



Template - 2.11 Labour

Table 2.11.3 - LABOUR/NON-LABOUR EXPENDITURE SPLIT

Table 2.11.3.1 - Opex

Table 2.11.3.2 - CAPEX

Source of Data

We have used template 2.1 (Expenditure Summary) and 2.12 (Input Tables) as a primary source for reporting the data in these tables.

Estimated or actual information

There is a mix of actual and estimated data in this template, due to the use of templates 2.1 (actual) and 2.12 (mixture of actual and estimated). The information in 2.1 has been derived from OPEX, CAPEX and R&M Models, and the majority of the data in these models was defined as actual as it related to our financial systems. The information in 2.12 is considered a mixture of both types of information; this is because the assumptions made to disaggregate our internal direct standard control services activities into labour, materials and other costs is based on internal knowledge of financial asset management systems and our internal activities (actual), while the disaggregation of the other opex labour costs is based on the historic operating expenditure methodology described in Appendix C (estimated).

Methodology and assumptions

We have used the methodology set out in our Basis of Preparation for template 2.1 in the Category Analysis RIN for standard control services to split amounts between CAPEX and OPEX, and for template 2.12 in the Category Analysis RIN for the disaggregation of our internal direct standard control services activities into labour, materials and other costs.

The only additional information we used was the account balances associated with the NT Build Long Service Leave levy and network license fees, which are uncontrollable costs. We did not identify any other uncontrollable costs.

Confidential Information

Template 2.11 does not contain confidential information.



Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.



Template - 3.6 Quality of Service

Table 3.6.5 - QUALITY OF SUPPLY METRICS

Source of Data

The data source for all the requirements related to customer complaints (starting with 'Overvoltage Events' in the RIN) was the Customer Complaints/Claims Register which is located in TRIM (RM8).

The data source for the confirmed damages (starting with 'Customer Receiving Overvoltage' in the RIN) was the Customer Claims Register that is also located in TRIM (RM8) and managed by the PWC Legal Department.

It should be noted that for the purpose of this RIN, both claims and complaints were merged into one file and analysed to extract the data required in this RIN template.

The data related to 'voltage variations' was sourced from SCADA and processed using excel spreadsheet files.

Estimated or actual information

The SCADA data is estimated as the data for the whole year is not available. PWC can access only about 263 days of data which was then extrapolated to estimate the number of voltage disturbances for the entire year. The SCADA data that is used was sampled from the relevant equipment every 15 seconds. PWC cannot obtain the data for about 3 months between mid-Sept to mid-Dec because of system limitations.

The data on complaints/claims is actual because this comes from the complaints/claims raised by the customers. Also, the data on claims is based on the actual claims that PWC settled in the 2018-19 reporting period.

Methodology and assumptions

PWC do not currently gather data on voltage variations to the level of detail required by some RIN requirements in Table 3.6.5. In particular, PWC is only able to obtain data sampled every 15 seconds whereas the RIN template required the data sampled every 10 seconds. The data gathered cover the period 17 Jun 2018 - 17 Sept 2018 (dataset 1), 19 Dec 2018 - 03 March 2019 (Dataset 2) and 04 March - 09 Jun 2019 (Dataset 3).



The following RIN requirements were addressed by using the Customer Complaints which we re reviewed to identify:

- 'Over voltage events due to high voltage injection' These are customer complaints about overvoltage events, the cause of which is not understood by PWC. Hence, no data is provided against this requirement (See emailed in TRIM Record F2018/3891).
- 'Over voltage events due to lightning' are customer complaints about overvoltage events, the cause of which is known to have been lightning.
- 'Over voltage events due to voltage regulation or other cause' are those customer complaints where the complaint is about overvoltage event, the cause of which is unknown or where the cause is known to be related to voltage regulations e.g. distribution transformer tap changing.

The customer complaints/claims were also used to identify those related to claims against PWC or reimbursement. Additional data was obtained by the Customer Advocate from TRIM on whether PWC settled the claim. The details provided on the claims that were settled were reviewed to find out whether the claims can be accommodated in any of the categories described above.

- 'Customer Receiving Overvoltage due to high voltage injection' These are the confirmed claims that were settled by PWC due to overvoltage events, the cause of which is not understood by PWC. Hence no data is provided against these requirement (See emailed in TRIM Record F2018/3891).
- 'Customer Receiving Overvoltage due to lightning' are the confirmed claims that were settled by PWC due to overvoltage events, the cause of which is known to have been lightning.
- 'Customer Receiving Overvoltage due to voltage regulation or other cause' are the
 confirmed claims that were settled by PWC due to overvoltage event, the cause of which is
 unknown or where the cause is known to be related to voltage regulations e.g. distribution
 transformer tap changing.

Voltage variation requirements were addressed by using SCADA's 15 seconds voltage data which represented various bus events recorded 15 seconds apart over a period of about nine



months. These events that cover the periods described above were analysed and those which show a voltage variation of more than 10 per cent from the reference bus voltage (set point) of 10.5kV on 11kV feeder and 21.8kV on 22kV feeders were identified. After the analysis was completed covering the period of about 263 days, the number of voltage variations per day for each of the RIN requirements was estimated and the per day count extrapolated to cover the 365 days in a year. These events were then further analysed to determine the RIN requirements into which they fall as follows:

- Voltage variations steady state (zone sub)' was addressed by identifying those disturbances that lasted for one or more minutes.
- Voltage variations one minute (zone sub) was addressed by identifying those events that lasted for less than one minute but more than 15 seconds (note that in this case since sampling of data is done every 15 seconds, this requirement is addressed by identifying variations that lasted for at least 30 minutes but less than one minute. This also ensures that variations that happened at 15 seconds only are excluded so as to avoid double counting).
- Voltage variations 10 seconds (zone sub) Min <0.7 was addressed by identifying those events that lasted for less than 15 seconds and presented the voltage variation that is more than 30 per cent.
- Voltage variations 10 seconds (zone sub) Min <0.8 was addressed by identifying those events that lasted for less than 15 seconds and presented the voltage variation that is more than 20% AND less than 30 per cent.
- Voltage variations 10 seconds (zone sub) Min <0.9 was addressed by identifying those events that lasted for less than 15 seconds and presented the voltage variation that is more than 10% AND less than 20 per cent.
- Voltage variations steady state (feeder) PWC currently does not have equipment
 installed to monitor voltage variations on feeders. Monitoring is usually done as and when
 needed to resolve a complaint, for example related to overvoltage.
- Voltage variations % zone subs monitored' was addressed by providing a percentage of the zone substations that have monitoring equipment installed. The number provided only



- provides information that the equipment is installed and does not necessarily suggests that the installed equipment was operational during the regulatory period.
- Voltage variations % feeders monitored PWC currently does not have equipment
 installed to monitor feeder voltages and where equipment exists good quality data that is
 necessary to address these requirements has not been gathered.

A key assumption is that the bus voltage that was sampled every 15 seconds is acceptable as a representation of the values that could have been obtained at 10 seconds. Also, the data on each bus at zone substation level was analysed. Some of these buses may be split whereas others may be continuous buses. It is believed that handling each individual bus and analysing the data as recorded in SCADA without distinguishing split versus continuous buses (as done in the analysis) provides good quality data because individual bus events that resulted in voltage variation are accounted for in the analysis.

Confidential Information

There is no confidential information in this table.

Consistency with RIN requirements

There are no specific requirements applicable to this template.



Table 3.6.6.1 - TECHNICAL QUALITY OF SUPPLY

Table 3.6.6.2 - PERCENTAGE OF COMPLAINTS BY CATEGORY

Table 3.6.6.3 - PERCENTAGE OF COMPLAINTS BY LIKELY CAUSE

Source of Data

The data was sourced from the Power Services Customer Advocate who manually records and categorises complaints into a spreadsheet stored in TRIM. Data can only be extracted (from TRIM) on a calendar year basis, with two reports extracted and combined to create a financial year file.

Estimated or actual information

The data is actual as it comes from an internal business record.

Methodology and assumptions

The details provided in each complaint were reviewed together with the related data in TRIM in order to decide the category into which the complaint falls. This review also assisted us to decide on the likely cause of the complaint. The data was then used to populate the Annual RIN Table 3.6.6.

Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.



Table 3.6.7.1 - TIMELY PROVISIONS OF SERVICES

Table 3.6.7.3 - CALL CENTRE PERFORMANCE

Source of Data

3.6.7.1 - Timely Provision of Services

Number of new connections was provided by the Power Services Connections section and is consistent with the requirements. This figure agrees to the New Connections SCS Total excluding embedded generations in the Category Analysis RIN section 2.5.3.

3.6.7.3 - Call Centre Performance

Sourced by Power and Water's Customer and Stakeholder team's Data Analyst. Touchpoint is the program that is the source of the data which is then filtered to BI program to enable the report RET002 to be generated.

Estimated or actual information

We have based the information on actual data, as the source relates to internal records.

Methodology and assumptions

Our call centre statistics only record calls once the customer has completed the IVR. The following parameters were used in the extracting the data:

- Answered Calls (New Electric Faults) A variable that sum the count of call answered which
 has a call queue name of New Electricity Faults.
- Abandoned Calls (New Electric Faults) A variable which sums the count of abandoned call that has call queue name of New Electricity Faults.
- ASA New Electric Faults Secs A variable that calculates the Average Speed of Answer for call queue name of Electricity Faults measure in Seconds.
- Averaged ASA New Electric Faults Secs A variable that calculates the Average Speed of Answer over Number of Work Days for call queue name of New Electricity Faults measure in Seconds.
- Abandoned Calls % (New Electric Faults) A variable which sums the count of abandoned call that has call queue name of New Electricity Faults.



Sourced from Power and Water's Customer and Stakeholder team. The data is extracted using BI report RET002.

Confidential Information

There is no confidential information in these tables.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.



Table 3.6.7.4 - NUMBER OF CUSTOMER COMPLAINTS

Source of Data

The data used in this RIN was sourced from the complaints/claims that are recorded in a spreadsheet that is stored in TRIM (RM8).

Estimated or actual information

We have based the information on actual data, as the source relates to internal records.

Methodology and assumptions

The customer complaints/claims were obtained from TRIM (RM8). The details provided in each complaint/claim were reviewed together with the related data in TRIM in order to ensure that the classification used by PWC is similar to one used by AER. After the mapping was completed between the AER and PWC classifications, the count required in this RIN was obtained.

Confidential Information

There is no confidential information in these tables.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN. For example we have used the definition of new connections and telephone answering.



Template - 3.6.8 Network Feeders

Table 3.6.8 - NETWORK FEEDER RELIABILITY

Source of Data

Outage data was sourced from the Asset Management System (Maximo).

The number of customers in NT was sourced from the Retail Management System (RMS) and the number of customer affected by the interruption was sourced from GIS/ESRI. For feeders and distribution substations, the customer count from GIS/ESRI was then loaded into Maximo.

The MVA and Energy Not Served were calculated using the 30 minutes SCADA data. In particular, the average monthly feeder load and the maximum load were both obtained from SCADA.

The source for the 'length of HV distribution lines' (cables and conductors) is the age profile data that is contained in the Maximo/GIS.

Estimated or actual information

Most of the data is actual and sourced from the GIS, SCADA and Maximo. In particular, the data on energy not served and maximum demand were calculated using actual data from SCADA. The data on unplanned outages is sourced from Maximo/GIS and is reviewed monthly to ensure that it is correct. Hence, the data on unplanned outages are considered actual. The data on planned outages are sourced from Maximo and GIS but since these outages are not reviewed monthly like unplanned outages, the data is considered estimate more so because the duration of the planned outage is not reviewed monthly. Hence, the entire RIN can be considered to be based on estimated data.

The data on 'length of HV distribution lines' (cables and conductors) is actual.

Methodology and assumptions

System operators record outages manually into Maximo in real-time. The data recorded comes from various sources including SCADA, customer calls, outcome from monthly data reviews. The recorded on unplanned interruptions data is reviewed monthly by both System Control and Power Services personnel to ensure that it is as accurate as possible based on the limitations of the systems used to capture this data. Data on planned outages is not reviewed and therefore the quality of data is poor.



It should be noted that for reliability reporting purposes, all the analysis is done in an excel spreadsheet file and the reliability indices (SAIDI/SAIFI) that are calculated only apply to regulated areas of the network. These indices were calculated after excluding some interruptions together with any duplicated interruptions.

There are some interruptions recorded on some assets that result in healthy assets being interrupted. For the sake of recording all outages affecting the customer, the first interruption is recorded as the parent event and the other related interruptions are recorded as child events. If all outages in the parent-child relationship were to be included in the reliability calculations, this would result in the reliability data being overestimated. Hence, for reliability calculations, all the parent events are excluded from those outages that are in the parent-child relationship. The data included Date of event, Time of interruption, Asset ID, Average duration of sustained customer interruption.

Number of customers affected

In most cases the outage-related data was used to provide the 'Number of customers affected by the interruption' as required in the RIN. However, in cases where these data were not provided, the customer count on an asset affected by the outage was obtained from GIS/ESRI. This was usually the case where the location that was interrupted is a switch, recloser, or pole fuses.

To calculate the SAIDI/SAIFI impact of an outage event, the 'Number of customers affected by the interruption' together with the 'Average duration of sustained customer interruption' was obtained directly from the outage record. The other input required is the number of customers in NT. The customer base that was used is the total number of customers in the regulated areas of NT. This total number of customers was obtained from the Retail Management System (RMS) on a monthly basis. The number of customers used for the calculation is the 12-month rolling average of this monthly data.

The customer count on individual feeder was obtained from the GIS/ESRI on a quarterly basis and saved into excel spreadsheet file. These excel spreadsheet files are used as the source of the customer count on feeders and in feeder categories. The customer count on feeder categories was taken to be the average of the customer counts collated quarterly. The



customer count data collated quarterly was also used to populate customer count on locations such as switches, reclosers, and pole fuses.

Length of HV Distribution Lines

The source for the 'length of HV distribution lines' (cables and conductors) is the age profile data that is contained in Maximo. While some asset data can be extracted from the Geographical Information System (GIS), the systems are integrated and configured such that asset data is supposed to be synchronised and identical in both systems. In most cases, Maximo provided a better source to report on cable and conductor length compared to GIS. And, where critical data was missing in Maximo, the data was obtained from the GIS.

After the data was extracted, it was cleansed and the quantity of installed assets populated by simply counting the number of assets or summing the length of each asset for linear assets - cables (underground), conductors (overhead).

Confidential Information

There is no confidential data in this template.

Consistency with RIN requirements



Template - 3.6.9 Network Reliability

Table 3.6.9 - NETWORK FEEDER RELIABILITY - PLANNED OUTAGES

Source of Data

Outage data was sourced from the Asset Management System (Maximo).

The number of customers in NT was sourced from the Retail Management System (RMS) and the number of customer affected by the interruption was sourced from GIS/ESRI. For feeders and distribution substations, the customer count from GIS/ESRI was then loaded into Maximo.

Estimated or actual information

Data is estimated. As described in the Basis of Preparation for the Economic Benchmarking RIN for table 3.6.1 (Reliability), only unplanned outages are reviewed on a monthly basis. The unplanned outages are not reviewed and therefore the data on planned outages is of poorer quality. An alternative method may have yielded a materially different outcome.

Methodology and assumptions

The methodology is consistent with the approach described in the Basis of Preparation for the Economic Benchmarking RIN Tables 3.6.1 (Reliability).

Confidential Information

This template does not contain confidential data.

Consistency with RIN requirements



Template - 6.2 STPIS Reliability

Table 6.2.1 - UNPLANNED MINUTES OFF SUPPLY (SAIDI)

Table 6.2.3 - UNPLANNED MOMENTARY INTERRUPTIONS TO SUPPLY (MAIFI)

Table 6.2.4 - DISTRIBUTION CUSTOMER NUMBERS

Source of Data

Outage data was sourced from the Asset Management System (Maximo).

The number of customers affected by interruptions in NT was sourced from the Retail Management System (RMS) and the number of customers affected by the interruptions on electrical assets was sourced from GIS/ESRI. For feeders and distribution substations, the customer count from GIS/ESRI was also loaded into Maximo.

The customer count per feeder for use in Table 6.2.4 was sourced from the metering system (MV90), RMS, GIS/ESRI and Maximo.

Estimated or actual information

The template includes both actual and estimated information.

- Unplanned outages are being reviewed monthly whereas planned interruptions are not reviewed. Hence, the data on unplanned outages can be considered to be actual whereas data on planned outages is considered to be estimated.
- The source data on outages is contained in the Asset Management System (Maximo). Though additional processing of Maximo data was done in order to address regulatory requirements related to unplanned interruptions and to derive some additional values that are not contained in the sourced data, this additional processing was based on actual data obtained outside Maximo. Since the planned interruptions are included in all the data that is intended to address the intent of this requirement, the data in this template is considered to be estimated.
- The customer count per feeder category that is used in Table 6.2.4 is estimated because the
 GIS data has to be extrapolated in order to reconcile it with the data sourced from the
 billing systems (MV90 and RMS).



Methodology and assumptions

Outage data

System operators record outages manually into Maximo in real-time. The data recorded comes from various sources including SCADA, customer calls, outcome from monthly data reviews. The recorded on unplanned interruptions data is reviewed monthly by both System Control and Power Services personnel to ensure that it is as accurate as possible based on the limitations of the systems used to capture this data. Data on planned outages is not reviewed and therefore the quality of data is poor.

It should be noted that for reliability reporting purposes, all the analysis is done in an excel spreadsheet file and the reliability indices (SAIDI/SAIFI) that are calculated only apply to regulated areas of the network. These indices were calculated after excluding some interruptions together with any duplicated interruptions.

There are some interruptions recorded on some assets that result in healthy assets being interrupted. For the sake of recording all outages affecting the customer, the first interruption is recorded as the parent event and the other related interruptions are recorded as child events. If all outages in the parent-child relationship were to be included in the reliability calculations, this would result in the reliability data being overestimated. Hence, for reliability calculations, all the parent events are excluded from those outages that are in the parent-child relationship. The data included Date of event, Time of interruption, Asset ID, Average duration of sustained customer interruption.

Number of customers affected

In most cases the outage-related data was used to provide the 'Number of customers affected by the interruption' as required in the RIN. However, in cases where these data were not provided, the customer count on an asset affected by the outage was obtained from GIS/ESRI. This was usually the case where the location that was interrupted is a switch, recloser, or pole fuses.

To calculate the SAIDI/SAIFI impact of an outage event, the 'Number of customers affected by the interruption' together with the 'Average duration of sustained customer interruption' was obtained directly from the outage record. The other input required is the number of customers



base in NT. The customer base that was used is the total number of customers in the regulated areas of NT. This total number of customers was obtained from the Retail Management System (RMS) on a monthly basis. The number of customers used for the calculation is the 12-month rolling average of this monthly data.

The customer count on individual feeder was obtained from the GIS/ESRI on a quarterly basis and saved into excel spreadsheet file. These excel spreadsheet files are used as the source of the customer count on feeders and in feeder categories. The customer count on feeder categories was taken to be the average of the customer counts collated quarterly. The customer count data collated quarterly was also used to populate customer count on locations such as switches, reclosers, and pole fuses.

Major event days

For the purpose of calculating the Major Event Days, the Power and Water network is divided into three systems, namely: Darwin-Katherine, Alice Springs and Tennant Creek. The MEDs were identified by using the 2.5 Beta Method described in IEEE Standard 1366 as follows:

- When calculating the MEDs for 2018/19, all the days that have been identified as MEDs in the previous years together with other failure causes described in Clause 3.3(a) STPIS were excluded from the analysis before calculating the MEDs
- The Major Event Day Thresholds (TMED) were then identified for each of the three systems
- Any daily SAIDI value that exceeded the MED thresholds in d) was considered to be an MED and used in the AER submissions.
- There were no MEDs in 2018-19

Customer Count per Feeder Category

The customers count used in Table 6.2.4 was sourced from the GIS, Maximo, MV90 and RMS.

The data in the GIS includes, among other things, feeder name. Each feeder is linked to a feeder category in Maximo [and in TRIM (RM8)]. The total customer count obtained from the GIS at the end of the reporting period was 79285. The GIS data together with the data in Maximo were collectively used to obtain the customer count per feeder category. Using this approach, CBD feeders had about 4.5% of the total customers in the GIS, the urban feeders had



about 40.1%, rural short feeders had about 54.4% and rural long feeder had about 1% of the total customer count in the GIS.

The customer count from the billing systems (MV90, RMS) at the end of the reporting period was about 85743. It should be noted that the billing systems do not have data on the feeders that are serving the customers. Hence this 85743 was then allocated to the various feeder categories using the percentages provided above. For instance, 4.5% of 85743 was allocated to CBD feeders. Customer count for other feeder categories was allocated in a similar manner. This method is considered appropriate in order to reconcile the customer count in the GIS and the customer count in the billing systems.

The customer count at the beginning of the reporting period was calculated in the similar manner, using the data that was obtained at the beginning of the reporting period, which is the same data that was provided in the RIN submissions in 2017-18.

Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements



Template - 6.6 Customer Service

Table 6.6.1 - TELEPHONE ANSWERING

Source of Data

6.6.1 - Telephone Answering

Sourced from Power and Water's Customer and Stakeholder team's Data Analyst. The data is sourced from BI report RET002.

Estimated or actual information

This is sourced from BI Portal so it's actual data

Methodology and assumptions

Sourced from Power and Water's Customer and Stakeholder team. The data is extracted using BI report RET002

All call performance data is based on calls once the customer has completed the Interactive Voice

Response (IVR). The following parameters were used to extract the reported data:

- Answered Calls (New Electric Faults) A variable that sum the count of call answered which
 has a call queue name of New Electricity Faults.
- Abandoned Calls (New Electric Faults) A variable which sums the count of abandoned call that has call queue name of New Electricity Faults.
- ASA New Electric Faults Secs A variable that calculates the Average Speed of Answer for call queue name of Electricity Faults measure in Seconds.
- Averaged ASA New Electric Faults Secs A variable that calculates the Average Speed of Answer over Number of Work Days for call queue name of New Electricity Faults measure in Seconds.
- Abandoned Calls % (New Electric Faults) A variable which sums the count of abandoned call that has call queue name of New Electricity Faults.

Confidential Information

The information in the template is not confidential.



Consistency with RIN requirements

The data was readily available and able to be extracted and easily matched to the RIN's required metrics - without requiring further dissection or analysis.



Template - 6.7 STPIS Daily Performance

Table 6.7.1 - DAILY PERFORMANCE DATA - UNPLANNED

Source of Data

Sourced from Power and Water's Customer and Stakeholder team. The data is extracted using BI report RET002.

Estimated or actual information

This is sourced from BI Portal so it's actual data

Methodology and assumptions

The data was readily available and able to extracted and easily matched to the RIN's required metrics - without requiring further dissection or analysis.

Confidential Information

The information in the template is not confidential.

Consistency with RIN requirements

There are no applicable AER requirements.



Template - 6.8 STPIS Exclusions

Table 6.8.1 - STPIS EXCLUSIONS

Source of Data

Outage data was sourced from the Asset Management System (Maximo).

The number of customers in NT was sourced from the Retail Management System (RMS) and the number of customer affected by the interruption was sourced from GIS/ESRI. For feeders and distribution substations, the customer count from GIS/ESRI was then loaded into Maximo.

Estimated or actual information

The data in this RIN is actual and sourced from the GIS and Maximo. These data contain unplanned outages that are reviewed monthly to ensure it is correct. Hence, these data on unplanned outages are considered actual.

Methodology and assumptions

Outage data

System operators record outages manually into Maximo in real time. The data recorded comes from various sources including SCADA, customer calls, outcome from monthly data reviews. The recorded on unplanned interruptions data is reviewed monthly by both System Control and Power Services personnel to ensure that it is as accurate as possible based on the limitations of the systems used to capture this data. Data on planned outages is not reviewed and therefore the quality of data is poor.

It should be noted that for reliability reporting purposes, all the analysis is done in an excel spreadsheet file and the reliability indices (SAIDI/SAIFI) that are calculated only apply to regulated areas of the network. These indices were calculated after excluding some interruptions together with any duplicated interruptions.

There are some interruptions recorded on some assets that result in healthy assets being interrupted. For the sake of recording all outages affecting the customer, the first interruption is recorded as the parent event and the other related interruptions are recorded as child events. If all outages in the parent-child relationship were to be included in the reliability calculations, this would result in the reliability data being overestimated. Hence, for reliability calculations, all the parent events are excluded from those outages that are in the parent-child



relationship. The data included Date of event, Time of interruption, Asset ID, Average duration of sustained customer interruption.

Number of customers affected

In most cases the outage-related data was used to provide the 'Number of customers affected by the interruption' as required in the RIN. However, in cases where these data were not provided, the customer count on an asset affected by the outage was obtained from GIS/ESRI. This was usually the case where the location that was interrupted is a switch, recloser, or pole fuses.

To calculate the SAIDI/SAIFI impact of an outage event, the 'Number of customers affected by the interruption' together with the 'Average duration of sustained customer interruption' was obtained directly from the outage record. The other input required is the number of customers base in NT. The customer base that was used is the total number of customers in the regulated areas of NT. This total number of customers was obtained from the Retail Management System (RMS) on a monthly basis. The number of customers used for the calculation is the 12-month rolling average of this monthly data.

The customer count on individual feeder was obtained from the GIS/ESRI on a quarterly basis and saved into excel spreadsheet file. These excel spreadsheet files are used as the source of the customer count on feeders and in feeder categories. The customer count on feeder categories was taken to be the average of the customer counts collated quarterly. The customer count data collated quarterly was also used to populate customer count on locations such as switches, reclosers, and pole fuses.

Major event days

For the purpose of calculating the Major Event Days, the Power and Water network is divided into three systems, namely: Darwin-Katherine, Alice Springs and Tennant Creek. The MEDs were identified by using the 2.5 Beta Method described in IEEE Standard 1366 as follows:

- When calculating the MEDs for 2018/19, all the days that have been identified as MEDs in the previous years together with other failure causes described in Clause 3.3(a) STPIS were excluded from the analysis before calculating the MEDs
- The Major Event Day Thresholds (TMED) were then identified for each of the three systems



- Any daily SAIDI value that exceeded the MED thresholds in d) was considered to be an MED and used in the AER submissions.
- There were no MEDs in 2018-19

The exclusions described in Clause 3.3 of the STPIS were identified and included in the RIN.

Confidential Information

There is no confidential data in this template

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.



Template - 6.9 STPIS GSL

Table 6.9.1 - GUARANTEED SERVICE LEVELS - JURISDICTIONAL GSL SCHEME

Source of Data

Outage data was sourced from the Asset Management System (Maximo).

The number of customers in NT was sourced from the Retail Management System (RMS) and the number of customer affected by the interruption was sourced from GIS/ESRI. For feeders and distribution substations, the customer count from GIS/ESRI was then loaded into Maximo.

The data on connections/re-connections is sourced from Maximo and RMS - RMS is relied on to identify the address that should be connected/re-connected while Maximo is relied on to raise the work order that is required to effect the connection/re-connection and to track the if the request was completed in a timely manner.

The data on 'Giving Notice of Planned Interruptions' is sourced from the customer complaints/claims and GIS. Once the claim has been registered, investigation that is conducted relies on the info from service delivery crew and the data that is in the GIS.

Estimated or actual information

Data used in most of the GSL KPI's is actual and sourced from the GIS, Maximo and based on the payments already made to customers during the 2018-19 financial year. The payment for 'Frequency of Interruption' and 'Cumulative Duration' are made at the end of the financial year. The end-of-the-year final payment data is also sourced from GIS and Maximo and will be made to customers who have already been identified. The necessary paperwork to effect these payments has been completed and signed. The values provided may slightly change because Customer Service Centre is yet to exclude from the data provided in this RIN and payment request customers who were not in the property on 30 Jun 2019, customers whose annual consumption was more than 160MWh, and customers using prepaid electricity meters. Since the data provided in this template is subject to change after review by Customer Service Centre, the data used in this template can be considered to be estimated.

It should be noted that Power Services identifies customers using both GIS and Maximo where Customer Service Centre uses the RMS which is relied on in all cases where the data in the three databases (GIS, Maximo, RMS) do not agree.



Only the data on outages is estimated as described above. The data used in other GSL measures is actual.

Methodology and assumptions

DURATION FOR SINGLE INTERRUPTION

The system used to source the outage data for these types of GSL breaches is Maximo.

Single interruptions that lasted for more than 12 hours but less than 20 hours are identified on a monthly basis and payments made as soon as possible during the year.

Single interruptions that lasted for more than 20 hours are identified on a monthly basis and payments made as soon as possible during the year.

FREQUENCY OF INTERRUPTION

The system used to source the outage data for these types of GSL breaches is Maximo.

The outage dataset that is reviewed on a monthly basis is used at the end of the financial year to identify assets that have been affected by more than 12 interruptions in a year. Once these assets have identified the customers who are affected are then identified (using the GIS data) and paid after the end of the financial year.

CUMULATIVE DURATION OF INTERRUPTION

The system used to source the outage data for these types of GSL breaches is Maximo.

The outage dataset that is reviewed on a monthly basis is used at the end of the financial year to identify a combination of assets that have been affected by the cumulative duration of more than 20 hours in a year. Once these assets have identified the customers who are affected are then identified (using the GIS data) and paid after the end of the financial year.

TIME FOR ESTABLISHING A RE-CONNECTION

The system used to source the data for these types of GSL breaches is the Retail Management System (RMS).

Metering Services reviews connection service requests (from the electricity retailer) on a daily basis in order to identify the connection's that were not completed within 24 business hours of receipt of the service request into the RMS.



Metering Services also reviews data from relevant customer complaints (from the Power Services Customer Advocate) and outage data (from Maximo) to ascertain if a late connection has occurred, and can also make GSL payment's based on the data obtained from these sources.

TIME FOR ESTABLISHING A NEW CONNECTION

The system used to source the data for these types of GSL breaches is sourced from Maximo.

Network Engineering personnel review the connections data in Maximo on a monthly basis to identify any new connections that were not completed within 5 business days of receiving a valid certificate of compliance from the customer or their electrical contractor. The process includes extracting the data from Maximo, reviewing the dates when the connection request was made, when it was scheduled through to when the actual work was done. When a connection was not completed in a timely manner for reasons that are within Power & Water Corporation's control, GSL is made. GSL payment is not made where the reason for the delay was caused by the customer and/or the contractor.

TIME OF GIVING NOTICE OF PLANNED OUTAGE

The system used for identifying the properties that were not notified of a planned outage is GIS.

Breaches of this measure can be identified by staff in the field who are working on the planned job or by customer's notifying PWC that no prior notice was given for a power outage they are experiencing due to planned works.

The Power Services Customer Advocate investigates the breach and a GSL payment is made to the customers signed up to power at properties that were not identified as being affected by the planned works.

KEEPING APPOINTMENTS

Both customer and/or PWC field officers can notify that a breach has occurred when an appointment has not been met resulting in a GSL payment.

Breaches when appointments have not been attended are brought to the Power Services Customer Advocate's attention for investigation.



After payment to the customers has been made by the customers' Retailer, the details of payments are sent back the Power Services Customer Advocate so that the records can be updated to reflect the actual number of customers paid and the total amount paid every month.

Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template.



Table 6.9.2 - GUARANTEED SERVICE LEVELS - AER GSL SCHEME

Source of Data

Power and Water are not required to complete this RIN for 2018-19.

Estimated or actual information

N/A

Methodology and assumptions

N/A

Confidential Information

N/A

Consistency with RIN requirements

N/A



Template - 7.10 Juris Scheme

Table 7.10.1 - JURISDICTIONAL SCHEME PAYMENTS

Source of Data

Jurisdictional scheme payments are defined as the amounts a DNSP are required under the jurisdictional scheme obligations to pay to a person; pay into a fund established under an Act of a participating jurisdiction; credit against charges payable by a person; reimburse a person *less* any amounts recovered by the DNSP from any person in respect of those amounts other than under the NER.

We reviewed the National Electricity Rules, and as per section 6.18.7A (e) (1), none of the schemes established are applicable to the Northern Territory.

Therefore, our current assessment is that there are no jurisdictional scheme payments at Power and Water Corporation, so this template's cells have been intentionally left blank.

Estimated or actual information

N/A - See discussion in "Data Source" section.

Methodology and assumptions

N/A - See discussion in "Data Source" section.

Confidential Information

N/A - See discussion in "Data Source" section.

Consistency with RIN requirements

N/A - See discussion in "Data Source" section.



Template - 8.1 Income

Table 8.1.1.1 - REVENUE

Source of Data

The data in this template was primarily based on Power and Water Corporation's Audited Statutory Accounts.

Estimated or actual information

This data is considered actual information because it was based on Power and Water Corporation's Audited Statutory Accounts and, while the mapping of transactions to the RIN categories was undertaken manually, it is unlikely to drive material variation in the RIN data reported.

Methodology and assumptions

The RIN defines distribution revenue as revenue earned from the provision of standard control services, alternative control services, negotiated distribution services and unregulated distribution services but excludes capital contributions. Therefore, in the Audited Statutory Accounts Distribution Revenue is equal to the Distribution Business Distribution Revenue.

Cross Boundary Revenue is reported as zero as we do not have any revenue that meets the RIN definition.

The contributions amount has been sourced directly from our accounts as the sum of the following accounts:

- 35-386: Contributions to Assets Gifted Assets
- 35-391: Contributions to Assets Capital Contribution for PWC Owned Assets
- 35-392: Contributions to Assets Capital Contribution DSEP
- 35-393: Contributions to Assets Capital Contribution WASSEP
- 35-394: Contributions to Assets Loan Contribution DSEP

Interest income was the reported directly from the company Income Statement from 'Finance Revenue'. Jurisdictional scheme amounts were reported as zero as we do not have any revenue that meets the RIN definition. Profit from sale of fixed assets was reported as zero as we do not have any revenue that meets the RIN definition. TUOS revenue was reported as zero



as we do not have any revenue that meets the RIN definition. Pass through revenue was reported as zero as we do not have any revenue that meets the RIN definition.

Other revenue was calculated as the total revenue attributed to Power and Water Corporation in our statutory accounts minus the amounts allocated in the variables above. Inter-group sales is internally accounted for as a revenue, which is a Distribution business expense, so this has also been excluded.

Confidential Information

There is no confidential information in this table.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN. The primary RIN requirement was to ensure the data in this template was based on the Audited Statutory Accounts. This is based on the RIN definition of "financial regulatory templates". We have ensured this data is based on the Audited Statutory Accounts.



Table 8.1.1.2 - EXPENDITURE

Source of Data

The data in this template was primarily based on our audited statutory accounts.

Estimated or actual information

This data is considered actual information because it was based on Power and Water's audited statutory accounts and, while the mapping of transactions to the RIN categories was undertaken manually, it is unlikely to drive material variation in the RIN data reported.

Methodology and assumptions

We have used the following calculations and data to report the information required in the AER's RIN:

- TUOS expenditure: This is reported as zero as we do not have any expenditure that meets the RIN definition.
- Avoided TUOS expenditure: This is reported as zero as we do not have any expenditure that meets the RIN definition.
- Cross boundary expenditure: This is reported as zero as we do not have any expenditure that meets the RIN definition.
- Depreciation: This expense has been reported from the Audited Statutory Accounts mapping the reporting categories from our accounts to the RIN categories.
- Finance charges: This expense has been reported from the Audited Statutory Accounts mapping the reporting categories from our accounts to the RIN categories.
- Impairment losses: This expense has been reported from the Audited Statutory Accounts mapping the reporting categories from our accounts to the RIN categories.
- Jurisdictional scheme amounts: This is reported as zero as we do not have any expenditure that meets the RIN definition.
- Loss from sale of fixed assets: This expense has been reported from the Audited Statutory

 Accounts mapping the reporting categories from our accounts to the RIN categories.
- Maintenance expenditure: This expense has been reported from the Audited Statutory
 Accounts mapping the reporting categories from our accounts to the RIN categories.



- Operating expenditure excluding maintenance expenditure: This expense has been reported from the Audited Statutory Accounts mapping the reporting categories from our accounts to the RIN categories.
- Other: This expense has been reported from the Audited Statutory Accounts mapping the reporting categories from our accounts to the RIN categories.

Confidential Information

There is no confidential information in this table.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN. The primary RIN requirement was to ensure the data in this template was based on the Audited Statutory Accounts. This is based on the RIN definition of "financial regulatory templates". We have ensured this data is based on the Audited Statutory Accounts.



Table 8.1.1.3 - PROFIT

Source of Data

The data in this template was primarily based on Power and Water's audited statutory accounts.

Estimated or actual information

The Income Tax Expense data is actual information because it is based on the Audited Statutory Accounts and the assumed tax rate of 30% is the tax rate applied across the company. We would not have an alternative assumption that would result in materially different data for the RIN template.

Methodology and assumptions

The Income Tax Expense for the Audited Statutory Accounts column was sourced directly from the Audited Statutory Accounts. The amount allocated to each of the service and adjustment columns was 30% of the Profit before Tax (PBT) in the relevant column. The adjustment column also reconciles to the difference between the Audited Statutory Accounts and Distribution business columns.

Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN. The primary RIN requirement was to ensure the data in this template was based on the Audited Statutory Accounts. This is based on the RIN definition of "financial regulatory templates". We have ensured this data is based on the Audited Statutory Accounts.



Template - 8.2 CAPEX

Table 8.2.1 - CAPEX BY PURPOSE - STANDARD CONTROL SERVICES

Table 8.2.2 - CAPEX BY PURPOSE - MATERIAL DIFFERENCE EXPLANATION

Table 8.2.3 - CAPEX OTHER

Source of Data

The actuals in 8.2.1 and 8.2.3 are derived from the Capex Backcasting Model described in Appendix A of this Basis of Preparation. The forecast data is derived from the 2014-2019 Network Pricing Determination (NPD).

The explanations in 8.2.2 were provided by the accountable line manager for each expenditure type.

Estimated or actual information

The actual expenditure information was sourced from our asset management system and our financial system. There was a significant amount of categorisation, mapping allocation and assumptions applied. We applied rules primarily based on our system data and expenditure attributes. If we started again and applied different assumptions it is likely that we would report values that are not materially different. Therefore, the RIN defines this as actual information.

The estimated information is the CPI adjusted forecast. This is because the Utilities Commission did not provide a capex allowance by the exact categories required by the AER. We have aligned the categories using judgment; however, an alternative method may have yielded a materially different allocation.

Methodology and assumptions

Table 8.2.1 includes all SCS expenditure. The expenditure per year is calculated from the Capex Model by summing the asset cost by AER Service Classification and voltage level. All non-network expenditure has been allocated to the "Other" voltage level, and capitalised overheads have been proportionally allocated to voltage levels based on the known expenditure in the other categories.



Table 8.2.3 includes all ACS expenditure. The expenditure per year is calculated from the Capex Model by summing the asset cost by AER Service Classification and voltage level. All metering services expenditure has been allocated to the "Other" voltage level. There is a small amount of Fee Based capex which has been allocated to the "Ancillary network services" category and "Other" voltage level. This expenditure consists of a small amount of capitalised overheads which have been allocated to the Fee Based alternative control service. Quoted Services capex has been allocated to the "Ancillary network services" category, and has been allocated to voltage levels on the basis of the assets installed.

Total capital contributions are the sum of cash contributions and gifted assets. Cash contributions are allocated to voltage levels in the same proportions as the expenditure on the corresponding projects. Gifted assets were assigned to voltage levels manually. The capital contributions revenue has not been deducted from the actual expenditure.

The forecast was sourced from the Utilities Commission's 2014 Network Price Determination. The Utilities Commission allowances were mapped from the Utilities Commission's expenditure categories to the expenditure categories in 8.2.1 and 8.2.3. The forecast was inflated from dollars as at June 2014 (as input to the Utilities Commission's NTRM) to dollars as at December 2017.

The AER's service classification for the 2019-24 period was applied and therefore metering capital expenditure was removed from the Utilities Commission's SCS forecasts and allocated to ACS in Table 8.2.3.

Power and Water endeavored to provide explanations at the expenditure category level where there was a material difference between forecasts and actuals. However, as previously noted, the categories do not align so judgement was required to map these. In addition, the definitions of the expenditure categories, for example augmentation expenditure, may vary, and this has not been taken into account.

The Utilities Commission's NTRM appears to have mistakenly excluded gifted assets from the gross forecast capex. Power and Water has not amended for this in our RIN response, and has instead aligned the expenditure with the NTRM, as required.



Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements

Appendix E Requirements	Compliance with the Requirements
5.1 PWC must disclose all capital contributions in the	All capital contributions (cash contributions and
basis of preparation.	gifted assets) are disclosed in RIN table 8.2.5
6.2 Revaluations or adjustments for impairment made	We have complied with this requirement.
in the audited statutory accounts must be recorded in	
the adjustments column in the financial regulatory	
templates.	
6.3 Capital works expenditure must be allocated to an	All capital expenditure has been allocated to an
asset class and must not be shown under a work in	asset class as required.
progress heading.	
6.4 Goodwill and any related impairments must not	This has not been included in the templates.
be included in the financial regulatory templates.	
8.1 Forecasts from the 2014 Network Price	Forecasts have been adjusted to the same
Determination must be adjusted to the same dollar	dollar terms as the actual data.
terms as the actual data reported in the financial	
regulatory templates at Appendix A.	
8.2 Where appropriate the forecast data is to be	The forecast data from 2014 NPD is set at real
deflated by removing the impact of the forecast	terms, \$2013-14.
inflation from the 2014 Network Price Determination	
data, and re-inflated taking into account the impact of	
actual inflation outcomes.	
8.3 Any inflation adjustments to forecast data must be	The forecast data is adjusted by 107.74%. The
detailed in the PWC' basis of preparation.	107.74% is the adjustment from Jun 2014 CPI
	(105.9) to Dec 2018 CPI (114.1)



Table 8.2.4 - CAPEX BY ASSET CLASS

Source of Data

The actuals in 8.2.4 are derived from the Capex Backcasting Model as described in Appendix A of the Basis of Preparation. The forecast data is derived from the 2014-2019 Network Pricing Determination (NPD) of the NT Utilities Commission.

Estimated or actual information

The expenditure information was sourced from our asset management system and our financial system. There was a significant amount of categorisation, mapping allocation and assumptions applied. We applied rules primarily based on our system data and expenditure attributes. If we started again and applied different assumptions it is likely that we would report values that are not materially different. Therefore, the RIN defines this as actual information.

Methodology and assumptions

Table 8.2.4 includes all SCS expenditure and all ACS Metering expenditure. The expenditure per year is calculated from the CAPEX model by summing the asset cost for the corresponding year and RAB Asset Category. For example, the transmission lines expenditure would use the following field values:

- Service Classification = "SCS"
- RAB AssetCategory = "Transmission lines"

It should be noted that there are some expenditure categories that could not be attributed to an individual RAB Asset Category, such as network and corporate overheads. In these cases the expenditure has been apportioned in proportion to the known expenditures in the other categories. It should also be noted that capitalised overheads are not included in the 8.2.4 forecast (or the Roll Forward Model), because overheads were treated as Opex in the 2014-2019 NPD.

The cash contribution amount for each RAB Asset Category has been deducted from the actual expenditure, so that the summation of tables 8.2.4 and 8.2.5 will give the gross CAPEX including gifted assets.



The forecast was sourced from the 2018-19 year from the Utilities Commission 2014 network price determination. The UC allowances were mapped from the UC asset classes to the AER determined asset classes using the mapping applied to the RAB as at 30 June 2013. The forecast was inflated from dollars as at June 2014 (as input to the UC's NTRM) to dollars as at December 2018

Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements

Appendix E Requirements	Consistency with the Requirements
5.1 PWC must disclose all capital contributions in the basis of preparation.	All capital contributions (cash contributions and gifted assets) are disclosed in RIN table 8.2.5
 6.2 Revaluations or adjustments for impairment made in the audited statutory accounts must be recorded in the adjustments column in the financial regulatory templates. 6.3 Capital works expenditure must be allocated to an asset class and must not be shown under a work in progress heading. 6.4 Goodwill and any related impairments must not be included in the financial regulatory templates. 	All capital expenditure has been allocated to an asset class as required
8.1 Forecasts from the 2014 Network Price Determination must be adjusted to the same dollar terms as the actual data reported in the financial regulatory templates at Appendix A.	Forecasts have been adjusted to the same dollar terms as the actual data
8.2 Where appropriate the forecast data is to be deflated by removing the impact of the forecast inflation from the 2014 Network Price Determination data, and re-inflated taking into account the impact of actual inflation outcomes.	The forecast data from 2014 NPD is set at real terms, \$ 2013-14



Appendix E Requirements	Consistency with the Requirements
8.3 Any inflation adjustments to forecast data must be	The forecast data is adjusted by 107.74%.
detailed in the PWC' basis of preparation.	The 107.74% is the adjustment from Jun
	2014 CPI (105.9) to Dec 2018 CPI (114.1)



Table 8.2.5 - CAPITAL CONTRIBUTIONS BY ASSET CLASS

Source of Data

The actual data in table 8.2.5 was derived from the gifted asset and capcon models as described in appendix A of the Basis of Preparation. Capcons data was extracted from a Business Intelligence report from our Financial Management System (FMS). Gifted Assets data was extracted from a monthly gifted assets report.

Estimated or actual information

Information is actual information from our financial systems.

Methodology and assumptions

There are two sources of Standard Control Service Capcons:

- Financial contributions made in relation to capital project expenditure on a particular project, in accordance with our Capcons policy.
- The asset value of assets gifted to Power and Water.

The dataset for financial contributions was obtained by extracting all contributions in the period of interest from the financial system, and linking these to actual projects in the Capex Backcasting Model described in Appendix A of the Basis of Preparation. The project categorisation from the Capex Model was then applied to the corresponding Capcon transaction, which yielded a dataset of categorised financial contributions. The transactions were then summed by the RAB Asset Category as required by RIN Table 8.2.5.

The dataset for gifted assets was obtained by compiling monthly gifted asset reports into a single dataset for the period. All gifted assets were categorised as "Connections", since the only source of gifted assets are developments relating to the connection of new customers or upgrades for existing customers.

The RAB asset category was assigned manually based the asset description. There was a minor discrepancy between the monthly gifted asset reports and the asset values in the Fixed Asset Register. To address this, the values from the monthly reports were adjusted to meet the Fixed Asset Register values.

The values in Table 8.2.5 are the sum of the output from the two data sources.



Confidential Information

There is no confidential information in this table.

Consistency with RIN requirements

Appendix E Requirements	Compliance with the Requirements
5.1 PWC must disclose all capital contributions in	All capital contributions have been disclosed
the basis of preparation	including financial contributions and gifted assets.



Table 8.2.6 - DISPOSALS BY ASSET CLASS

Source of Data

The sales proceed amounts reported in the RIN were sourced from our financial accounts (24318) trial balance.

Estimated or actual information

Information is actual information from our financial systems.

Methodology and assumptions

The sales proceed amounts reported in the RIN were sourced from our financial accounts (24318) trial balance. These amounts were then allocated to the required asset categories based on the description within individual transactions.

There were amounts that could be attributed to substations or conductors, and there were smaller amounts of disposals that we could not allocate to a specific category. These amounts were allocated to substations, distribution lines and transmission lines using the assumed proportions of 30%, 60% and 10% respectively. The basis for the allocation percentage was that the major assets being disposed of are the metals in substations conductors.

Confidential Information

There is no confidential information in this table.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.



Template - 8.4 OPEX

Table 8.4.1 - OPERATING & MAINTENANCE EXPENDITURE - BY PURPOSE

Source of Data

Primary sources are Trial Balance, Audited Statutory Accounts and our internal OPEX model.

Estimated or actual information

The RIN contains both Actual and Estimated information.

The actual information includes Audited Statutory Accounts, Adjustments, Distribution business, standard control services, alternative control services, and negotiated services. The estimated information is CPI adjusted forecast. This is because the Utilities Commission did not provide an opex allowance by the categories required by the AER. We have used our opex mapping methodology to assign forecasts to AER categories. However an alternative method may have yielded a materially different allocation.

Methodology and assumptions

The RIN template specifies "Power and Water is to list the operating expenditure categories identified in Power and Water's regulatory proposal at table 3.2.1.1 current Opex categories and cost allocations." As we did not have a table 3.2.1.1 in the RIN submitted with the Regulatory Proposal, we used the categories that we reported in the Category Analysis RIN template 3.2.1 that was submitted to the AER on 16 March.

The reporting categories used in 3.2.1 and, now, 8.4 originate from our Audited Statutory Accounts. They are:

- Employee benefits expense
- Energy and materials
- External service agreements
- Other expenses
- Repairs and maintenance expense
- Inter-group sales.



The following explains our methodology:

- Audited Statutory Accounts The amounts were sourced directly from the corporation P&L
 Statement. (Actual)
- Adjustments The amounts are calculated as the amount in the Distribution business
 column minus the amount in the Audited Statutory Accounts column. (Actual)
- Distribution business The amount in the Distribution business column is the sum of the
 amounts in the columns for standard control services, alternative control services and the
 negotiated services plus Opex for unregulated services provided by Power Services, which
 is not reported in the template. (Actual)
- Standard Control Services The amounts reported were calculated using the mapping that
 was used to create the Audited Statutory Accounts column. In other words, each financial
 account is mapped to the reporting category and the account was also mapped or
 otherwise allocated to a service class. The categorisation of accounts to service classes was
 done using the Opex Mapping Methodology described in Appendix C. (Actual)
- Alternative Control Services Our Alternative Control Services have been classified into Metering, Fee Based and Quoted Services. The Opex reported under these headings is the total Opex including a portion of non-network costs and overhead costs has been calculated using the Opex Mapping Methodology. Fee Based and Quoted Services have been further classified into Metering, Connection and Ancillary Network Services. Tables 4.3 and 4.4 report the direct Opex (i.e. excludes Overheads and Non-network) for Fee Based and Quoted Services. We attributed the Fee Based and Quoted Services Opex to the Connections, Metering and Ancillary Network Services columns using the proportion of opex for each of these categories reported in tables 4.3 and 4.3/ Finally, we added the ACS Metering Opex (from table 4.2) into the Metering column. (Actual)
- Negotiated services We do not have any negotiated services so this was reported as zero.
 (Actual)
- CPI Adjusted Forecast The Utilities Commission did not make its 2014 to 2019 Opex allowance using the categories that we needed to report in this table. We do not have a meaningful way to estimate the allowance into these categories so we have used the proportion of actual expenditure to allocate the allowance into these categories. Prior to



undertaking this allocation, we extracted the allowance from the Utilities Commission determination (\$80.75, \$m 2013-14) and escalated this amount using the inflation index from June 2014 to December 2017 to derive a nominal amount of (\$85.29, \$m nominal 2017-18). Further, the Utilities Commission allowance for Standard Control Services opex included metering costs, which are now classified as Alternative Control Services. Therefore, consistent with our Regulatory Proposal, we have deducted 3% from the allowance to provide more of a like for like comparison (\$82.73 \$m nominal 2017-18). (Estimate)

Confidential Information

There is no confidential information in these templates.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.



Table 8.4.2 - OPERATING & MAINTENANCE EXPENDITURE - BY PURPOSE - MARGINS ONLY

Source of Data

We have no information to suggest that we have "related parties" as per the AER's definition in Appendix F.

Estimated or actual information

As noted in our previous RINs, we consider that Power and Water Corporation has no related parties on the AER's definition in Appendix F. As we have no business record, the RIN defines this information as estimated.

Methodology and assumptions

As noted in our previous RINs, we consider that Power and Water Corporation has no related parties based on the AER's definition in Appendix F

Confidential Information

There is no confidential information in this template.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN. Relevantly, we have considered the AER's definition of related parties in addressing this requirement.



Table 8.4.3 - OPERATING & MAINTENANCE EXPENDITURE - EXPLANATION OF MATERIAL DIFFERENCE

Source of Data

The amounts for the classifications are derived from the OPEX model. The OPEX model allocates out the Trial Balance to the various OPEX categories required in the EB3.2.1 RIN.

Estimated or actual information

Data is actual as it relates to internal records that reconcile to the Trial Balance.

Methodology and assumptions

We used the following steps to derive and provide comment on material differences.

- 1. Input the 2018-19 forecast amounts for SCS and ACS expenditure from PWC's regulatory reporting statement for 2019-20 to 2023-24.
- 2. Input the 2018-19 actual amounts for SCS and ACS expenditure from RIN EB3.2.1 ("OPEX CATEGORIES").
- 3. Compare the amounts and calculate the variance. If material difference, explain the main factors driving the difference.

Confidential Information

There is no confidential information in these templates.

Consistency with RIN requirements

There are no specific requirements in relation to Appendix E of the Annual RIN that relate to this template. When completing the template we have given effect to the general instructions in Appendix E and the definitions in Appendix F of the RIN.