

**Expenditure Forecast Assessment Guidelines**

**Summary of meeting – 25 September 2013**

***Category analysis data templates***

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

On 25 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 1:00 pm to 5:00 pm and was chaired by Jess Manahan 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.

AER staff also confirmed that audit and assurance requirements, timeframes for provision of data and the timetable for the development of the templates will be subject to separate discussions.

In relation to historic data, AER staff confirmed the intention to seek 5 years’ of historical information across the required information sets initially. This data would then be collected annually on an ongoing basis.

In terms of the forecast information required in the templates, AER staff confirmed that businesses would be required to provide this data only at the time of a revenue determination process.

AER staff also advised of the following updated timetable:

* Issue draft RIN – early December 2013
* Issue final RIN – February 2014
* RIN responses due – May 2014
* Annual data reporting commences – approximately October 2014

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.

In response to the survey on the templates, ElectraNet stated it does not collect actual historic demand data in MVA, nor does it maintain temperature corrected data.

AER staff noted that demand, in MVA terms, is the appropriate measure to observe when assessing whether sections of the network require augmentation on a forecast basis. Temperature correction of historical data was also a vital process in generating robust demand forecasts.

ElectraNet stated they are not confident they keep MVA data to an auditable standard. MW data would be sourced from revenue metering and was thus more readily verifiable.

ElectraNet clarified that SA Power Networks (SAPN) provides them with their connection point historical and forecast demand data. Such connection point demand data are key inputs to ElectraNet’s augmentation decisions, hence almost all (approximately 90%) of demand data that would be requested of ElectraNet would be obtained from SAPN. SAPN confirmed they record weather corrected demand. ElectraNet stated that it only separately maintains direct connect customer data. AER staff confirmed it would be appropriate for ElectraNet to cross-reference the historic demand data reported by SAPN for the relevant connection points rather than duplicate this information.

AER staff noted SAPN’s comments that the demand data templates should make clear that 10% or 50% PoE do not apply to historical data. This was acknowledged by AER staff, who stated that the indicative templates require some work and re-formatting to clarify concepts and definitions.

1. ***Augmentations capex***

AER staff noted the indicative templates collects 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.

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. SAPN commented that the templates require very detailed disaggregation of augex costs and would require considerable resources and effort to prepare, particularly backcast data.

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 stated such information is probably recorded within the organisation; however, current accounting systems do not disaggregate augex project cost data to the level specified in the indicative templates. Obtaining such data would require the NSPs to look at past contracts. SAPN stated they keep unit cost models to capture the costs of augex projects. However, these models still rely on assumptions. AER staff suggested the NSPs advise on how they disaggregate augex project costs and also asked them to provide feedback on whether the indicative templates have appropriately captured the major cost items of augex projects.

AER staff stated their understanding from the discussion that difficulties relate mostly to providing backcast augex project costs. NSPs were asked whether it is possible to provide such data going forward. SAPN stated it may be possible to provide such data going forward, however it would still take effort. Prior to undertaking this effort, SAPN would also ask for greater certainty that augex subcategories specified in future RINs will not be subject to continual change. SAPN also pointed out that such data requirements should not unduly disrupt the work practices of field workers.

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. In response NSPs provided feedback on using repex model asset groups used in its 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 (when associated with a revenue proposal RIN) for the future regulatory period when prepared as part of the revenue determination process.
* AER staff noted the discretion NSPs have to disaggregate the asset categories at a lower level than those in the category analysis 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 indicated that earlier discussion covered off on several of the issues that NSPs raised in response to the survey, most notably the difficulties associated with extracting and back-casting unit cost information.

The following key issues were then discussed between AER staff and the NSPs:

* 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. ElectraNet noted of the assets classified by rating type it has relatively few compared with distribution, it noted a mode of estimating could be to map the standards it has applied over time to the age profile of segments of its networks. SAPN noted that generally the level of data kept below HV feeder level is as aggregate only.  Asset management at 11kV and below is generally not based on individual assets.
* SAPN noted that it rarely does like for like replacements, noting that changes in policy could require upgrades at replacement. Further noting it experiences asset infant mortality issues and conducts replacement due to third party damage. AER staff noted the future intention to seek total replacement volumes and condition based replacements which is directly linked to the deterioration of the asset, this will exclude factors such as; augmentation requirements, asset redundancy, technological or environmental change and third party damage.
* SAPN raised in its survey response a particular concern regarding the poles asset group. Specifically considering the asset categories were not adequate to categorise stobie poles. Further noting these assets accounted for approximately 95% its total poles. SAPN also believes that there is a substantial unit cost difference for these relative to other pole types across the NEM. AER staff requested feedback on whether these poles could be subcategorised underneath the categories with supporting documentation on cost differences in unit cost and asset life.
* AER staff sought NSPs views on the historical data required by the AER to generate the age profile applied in the repex model. SAPN noted that it had reasonably good production records and would be able to provide reasonably quality information back to 2006 when it reformed its information management procedures. However these would be captured at the feeder and substation level. SAPN considered there would be difficulty back-casting beyond this and would involve a great deal of assumptions. ElectraNet stated it had no major concerns with generating the age profile given its lower volume of assets, it would likely infer ages by looking at the segment of line and its associated age. ElectraNet did raise concerns that the asset life is unknown; citing that it does not run its asset to failure, it suggested applying the economic mean life and standard deviation as the relevant measures.
* ElectraNet raised concerns about the applicability of the IT asset group to repex modelling, noting that the “units” used to measure this would not be meaningful or comparable across time. AER staff considered the categorisations for IT expenditure are appropriate for assessing a NSP’s expenditure through time and are appropriate for the purposes of the repex model, AER staff agreed that the comparability of asset volumes across time could provide limitations on the applicability of the data in benchmarking analysis given the discrete nature of IT choices.
* AER staff sought NSP 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. SAPN noted it managed asset components and recorded costs of a distribution substation separately from similar components on a distribution line. It provided the example of switchgear located on a distribution feeder being recorded separately from switchgear located in a substation.

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

AER staff introduced customer-initiated works category templates, providing an overview of the information being sought and reasons to justify the classification of expenditure categories.

AER staff outlined the benefits of standardised reporting templates as being to generalise large programs of customer-initiated works, and, where possible, allow for the benchmarking of works across NSPs.

### Connections – Transmission

AER staff re-capped ElectraNet’s survey response that reporting connections expenditure by CBD, Urban and Rural locations would be difficult. AER staff explained that CBD, Urban and Rural categories intended to be used as a measure of density and may be used to explain the difference in costs between transmission projects. ElectraNet considered that the CBD, Urban and Rural categories were not likely to offer much explanation of the difference in cost across different connection projects given the variety of other factors involved and the bespoke nature of transmission connections. AER staff added that the location field in the reporting template gave TNSPs the ability to record the specific location of connection projects, as a way of indicating locational-specific factors which influence the cost of performing connection projects. ElectraNet considered that reporting a single location would not be a useful indication of the locational-specific issues and suggested that locational-specific factors would be better expressed in a detailed business case. Additionally, ElectraNet added that they had undertaken very few prescribed connections in the 5 year sample period, and asked whether the AER’s template was intended to record expenditure related to non-prescribed services. AER staff clarified that only the expenditure data related to prescribed connection services was to be reported in the expenditure forecast templates. ElectraNet explained that they expected to undertake few connections which would be classified under prescribed services, and those connections were expected mainly to be connecting to distribution substations. AER staff added that it expected ElectraNet to undertake a detailed engineering review of proposed transmission connection projects and that it expected a detailed business case which explains locational-specific issues and an explanation of why similar connection projects differ in costs. ElectraNet stated that business cases with this level of detail had already been provided to the AER as part of past determination processes.

### Connections – Distribution

AER staff re-capped SAPN's comment in response to the AER's survey that it would be difficult to report by connections expenditure by CBD, Urban and Rural. AER staff sought clarification of whether expenditure for connection works was collected by depot or by some other location type which reflects any locational-specific factors affecting the cost of providing connection services. SAPN indicated that connection volumes and expenditure could possibly be reported by asset management areas where a number of depots may comprise an asset management area. However, many depots perform work in rural and urban areas. More generally, SAPN noted that varying level of detail was collected for each type of works and SAPN ranked connection works in terms of materiality: less than $20,000, between $20,000 and $100,000, and greater than $100,000.

SAPN sought clarification on the definition of simple and complex connections. AER staff explained that simple connections were expected to represent the majority of connection works and were intended to capture those works involving a single span of wire connecting the customer's premises to an existing portion of the network. 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. SAPN broadly accepted the principle of the AER's approach to classification of simple and complex connections and would be able to report such connections at state-wide level. SAPN indicated that it would be difficult to report simple and complex expenditure data disaggregated into material, labour and contractor categories by location and urban, CBD and rural areas. AER staff suggested a further bilateral discussion with SAPN technical staff to determine the possibility of disaggregating connections expenditure.

### Fee-based and quoted services

AER staff re-capped SAPN’s response to the AER’s survey, which raised the following concerns:

* SAPN only provides some of the categories of fee based and quoted services listed in the AER’s category reporting templates. SAPN seeks clarity on the definition of fee based and quoted service categories.
* SAPN could only report expenditure related to fee based and quoted services as a state-wide total and could not disaggregate expenditure into material, labour and contract splits by location or CBD, Urban or rural areas.
* SAPN cannot allocate fee based and quoted service proportions to public lighting, metering and connection services.

In response, 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. Furthermore, the allocation to connections, metering and public lighting activities was intended as a cross-check of fee-based and quoted service volumes. AER staff recognised that the fee-based and quoted service volumes were to some extent random, as they were driven by customer requests, but wanted to understand the extent that these services were driven by other service volumes.

SAPN indicated they would have difficulty in reporting disaggregated fee-based and quoted service expenditures and sought further clarity of the services’ definitions. AER staff suggested a further bilateral discussion with SAPN technical staff to clarify which services are intended for benchmarking and the definition of services, more generally.

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

AER staff indicated recurrent was used in the context of ordinary English usage of the word and meant expenditure that is ongoing in nature. While personal computers have been identified by the AER, the businesses are free to identify other recurrent expenditures and relevant cost drivers. Recurrent expenditure may be assessed via trend analysis. Material non-recurrent expenditures would likely be assessed by examining business cases. The intent would be all costs would be examined (opex and capex) given the ability to undertake expenditure via either opex or capex in these categories.

ElectraNet indicated their vehicle expenditure will be very minor relative to other TNSPs given they outsource most activities and the contractors provide their own vehicles thus ElectraNet would not be able to provide disaggregated costs for vehicles and plant provided by contractors as tools of trade. Due to these differences, care needs to be taken when benchmarking individual categories of expenditure across NSPs.

AER staff acknowledged cost would differ depending on the nature of operations.

1. ***Vegetation management***

AER staff explained the aim behind the increased collection of vegetation management data and responded to a request for clarification on the contents of the vegetation management zones spreadsheet. AER staff invited comment on the contents of this spreadsheet.

SAPN responded that rainfall and sunshine were not currently recorded.

ElectraNet responded that they would likely classify zones by level of bushfire risk (as would SAPN). ElectraNet stated the South Australian bushfire danger zones were broadly based on rainfall zones. ElectraNet considers average rainfall as a long-term proxy for bushfire risk based on likely vegetation exposure to lines. ElectraNet do not collect data on tree growth rates.

AER staff queried the NSPs on how they go about vegetation inspections. ElectraNet responded that they have people inspect along every line on a priority basis. They will scope out work every year, and trim areas as required. AER staff asked what information is collected from contractors. ElectraNet responded that they do not receive itemised information as listed in the reporting templates, as data is not required in this form for the management vegetation clearance obligations. ElectraNet’s contractor identifies trees to be cut, so the contractor may have this data, however this is unlikely. SAPN noted that the data they do collect is of the number of spans with trees trimmed in bushfire risk areas, the number of trees cut is recorded for non-bushfire risk areas.

ElectraNet questioned the benefit of collecting some of the proposed data, noting that to obtain the proposed data would add to their compliance costs. They noted that the ability to disaggregate inspection costs would be complicated as their field workers may engage in the inspection of both lines and the vegetation surrounding those lines at the same time. They also noted that they operate under the same state legislation as SAPN when conducting vegetation management work. The legislation specifies clearance zones, periods etc. with respect to voltage, location and construction.

SAPN commented that they collected information by span and by the feeder, so they could disaggregate the data geographically. They cannot determine what work has been done along those spans; they just have knowledge if work was performed along the span that was identified as requiring work. They commented that they do have internal inspection and audit costs. SAPN said they would need to do some more research and liaise with their contractors to determine what data they collect.

SAPN brought up the topic of hazard tree clearance. SAPN commented that they would not be able to provide historical data on hazard trees as it has not been collected, however forecast data will be developed for its next Regulatory Proposal. ElectraNet commented that hazard tree clearance was less relevant for their network but it was something they were starting to consider as part of their tree cutting work. The use of laser aerial surveys was mentioned as a possible means to provide information to this end but was not something being considered seriously at present.

AER staff queried NSPs if their businesses consider the volume of work required to be done. ElectraNet noted that this is considered when they go out to competitive tender.

AER staff queried NSPs on how the process for businesses when they need to request an increase in their expenditure allowance. ElectraNet replied that when they were required to change their vegetation cutting profile, they went to their contractor and rescoped and repriced the work accordingly.

SAPN said that they were considering the required amount of vegetation management work in their proposal for their upcoming determination. They noted that they scope every year for required work to be done, and may engage in annual trimming work rather than engage in a three year cutting cycle. They commented that they utilise the services of a single contractor, but were aiming to engage the services of more for competitive purposes.

AER staff commented the broad purpose of collecting the requested was to understand the drivers behind the components of NSPs’ vegetation management costs; and how the drivers and costs change over time. ElectraNet responded that they understood what AER staff were aiming to do with the requested vegetation management data, but considered there would be difficulties in comparing data due to geographical splits, regulations and other environmental factors.

SAPN asked if AER staff were proposing to request five years of backcast data on for vegetation management, AER staff replied that that was the case.

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

SAPN commented on the asset groups and subcategories data requirements (same comments as for the repex model asset groups):

* Insufficient data is available at present to easily break down costs by asset class and voltage as required by the draft template. Some asset groups will be SA-specific and should be accounted for, e.g. stobie poles.
* For poles, overhead components and conductors, there is very little data available that will allow the asset populations to be split into installation year and voltage type. Better data is available to allow this split to be undertaken for substation transformers and underground cables.
* SAPN could have some 2012/13 data by February 2014, but these will likely be subject to a number of caveats and assumptions, and will not be at the level of detail requested.
* At present, SAPN does not hold much of the data requested at the asset level, most is stored at the feeder level. It is also difficult to break costs recorded down into categories requested for some activities. Work is underway to improve the way assets are recorded in its SAP system for some asset groups, and therefore how costs are recorded against those assets, but at present this is not being undertaken for all asset groups. Data can possibly be derived but will be subject to a number of caveats and assumptions, with a methodology needing to be developed, documented and agreed by the business.
* SAPN will further review how assets are recorded in SAP, and how costs are recorded against assets. Moving forward, improved data collection processes will be necessary with data governance practices to be documented, agreed and enforced.
* SAPN commented that more definition is required on what should be included in each of the categories which make up the unit cost, especially if this information is used for benchmarking purposes. If no additional information is provided, SAPN will document assumptions made and as far as possible ensure we apply the same assumptions across the business.

SAPN commented that it records costs by jobs or the feeder levels, not by the asset types proposed. Its asset groups are represented by feeders. SAPN commented that it could also have data down to 66kV and 33kV, but data for 11 kV and lower is aggregated. Even if cost data were collected, costs would be affected by differences in location, etc.

SAPN stated that it seeks efficiencies by bundling work or improving work methods, not by reducing the number of hours per activity.

ElectraNet stated it will not necessarily have maintenance unit rates by each asset type. Its maintenance activities involve a program of work and indirect costs and overheads will be allocated across a number of activities. This will mean unit costs are based on a number of broad assumptions. Preparation of this data would require significant internal resource from ElectraNet to prepare. The information provided is likely to be of limited usefulness when assessing ElectraNet on an inter-company basis as detailed cost categorisation will likely differ. ElectraNet notes there are a number of uncontrollable factors that will reduce the ability to compare inter-company maintenance expenditure such as average asset age and unique operating environments. However, the data will be moderately material in assessing intra-company performance over time if used to understand maintenance expenditure requirements.

ElectraNet commented that it outsources its routine and corrective maintenance requirements to SAPN. Outsourced construction and maintenance includes vehicle costs (i.e. activity costs include whatever is needed, e.g. vehicles, to get the activity done.)

ElectraNet stated that in its reset proposal, it submitted a detailed opex model for routine maintenance expenditure forecasts, which were approved by the AER*.* For historic data in the form sought, it has to make estimates and assumptions, and it has to document procedures/ methodologies/ sources for this to determine what can be audited and signed off by an auditor.

1. ***Overheads***

SAPN stated that:

* for overhead data, there would have to be some assumptions and it would be time consuming (assuming 10 years back-cast), but it could provide some reasonable information on corporate overheads
* its Cost Allocation Methodology (CAM) has changed over time; there was a change at the 2005 reset (ESCoSA) and again for the 2010 reset (AER) and SAPN would need to make assumptions on what methodology to apply
* providing information prior to 2005 would be more problematic, probably of little value
* corporate structures have changed over time, making consistency of reporting a problem (for example, prior to 2010 procurement costs were absorbed in the material on-cost and since 2010 has been reported as a corporate overhead)
* overheads allocation section not relevant - for regulatory purposes they don’t allocate corporate overheads
* what the template calls Network Overheads, SAPN treats as a direct cost (but can still populate)
* categories of expenditure may not be consistent with how they are currently reported (e.g. corporate governance costs)
* vehicles are currently allocated (transfer priced) as a direct cost (operational) or business overhead (passenger) rather than as overheads.

ElectraNet stated that it can reasonably supply these data; however, it is concerned with how the data will be used. The data reported on this basis will not align with historical accounts as opex cost categories have changed substantially over time and as such will not necessarily be comparable. This information is also likely to have a low level of usefulness for ElectraNet and external stakeholders as it will be difficult to compare cost categories across TNSPs as there will be differences historically in how each TNSP allocates costs to the various cost categories and how overheads are allocated. The proposed reporting categories will also not necessarily align with how each TNSP has historically reported expenditure. Cost categories will need to be clearly defined by the AER and a consistent approach to overheads applied by each TNSP to make the data comparable between TNSPs.

AER staff clarified the following:

* For Corporate Overhead line items, NSPs can maintain their current individual expenditure items and these do not have to be the same across NSPs. The AER will benchmark corporate overhead as an aggregate expenditure.
* The current CAMs will not change and the AER will not require a standardised CAM. Network Overheads and Corporate Overheads will be benchmarked in the aggregate. The differences in cost allocation will not matter.

1. ***Closing observations***

ElectraNet noted that the data collection and auditing requirements presented a significant burden to the business and that the process was unreasonably intrusive and costly. ElectraNet asked about potential changes to the templates and techniques, e.g. application of the augex model to TNSPs. AER staff noted that changes across the set of templates were likely to be put to the AER Board for consideration but that ElectraNet should work on the presumption that the data required for the augex model would be requested.

1. ***Actions***

### Demand forecasting

1. 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.

### Augmentations

1. SAPN to provide comments on appropriate ways to classify high volume, low cost augex such as augex for distribution substations or LV feeders.
2. NSPs to provide feedback on how they can break down augex project costs. 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 including definitions in the demand sheets.

### Repex

1. SAPN to provide common amperage ratings for difference classes of assets and suggested rating bands
2. SAPN to provide feedback on where stobie poles might be categorised in the repex templates

### Connections and customer driven works

1. SAPN to indicate what data is available and how connections volumes and costs can be broken down by location across the state
2. AER staff to arrange a further bilateral discussion with SAPN technical staff to clarify which fee/ quoted services are intended for benchmarking and the definition of services, more generally.

### Non-network expenditure

N/A

### Vegetation management

1. SAPN to research and liaise with their contractors to determine what data is collected.

### Maintenance

1. NSPs to provide more feedback on what detailed data they collect (by asset groups and subcategories)
2. AER staff to discuss with NSPs mapping their existing maintenance expenditure into Routine and Non-Routine.

### Emergency response

1. NSPs to provide more feedback on what detailed data they collect (by causes)
2. AER staff to discuss with NSPs mapping their existing emergency response expenditure into Emergency Response.

### Overheads

1. NSPs to provide more feedback on what detailed data they collect

## *Attachment A: Attendee list*

### Adelaide office

|  |  |
| --- | --- |
| **Name** | **Organisation** |
| Simon Appleby | ElectraNet |
| Bill Jackson | ElectraNet |
| Andrew Gniel | ElectraNet |
| Richard Sibly | SA Power Networks |
| Peter Butler | SA Power Networks |
| Helen Edmonds | SA Power Networks |
| Jess Manahan | AER |
| Esmond Smith | AER |
| Mark Wilson | AER |

### Melbourne office

|  |  |
| --- | --- |
| **Name** | **Organisation** |
| Lawrence Irlam | AER |
| Mark McLeish | AER |
| Max Hooper | AER |
| Anthony Hynes | AER |
| Cameron Smith | AER |
| Paul Dunn | AER |

### Canberra office

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