

Pricing orders

Specified procedures

*The Utilities
Commission of the
Northern Territory*

February 2018

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Executive summary

Objective

In accordance with our engagement letter dated 8 September 2017, PricewaterhouseCoopers (PwC Australia) has performed specified procedures with regard to Jacana Energy (JE) and Power and Water Corporation's (PWC) processes to comply with regulatory obligations as required by the Utilities Commission of the Northern Territory ('the Commission'). The regulatory obligations considered are:

- Electricity Pricing Order issued by the Treasurer under section 44(8) of the Electricity Reform Act (applying to customers using less than 750 MWh of electricity each year)
- Water Supply and Sewerage Services Pricing Order issued by the Treasurer under section 60(5) of the Water and Sewerage Services Act.

Background

In May 2014, the Northern Territory Parliament passed a Bill to separate Power and Water Corporation into three separate government owned corporations. The legislation came into effective on 1 July 2014.

- Power and Water Corporation (PWC) continues to manage the electricity network and remains the water and sewerage services provider.
- Jacana Energy (JE), the electricity retailer looks after electricity accounts and customer needs, issues bills and collects payment.
- Territory Generation, the power generator, supplies electricity to Jacana Energy and other electricity retailers.

The corporations are governed by various legislation administered by the Utilities Commission ('the Commission').

Two entities are in scope for the report being PWC and JE. Each have defined responsibility for compliance obligations related to metering, pricing and billing. JE and PWC's billing and metering systems and processes continue to have a level of integration with services delivered through transitional service level agreements between the licensees.

PwC Australia's scope of work included detailed testing of customer invoices and testing of controls related to the accuracy of customer invoices. A number of controls in scope have been reviewed by Jacana Energy and Power and Water Corporation's Internal Auditors. To prevent duplication, the Commission has requested that procedures are not duplicated by PwC Australia. The reviews performed by the respective Internal Auditors included:

- Review of billing and customer management process by Merit Partners (JE's Internal Auditors). The scope related to:
 - Processes performed by JE and those performed by PWC on behalf of JE as part of the Transitional Services Agreement
 - The period from 01 July 2016 to 31 December 2016.
- Review of PWC's complaints management processes by KPMG (PWC's Internal Auditors). The scope related to:
 - Processes for performed by PWC related to customer complaints management
 - Internal audit was initiated in November 2017 and draft findings are expected by end of December 2017.

Tariffs and charges

Regulated tariffs and charges – electricity, water and sewerage services

Retail electricity tariffs and charges are regulated by the Territory Government, via Pricing Orders issued by the Regulatory Minister.

The electricity pricing order applies to contestable customers using less than 750 MWh per annum. Regulated tariffs include:

- Fixed daily charges
- Charges for consumption of electricity
- Non-metered installation customers
- Street lighting customers

The water supply and sewerage services pricing order applies to all customers. Regulated tariffs include:

- Fixed daily price for specified customers
- Volumetric price for all customers
- Sewerage services – there are various price schedules for general customers, single residential dwelling, multiple residential dwelling, body corporate and non-residential sewerage customers.

Related services – electricity, water and sewerage services

The regulated pricing orders for both electricity and water and sewerage services allow the billing entity to charge for “related services”. The value of these related service charges are not specified within the pricing orders but must be “fair and reasonable”. Table 1 provides relevant extracts from each of the pricing orders.

Table 1 Regulation of related service charges

Utility	Extract of the pricing order	
Electricity	2	Regulation of retail prices during pricing period
	(1)	This electricity pricing order regulates the retail prices (inclusive of GST) a billing entity may charge prescribed customers for the sale of electricity, and for the provision of related services, during the pricing period.
	(2)	For subclause (1):
	(a)	related services are the services the billing entity provides to prescribed customers that are ancillary to supplying electricity to the customers; and
	(b)	the billing entity may charge retail prices for related services that are fair and reasonable taking into consideration the costs of supplying the electricity.
Water supply and sewerage services	11	Prices for related services
		A price charged for related services must be a fair and reasonable amount taking into consideration the costs of providing the services in an efficient manner.

Source: Notice of Issue of Electricity Pricing Order, dated 06-Jun-2017, Notice of Issue of Pricing Order [water supply and sewerage services], dated 06-Jun-2017.

Fees for related services are reviewed and approved by PWC’s Board.

Alternative Control Services – electricity

Power Networks must provide services, and charge for those services in accordance with the approved Network Service Classification.

The Network Service Classification was determined by the Utilities Commission under its then role as the Regulator under Part 3 of *The Electricity Networks (Third Party Access) Code* (the Code). The classification applies to the period 1 July 2014 to 30 June 2019. On 1 July 2015, the Australian Energy Regulatory (AER) became the Regulator of Power and Water's Electricity Network.

The Network Service Classification defines the following services:

- Direct control services – Standard Control Services (also termed ‘regulated network access services’). The AER is now responsible for the approval of prices for Standard Control Services (previously the Utilities Commission).
- Direct control services – Alternative Control Services (also termed ‘excluded network access services not subject to effective competition’). Alternative Control Services are overseen by the AER, but set by PWC. Fees are determined on fair and reasonable terms and are reviewed and approved by PWC's Board.
- Excluded network access services subject to effective competition.

Scope of control objectives

The scope of specified procedures was agreed with the Commission and includes control objectives related to the accuracy of customer invoices. These control objectives are specific to the management of regulated tariffs but also the accuracy of customer account set up and meter consumption data. Refer to Table 2 for the full scope of control objectives and **Error! Reference source not found.** for a diagram of the key processes and systems in scope.

Table 2 Scope of control objectives

Process	Control objectives
Customer account management	Customers are accurately identified in the billing systems in line with the Pricing Orders
	Meter configurations are accurately captured in the customer's account profile.
Metering	Meter reading validations flag potential incorrect meter readings and exceptions are monitored.
Pricing	Changes to tariffs are appropriately reviewed and approved prior to set up.
	Tariffs are completely and accurately set up within the billing system (including a reconciliation to the relevant pricing order).
	Testing is performed to ensure changes to tariffs are operating as expected
Billing	The billing system is set up to facilitate data flows from different meter types/configurations
	Where actual meter readings are not available, estimated/substituted meter readings are calculated in line with the approved methodology
	Billing validations flag potential incorrect meter readings and exceptions are monitored.

Source: PwC Australia

Responsibilities

JE and PWC have defined responsibilities for compliance obligations related to metering, pricing and billing.

JE and PWC's customer, billing and metering systems and processes continue to have a level of integration with services delivered through transitional service level agreements between the licensees. It is anticipated that these systems and processes will become more segregated in future with the transfer of mass market customers from the Retail Management System (RMS) to the Retail Operating System (ROS).

As previously noted, a number of processes and controls in scope have been reviewed by JE and PwC's Internal Auditors. To avoid duplication, the Commission has requested that procedures already completed by previous Internal Audit work are not duplicated by PwC Australia.

Table 3 outlines the respective responsibilities for each entity by sub-process.

Table 3 Responsibilities for key processes and sub-processes

Process	Jacana Energy	Power and Water Corporation
Customer account management		
Creating and connecting new customers	Electricity	Water supply and sewerage services
Disconnecting/restricting customers	Electricity	Water supply and sewerage services
Customer complaints management	Electricity	Water supply and sewerage services
Pricing		
Annual review of changes	Electricity	Both
Periodic review of changes (including exception reports)	Electricity	Both
Metering		
Meter installation		Both
Meter data validation		Both
Unmetered revenue (streetlights and traffic lights)		Electricity
Billing		
Billing data validation		Both
Estimating consumption		Both
Issuing invoices		Both
Reconciliation of consumption generated and billed	Electricity	Both

Source: PwC Australia analysis

Internal Audit – Billing and Customer Management

A number of controls in scope have been reviewed by Jacana Energy and Power and Water Corporation's Internal Auditors.

Merit Partners, Internal Audit for Jacana Energy

- Merit Partners has conducted a recent review of billing and customer management processes. PwC Australia obtained the Internal Audit report which was finalised with Management comments by Jacana Energy on 29-August-2017.
- The scope of the Internal Audit report included processes performed by Jacana Energy and those performed by Power and Water Corporation on behalf of Jacana Energy as part of the Transitional Services Agreement. The scope relates to the period from 01 July 2016 to 31 December 2016.

KPMG, Internal Audit for Power and Water Corporation

- KPMG is currently conducting a review of PwC's complaints management processes.

- A review was recently undertaken with all key stakeholders within Power and Water – Shared Services, IES, Water Services and Networks – in order to implement a consistent approach to the capture and logging of complaints for reporting purposes. The process review is being reviewed by KPMG and updates will be released to the business as the new process following its completion.
- PwC Australia obtained the scope of the Internal Audit engagement. The internal audit was initiated in November 2017 and draft findings are expected by end of December 2017.

At the express request of the Commission, PwC Australia has not validated the work performed by Merit Partners or KPMG. The Commission requested that to avoid duplication of procedures, PwC Australia's scope has been defined by and agreed with the Commission as follows:

- No testing was performed by PwC Australia where:
 - No exceptions were identified by IA testing (Merit Partners)
 - Exceptions were identified by IA testing, and JE/PWC Management has accepted the accuracy of the finding (Merit Partners)
 - Processes and controls are currently under review in relation to PWC's customer complaints process (KPMG).
- Additional testing was performed by PwC Australia where:
 - Exceptions were identified by IA testing, but PWC Management has not accepted the accuracy of the finding (Merit Partners). As a result, two controls were in scope relating to (1) set up of concession card customers and (2) review of exceptions from the auto edit billing process.
 - Controls were not in scope for IA testing (Merit Partners and KPMG).

The period under review by PwC Australia spans from 01 January 2017 to 31 July 2017.

The services

As agreed with the Commission, PwC Australia has performed specified procedures which are outlined in the following Schedules:

- Schedule 1 Agree tariffs and charges (as published online by JE and PWC) to the regulated pricing orders, 2014 network price determination and/or Management approval processes
- Schedule 2 Test tariffs, charges and consumption values on a sample of customer invoices issued in July 2017
- Schedule 3 Review the Internal Audit 'Meter to Cash' report (Merit Partners) and scope of the Internal Audit 'Complaints/Compliments Process' (KPMG) and determine the scope of PwC Australia's work
- Schedule 4 Perform testing of the design and operating effectiveness of controls where appropriate

Section 1 details the procedures performed and summary of results.

Key findings are included overleaf and in Section 2.

Summary of results

The table below provides a summary of PwC Australia's specified procedures undertaken for each Schedule of work and the results of the procedures:

Schedule	Summary of procedure(s)	Summary of Results
1	Agree tariffs and charges (as published online by JE and PwC) to the regulated pricing orders, 2014 network price determination and/or Management approval processes.	One exception noted related to the lack of periodic review of related service charges. Refer to Summary of Findings below.
2	Test tariffs, charges and consumption values on a sample of customer invoices issued in July 2017 including: <ul style="list-style-type: none"> 25 electricity invoices 25 water and sewerage invoices. 	No exceptions noted.
3	Review Internal Audit 'Meter to Cash' report and refine the scope of controls approach to be performed by PwC Australia (avoiding duplication of procedures).	Exceptions have already been identified and documented by Merit Partners. No additional exceptions noted by PwC Australia.
4	Test controls related to the accuracy of customer invoices for electricity, water and sewerage. Testing performed on eight controls.	Two exceptions have been noted which have impact on four of the eight controls tested. Refer to Summary of Findings below.

The table below provides a summary of PwC Australia's findings as detailed in section 2 of this report:

Ref	Schedule	Entity	Finding	Agreed Management actions
2.1	1	Power and Water Corporation	<p><i>Lack of periodic review of related service charges</i></p> <p>Charges for related services of electricity, water supply and sewerage services were last reviewed and approved by PwC's Board in November 2013. A detailed cost recovery spreadsheet was compiled at this time to estimate the time and costs associated with customer service centre activities eg responding to calls, advising customers, sending SMS, raising service requests etc.</p> <p>Whereas tariffs such as alternative control services are reviewed by the PwC Board on an annual basis, the related service charges have not been reviewed or escalated since 2013. There is no process or control currently in place to ensure that costs continue to be charged on a "fair and reasonable" basis.</p>	<p>PwC will review its remaining related charges.</p> <p>The frequency will be established when a methodology (Procedure) is drafted. This procedure will support the related charges review process. This procedure will also describe the method to for verification of costs assumptions and the process for Board approvals. (Recommendations 3 and 4).</p>
2.2	4	Power and Water Corporation	<p><i>System calculation of estimated meter reads is not formally documented and variances were identified when recalculating expected estimated reads</i></p> <p>In the event that an actual meter read cannot be obtained, the system Gentrack will estimate the electricity or water consumption for the billing period.</p> <p>The algorithm for this estimation is complex and was originally hard-coded as part of Gentrack's system set-up. The system rules are not formally documented. Variances have been identified between the expected estimate calculation and the actual system estimate. The system calculation is not periodically reviewed and validated.</p>	<p>PwC have raised formal request with vendor Gentrack to have this documented. The expected delivery date is end of January 2018. And this document will include the necessary adjustments to system rules. The reviewed system rules will be tested then implemented to in Gentrack.</p> <p>PwC will develop a verification procedure that will cover the consumption report, set out the threshold parameters and triggers for variances investigations.</p>

Ref	Schedule	Entity	Finding	Agreed Management actions
2.3	4	Power and Water Corporation	<p><i>Lack of periodic review of system thresholds for metering and billing validation tests</i></p> <p>System validation tests have been embedded in the metering and billing systems to ensure the accuracy of invoices issued to customers. These systems include:</p> <ul style="list-style-type: none"> • MV-RS: Basic accumulation electricity meter reads and water supply • MV-90: Interval electricity meter reads • Gentrack: Billing system for electricity, water supply and sewerage services. <p>There is currently no process to review and approve the definition of these validation tests including, for example:</p> <ul style="list-style-type: none"> • Categorisation of a test as system fatal vs. non-fatal • Validation sensitivities adjusted for meter types eg interval vs accumulation meters • Threshold of exceptions eg high/low consumption values. 	<p>The parameters for Meter Data Validation will be included in the User Acceptance Testing (UAT). Testings are due to begin in Jan/Feb 2018. The completion is estimated to 30 June 2018.</p> <p>PWC will monitor the tests and assess the impact of the validation process.</p> <p>Once the validation tests are concluded PWC will evaluate the results and determine future validations tests periodicity and triggers.</p>

Scope limitations

Whilst our engagement may involve the analysis of financial information and accounting records, it does not constitute an audit in accordance with Australian Auditing Standards or a review in accordance with Australian Auditing Standards applicable to review engagements and accordingly no such assurance will be provided in our report.

PwC Australia has reviewed the Internal Audit (IA) report of Merit Partners (internal auditors for Jacana Energy). While our scope of specified procedures has been informed by the IA results, PwC Australia has not validated the work performed by Merit Partners or KPMG. To prevent duplication, the Commission has requested that procedures are not duplicated by PwC Australia.

PwC Australia has not included in this report full documentation of the exceptions or Management responses from the Merit Partners Internal Audit report. The KPMG Internal Audit Report has not been finalised at this stage of reporting (draft report is anticipated from KPMG in December 2017).

The Commission should acknowledge and understand that:

- they have responsibility for determining the adequacy or otherwise of the procedures performed by us
- they have responsibility for determining whether the findings provided by us, in combination with any other information obtained, provide a reasonable basis for any conclusions which you or the intended users wish to draw on the subject matter
- they have responsibility to engage other parties and request information as required in accordance with the *Utilities Commission Act*
- the procedures that we will perform will not constitute a reasonable or limited assurance engagement in accordance with AUASB standards and, consequently, no assurance will be provided.

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1 Procedures performed and summary of results

The table below provides the user with a summary table of our specified procedures, approach, results and findings. Further detail is referenced within the Appendices.

Schedule	Specified procedure	Results	Recommendation	Management response
1	Agree tariffs and charges (as published online by Jacana Energy and Power and Water Corporation) to the regulated pricing orders, 2014 network price determination and/or Management approval processes	<p>Procedure</p> <ul style="list-style-type: none"> Electricity, water and sewerage service charges were identified as published by Jacana Energy (JE) and Power and Water Corporation (PWC) on their websites: https://jacanaenergy.com.au/ http://www.powerwater.com.au/ Published charges were agreed to: <ul style="list-style-type: none"> a Regulated pricing order (effective 1 July 2017) b Regulated pricing order (effective prior to 1 July 2017) where the website continues to publish historic rates for reference c Schedule of alternative control services under the network price determination as approved by PWC's Board in June 2017 d Schedule of miscellaneous related services as approved by PWC's Board in November 2013 <p>Results</p> <p>Detailed test results are documented in Appendix C Tariffs Published Online.</p> <p>One exception was noted; "related service charges" have not been formally reviewed since 2013. There is no process or control currently in place to review these costs to confirm they continue to be charged on a "fair and reasonable" basis.</p>	<p>Entity: PWC</p> <p>Exception noted. Recommendations are detailed in Finding 2.1 Lack of periodic review of related service charges.</p>	<p>Entity: PWC</p> <p>Customer Service only applies the charges and hasn't been involved with charged reviews process. PWC will discuss the findings and recommendations with Office of the CFO teams.</p> <p>From 1 July 2019, all Alternate Control Service prices will be directly regulated by the Australian Energy Regulator (AER). PWC is currently conducting a detailed review of Alternate Control Services charges which will form part of its Regulatory Proposal to be submitted to the AER by 31 January 2018.</p> <p>PWC will review its remaining related charges subsequent to Jacana Energy's exit from the Power and Water's billing system.</p>
2	Test tariffs, charges and consumption values on a sample of customer invoices issued in July 2017	<p>Procedure</p> <ul style="list-style-type: none"> Obtained a listing of customer invoices issued between 01-Jul-2017 and 31-Jul-2017 for electricity, water supply and sewerage services as regulated under the pricing orders. Selected a sample of 25 electricity invoices and 25 water supply/sewerage service invoices with a cross section of contract plan descriptions. For the sample of 25 electricity invoices, PwC Australia agreed: <ul style="list-style-type: none"> - Pre-July 2017 tariff to pricing order - Post-July 2017 tariff to pricing order - Pensioner concession tariff to RMS customer account profile - Related service charges to PWC Board approved schedule (Nov-2013) - Metering consumption kWh to Gentrack Consumption History Summary – MVRs DERETE report 	No exceptions noted.	Not applicable.

Procedures performed and summary of results

Schedule	Specified procedure	Results	Recommendation	Management response
		<ul style="list-style-type: none">- Number of days to Gentrack Consumption History Summary – MVRs DERETE report• Recalculated electricity invoice values based on bill components; tariffs, number of days, consumption values, related service charges and concession discount.• For sample of 25 water supply/sewerage service invoices, PwC Australia agreed:<ul style="list-style-type: none">- Pre-July 2017 tariff to pricing order- Post-July 2017 tariff to pricing order- Metering consumption KL to Gentrack Consumption History by meter- Number of days to Gentrack Consumption History by meter- Number of sewerage fittings to RMS customer account profile <p><i>Note there were no related charges or pensioner concessions on the sample of 25 water supply/sewerage service invoices selected.</i></p> • Recalculated water supply/sewerage service invoice values based on bill components; tariffs, number of days, number of sewerage fittings, consumption values.		
		<p>Results</p> <p>Detailed test results are documented in Appendix C Error! Not a valid result for table..</p>		
3	Review Internal Audit ‘Meter to Cash’ report. Scope controls approach to be performed by PwC Australia.	<p>Procedure</p> <ul style="list-style-type: none">• Conducted a desktop review of work performed by Jacana Energy’s Internal Audit (IA) with respect to the Meter to Cash Report.• Identified whether control objectives were included in the scope of work performed by the Internal Auditors with respect to:<ul style="list-style-type: none">- Customer account management- Metering- Pricing- Billing <p>Results</p> <p>Detailed test results are documented in Appendix A Scope of controls procedures. Refer also to schedules 4.1 to 4.8 below for additional testing performed by PwC Australia.</p>	<p>Entity: JE</p> <p>No additional exceptions noted. Exceptions have already been identified and documented by Merit Partners.</p>	Not applicable.
4.1.	Reconciliation of concession card customer data between PwC and Department agency and system configuration for treatment of concession card data for billing	<p>Procedure</p> <ul style="list-style-type: none">• Held inquiry meetings with key stakeholders including PwC Customer Services Centre, PwC Compliance and JE Customer Care• Obtained documentation in support of PwC response to concession interface errors with NT Government Department of Health including:<ul style="list-style-type: none">- Example of Billing Summary Report generated 12-Jul-2017- Screenshot of memo added to customer account in RMS- Spreadsheet log of concession errors for billings in week ending 30-Jun-2017• Obtained documentation in support of JE process to contact the customer and notify of concession mismatches including:<ul style="list-style-type: none">- Customer screenshot evidencing result of successful customer contact	No exceptions noted.	Not applicable.

Procedures performed and summary of results

Schedule	Specified procedure	Results	Recommendation	Management response
		<ul style="list-style-type: none"> - Customer screenshot evidencing note for future customer reference (contact unsuccessful). <p><i>Results</i></p> <p>The NT Pensioner and Carer Concession Scheme is managed by the NT Government Department of Health (DoH). There is an interface between the concession database maintained by DoH and RMS which automatically checks the eligibility of a person to a concession based on a three-way match of:</p> <ul style="list-style-type: none"> • Customer name • Customer address • Customer concession identification number. <p>All concessions are automatically applied to invoices as part of the standard billing process in instances where the three-way match is satisfied.</p> <p>In instances where the three-way match is not satisfied, a concession will not be applied to a customer invoice and will appear as an exception on the daily Billing Summary Report.</p> <p>PWC log the mismatches in an Excel spreadsheet and share the list on a weekly basis with JE. JE Customer Care have processes in place to contact the customer. If contact is successful, the customer is charged with responsibility for correcting the mismatch with the relevant party (JE or DoH). If contact is not successful, JE will include a note on the customer account for future reference and customer resolution.</p>		
4.2.	Controls regarding unmetered revenue (streetlights and traffic lights)	<p><i>Procedure</i></p> <ul style="list-style-type: none"> • Held inquiry meetings with key stakeholders including the Customer Services Centre • Noted that each quarter CSC Billing Services receive: <ul style="list-style-type: none"> - Spreadsheet from Power Networks summarising streetlight installations connected to the power network - Spreadsheet from the Department of Infrastructure summarising traffic light and other associated infrastructure installations connected to the power network. • Spreadsheets are used by the Customer Service Manager to generate invoices for unmetered revenue. • Obtained traffic light invoices and supporting signals spreadsheet for Q3 2017 • Obtained streetlight invoices and supporting spreadsheet for Q4 2017 • Inspected evidence of review and approval for respective quarterly invoicing (email correspondence) <p><i>Results</i></p> <p>No issues noted.</p>	No exceptions noted.	Not applicable.
4.3.	Interfaces between MV90 and MVRs and RMS are monitored for completeness and accuracy of data transfers.	<p><i>Procedure</i></p> <ul style="list-style-type: none"> • Held inquiry meetings with key stakeholders including the Power Networks and Compliance • Sighted evidence of upload progress tracker and error messages automatically generated in event of upload failure. 	No exceptions noted.	Not applicable.

Procedures performed and summary of results

Schedule	Specified procedure	Results	Recommendation	Management response
	Exceptions are resolved in a timely manner.	<p>Results</p> <p>The transfer of data between metering systems and RMS is not an automatic scheduled interface. Each metering data file must be loaded by a user and is individually monitored for success.</p> <p>Metering data files are converted into a standard format for upload into the billing system, RMS. The folder is saved to the Z drive of RMS.</p> <p>An automated message alerts the user as to the success/failure of the upload. A process monitor screen shows this success. RMS automatically moves the data file from input to an archive folder. The billing process is unable to proceed until such time as a populated data file has been uploaded into RMS.</p> <p>An email is also auto generated to the user of the process which failed, to alert them of the failure and provide details which relevant for System Administrator or Systems Support to diagnose and correct the problem.</p>		
4.4.	Meter data validation activities performed within MV90 and MVRs	<p>Procedure</p> <ul style="list-style-type: none"> Held inquiry meetings with key stakeholders including Power Network Metering Services Noted that Metering Services perform validation checks on metering data received in MV-90 and MV-RS. Only data files that have satisfied validation checks are uploaded into RMS for billing. <p>Results</p> <p>Detailed test results are documented in Finding 2.3.</p> <p>User acceptance testing is performed at times of system upgrades to ensure that the legacy validation tests are performing as expected. However, there is currently no process to review and approve the definition of these validation tests.</p>	<p>Entity: PWC</p> <p>Exception noted.</p> <p>Recommendations are detailed in Finding 2.3</p> <p>Lack of periodic review of system thresholds for metering and billing validation tests.</p>	<p>Entity: PWC</p> <p>The parameters for Meter Data Validation will be included in the User Acceptance Testing (UAT). Testings are due to begin in Jan/Feb 2018. The completion is estimated to 30 June 2018</p>
4.5.	If an actual read cannot be obtained, a customer is billed on a substitute reading which is automatically calculated by RMS in line with PWC's approved methodology.	<p>Procedure</p> <ul style="list-style-type: none"> Held inquiry meetings with key stakeholders including the Customer Services Centre Inspected customer invoices with estimated reads Performed additional simulation of customer invoice estimates with consumption period between January to September 2017 Selected one sample of the following invoice types: <ul style="list-style-type: none"> Water – domestic Water – other Electricity – domestic basic meter Electricity – domestic basic + solar PV Electricity – commercial basic meter Identified the estimated usage amount as per the invoice Recalculated the expected estimated usage amount <ul style="list-style-type: none"> Identified the first actual meter consumption read starting 12 months prior to the estimation date Calculated the average usage per day from the last actual read date 	<p>Entity: PWC</p> <p>Exception noted.</p> <p>Recommendations are detailed in Finding 2.2</p> <p>System calculation of estimated meter reads.</p>	<p>Entity: PWC</p> <p>PWC have raised formal request with vendor Gentrack to have this documented. The expected delivery date is end of January 2018.</p>

Procedures performed and summary of results

Schedule	Specified procedure	Results	Recommendation	Management response
		<ul style="list-style-type: none"> - Recalculated the expected estimate from the number of days used • Compared the expected estimate with the estimate invoiced to the customer <p>Results</p> <p>System rules for calculating estimated reads are not formally documented. Variances have been identified when recalculating estimated reads with reference to actual meter reads recorded 12 months prior.</p> <p>Detailed testing results are documented in Appendix E and Finding 2.2.</p>		
4.6.	Review of exception reports resulting from the auto-edit process	<p>Procedure</p> <ul style="list-style-type: none"> • Held inquiry meetings with key stakeholders including the Customer Services Centre • Selected sample of 25 daily auto-edit reports for domestic and commercial each • Inspected documentation of auto-edit reports process to validate: <ul style="list-style-type: none"> - Auto-edit report had been generated - Non-fatal exceptions were logged and retained in exceptions tracking spreadsheet - Evidence of exceptions investigation and resolution - Details of reviewer ID and date are retained as evidence of review <p>Results</p> <p>Auto-edit exception codes are documented in Appendix F.</p> <p>Detailed testing results are documented in Finding 2.3.</p> <p>As noted in #4.4, user acceptance testing is performed at times of system upgrades to ensure that the legacy validation tests are performing as expected. However, there is currently no process to review and approve the definition of these validation tests.</p>	<p>Entity: PWC</p> <p>Exception noted. Recommendations are detailed in Finding 2.3</p> <p>Lack of periodic review of system thresholds for metering and billing validation tests.</p>	<p>Entity: PWC</p> <p>The parameters for Meter Data Validation will be included in the User Acceptance Testing (UAT). Testings are due to begin in Jan/Feb 2018. The completion is estimated to 30 June 2018.</p>
4.7.	System configuration to automatically workflow review and resolution of non-fatal billing validation tests	<p>Procedure</p> <ul style="list-style-type: none"> • Held inquiry meetings with key stakeholders including the Customer Services Centre and Compliance <p>Results</p> <p>Auto-edit exceptions are grouped into fatal system and non-fatal errors.</p> <p>It is a business expectation that all non-fatal exceptions should be manually reviewed and investigated by CSC staff. However, if no action is taken, these bills will automatically invoice after three days.</p> <p>Auto-edit exception reports are exported into MS Excel to allow members of the PWC Billing Services team to document the outcome of the checks performed. This is a manual process which has greater potential for control breakdown.</p>	<p>Entity: PWC</p> <p>PwC Australia has discussed with PWC the potential for a queue management system that would automatically workflow the non-fatal exceptions to the CSC group.</p> <p>Evidence of investigation would be logged in the system as part of the audit trail.</p> <p>Investigation into non-fatal exceptions would be mandated as part of the workflow.</p>	<p>Entity: PWC</p> <p>PWC has confirmed that a queue management system has been considered by the business. It was a business decision not to pursue this path but instead continue with the manual exceptions review process.</p>
4.8.	Configuration of system validation tests, such as	<p>Procedure</p> <ul style="list-style-type: none"> • Held inquiry meetings with key stakeholders including the Customer Services Centre 	<p>Entity: PWC</p>	<p>Entity: PWC</p>

Procedures performed and summary of results

Schedule	Specified procedure	Results	Recommendation	Management response
	high/low thresholds, are periodically reviewed ie every 1-2 years and in the event of a significant change	<ul style="list-style-type: none"> Inspected documentation of test script for auto edit and auto billing process to ensure functioning correctly and setting validation parameters [October 2008] Inspected documentation of auto-billing parameters – retail work instruction [June 2010] Inspected documentation of auto-billing procedure [June 2010] <p><i>Results</i></p> <p>Detailed testing results are documented in Finding 2.3.</p> <p>As noted in #4.4, user acceptance testing is performed at times of system upgrades to ensure that the legacy validation tests are performing as expected. However, there is currently no process to review and approve the definition of these validation tests.</p>	<p>Exception noted.</p> <p>Recommendations are detailed in Finding 2.3</p> <p>Lack of periodic review of system thresholds for metering and billing validation tests.</p>	<p>The parameters for Meter Data Validation will be included in the User Acceptance Testing (UAT). Testings are due to begin in Jan/Feb 2018. The completion is estimated to 30 June 2018</p>

2 Detailed findings and recommendations

2.1 Lack of periodic review of related service charges

2.1.1 Finding

There are a number of service charges which are additional to a standard utilities bill and relate to additional services provided such as reconnections after a customer's failure to pay or special meter readings at the request of the customer.

There are two key components to these service charges:

- Alternative control service (ACS) charges which are overseen by the AER, but set by PWC's Board
- Charges for related services which are reviewed and approved by PWC's Board.

Alternative control services are reviewed and approved by the PWC Board on an annual basis. An ACS spreadsheet is prepared by PWC's Economics team with estimated costs on a time and materials basis.

There is no process or control currently in place for PWC to review charges for related services and confirm whether they continue to be charged on a "fair and reasonable" basis.

Charges for related services of electricity, water supply and sewerage services were last reviewed and approved by PWC's Board in November 2013. A detailed cost recovery spreadsheet was compiled at that time to estimate the time and costs associated with customer service centre activities eg responding to calls, advising customers, sending SMS, raising service requests etc.

There is an additional water service charge which has not been formally reviewed since 1999 when the charge was last regulated by the Northern Territory Minister for Essential Services.

Table 7 in Appendix A shows related charges for electricity and water supply and sewerage services which were last approved by PWC's Board on 21 November 2013. These are also identifiable in Table 4 and Table 5.

Table 4 shows the tariffs for electricity related charges which are advertised on both PWC and JE's websites.

Table 4 Related charges published online – electricity

Fee description	Date of PWC Board approval	Establishmt. fee	Reconnection after failure to pay (No CT Meter)		Reconnection after failure to pay (CT Meter)		New prepayment meter connection	Reprint statement (per statement)	Billing data provision
<i>Hours¹</i>		<i>BH</i>	<i>BH</i>	<i>AH</i>	<i>BH</i>	<i>AH</i>	<i>BH</i>	<i>n/a</i>	<i>n/a</i>
Related charge ⁴	Nov-2013	\$ 56	\$ 30	\$ 86	\$ 30	\$ 86	\$ 56	\$ 8.50	\$ 32
Alternative control service charge ⁵	Jun-2017	-	\$ 95	\$ 766 ²	\$ 338	\$ 1,009 ³	\$ 475	—	—
Charge effective 1-Jul-2017 ⁶		\$ 56	\$ 125	\$ 852	\$ 368	\$ 1,095	\$ 531	\$ 8.50	\$ 32

Note

¹ Business hour (BH) connections are from Monday to Friday, 6.00am to 3.00pm. After hours (AH) are outside these times.

² Includes \$95.00 standard fee for reconnection plus \$671.00 additional cost for afterhours call out.

³ Includes \$338 standard fee for reconnection plus \$671.00 additional cost for afterhours call out.

Source:

⁴ **Related charge approved by PWC Board** – Power and Water Corporation, *Board Paper*, 21 November 2013.

⁵ **Alternative control service charge** – Power and Water Corporation, *2017-18 Alternative Control Charges*, June 2017.

⁶ **Published price effective 01-Jul-2017** – Power and Water Corporation website
http://www.powerwater.com.au/_data/assets/pdf_file/0003/146820/Tariff_brochure_-_1_July_2017_-_Web_ready.PDF

Jacana Energy website: https://jacanaenergy.com.au/my_account/pricing#domestictariffs,
https://www.jacanaenergy.com.au/news_and_publications/archive/tariffs_and_prices/pricing#electricityservicecharges

Table 5 shows the related charges for water supply and sewerage services which are advertised on PWC's website.

Table 5 Related charges published online – water supply

Fee description	Date of PWC Board approval	Establishment of new water account	Transfer of existing water account	Special meter readings requested by the customer ³	Removal of water restrictor
Special meter readings requested by the customer	Jun-1999	-	-	\$ 50	-
Related charge ¹	Nov-2013	\$ 56	\$ 56	-	\$ 40
Water services charge to install/remove water restrictor ¹	Nov-2013	\$ 55	-	-	\$ 55
Charge effective 1-Jul-2017 ²		\$ 111	\$ 56	\$ 50	\$ 95

Source:

¹ **Related charge approved by PWC Board** – Power and Water Corporation, *Board Paper*, 21 November 2013.

² **Price effective 01-Jul-2017** – Power and Water Corporation website
http://www.powerwater.com.au/_data/assets/pdf_file/0003/146820/Tariff_brochure_-_1_July_2017_-_Web_ready.PDF

³ **Special meter readings** – Pricing determined under the *Amendments of Water Supply and Sewerage Regulations*, Regulations 1999, No.24 dated 30 June 1999. Regulations under the *Water Supply and Sewerage Act*.

2.1.2 Recommendations

PWC Management should:

- 1 Agree a methodology to calculate costings for related charges for electricity, water supply and sewerage services
- 2 Agree the frequency of review for related charge costs eg annual wage escalation and/or periodic activity based cost analysis
- 3 Ensure proposed costs are appropriately reviewed to confirm accuracy of cost assumptions and calculations
- 4 Ensure proposed costs are appropriately reviewed by PWC Board including cost assumptions and proposed retail margins
- 5 Integrate related charge cost updates with existing change management procedures including:
 - Communication with Jacana Energy and other retailers
 - Updates into the billing system
 - Publication online

2.1.3 Agreed management actions

- 1 PWC will review its remaining related charges.
- 2 The frequency will be established when a methodology (Procedure) is drafted. This procedure will support the related charges review process. This procedure will also describe the method to for verification of costs assumptions and the process for Board approvals (Recommendations 3 and 4).

2.1.4 Responsibility

Action owner: Economics

- 1 Review of related services charges. 2 Development of procedure

Due date: 30/03/2018 **Due date:** 30/06/2018

2.2 System calculation of estimated meter reads is not formally documented and variances were identified when recalculating expected estimated reads

2.2.1 Finding

For customers with basic (accumulation) electricity meters, meter data is collected manually by teams of operators who visit each house and enter the household's meter values onto a handheld device.

If the operator is unable to gain access to the meter, they will record a 'skip code' eg gate locked, dog in yard etc.

In this event, the system Gentrack will estimate the electricity consumption for the period because an actual meter read cannot be obtained.

The algorithm for this estimation is not formally documented. It is understood that the standard estimating routine is based on an average historical daily usage multiplied by the number of outstanding days for current billing. The average daily usage value is calculated based on the previous 12 months where actual data is available.

It is unknown when the system algorithm was last reviewed and tested; it was originally hard-coded as part of Gentrack's initial system set-up. It is unknown whether it has been updated to reflect:

- Seasonality of customer demand (calculation is based on average usage in full 12 month period which may not account for higher expected demand in summer months)
- Installation of distributed generation eg solar panels
- Alternative methodology for missing interval meter records (in event of data transfer error/failure between the customer's smart meter and MV-90, PWC's metering database).

We have undertaken a simple comparison to understand the accuracy of the current algorithm.

The table below shows results of the recalculation of estimated meter reads. Variances were identified for seven out of seven samples selected across a cross-section of customer types and utilities.

Table 6 PwC Australia recalculation of estimated reads

Ref	Utility	Meter	Customer type	Historical record of consumption in previous 12 months			PwC Australia calculation of average daily usage based on previous 12 months	Number of days to be estimated	System estimate of kWh	PwC Australia recalculation of kWh with reference to 12 months historical data	Difference between Gentrack estimate and recalculated estimate	
				kWh	Days	kWh per day					kWh	%
1	Water	Water	Other	302	356	0.8		92	0	78.0	78.0	n/a
2	Water	Water	Domestic	359	114	0.3		91	30	28.9	-1.1	-4%
3	Electricity	Basic	Commercial	3864	356	10.9		92	980	998.6	18.6	2%
4	Electricity	Basic	Domestic	1718	364	4.7		89	330	420.1	90.1	27%
5	Electricity	Basic	Domestic	5730	364	15.7		89	1790	1,401.0	-389.0	-22%
6	Electricity	Basic	Domestic	449	300	1.5		89	150	133.2	-16.8	-11%
7	Electricity	Basic + PV	Domestic	11493	279	41.2		86	2572	3,542.6	970.6	38%

Source: Power and Water Corporation, Customer Services, PwC Analysis

2.2.2 Recommendations

PWC Management should:

- 1 Formally document the methodology for estimating customer consumption
- 2 Review the automated rules implemented in Gentrack to ensure they align to the documented methodology (note that system rules may need to account for updates to the methodology including revised assumptions for missing interval meter data, solar panel metering, calculation of average daily usage by customer group etc)
- 3 Develop a review process to validate the accuracy of Gentrack's system estimation. This might include:
 - Creating and executing a report of estimated consumption vs actual consumption
 - Determining a percentage/absolute threshold for investigating variances between expected and actual estimated meter reads (on an individual and/or cumulative basis)
 - Investigating and resolving variances in excess of agreed thresholds.

2.2.3 Agreed management actions

- 1 PWC have raised formal request with vendor Gentrack to have this documented. The expected delivery date is end of January 2018. And this document will include the necessary adjustments to system rules. The reviewed system rules will be tested then implemented to in Gentrack.
- 2 PWC will develop a verification procedure that will cover the consumption report, set out the threshold parameters and triggers for variances investigations.

2.2.4 Responsibility

Action owner: Customer Service Centre (CSC)

Due date: 30/06/2018

2.3 Lack of periodic review of system thresholds for metering and billing validation tests

2.3.1 Finding

System validation tests have been embedded in the metering and billing systems to ensure the accuracy of invoices issued to customers. These systems include:

- MV-RS: Basic accumulation electricity meter reads and water supply
- MV-90: Interval electricity meter reads
- Gentrack: Billing system for electricity, water supply and sewerage services.

Meter reads are validated in these metering systems before they are uploaded into Gentrack for billing. Validation tests are executed in Gentrack as part of the Auto-Edit process in preparation for billing.

Each bill which passes the validation tests will move automatically to the Auto Billing stage, where they remain un-billed until the Auto Billing process is initiated. Each bill which fails the validation tests is grouped into one of two categories, Non-Fatal and System Fatal.

If a bill fails 'System Fatal' exception, it will be automatically excluded from the bill sequence. The invoice will have to be raised manually by a Billing agent.

If a bill fails a 'Non-Fatal' exception, the exception will be reviewed and investigated by a Billing agent. If no action is taken, the bill will automatically invoice after three (3) days.

User acceptance testing is performed at times of system upgrades to ensure that the legacy validation tests are performing as expected. However, there is currently no process to review and approve the definition of these validation tests including, for example:

- Categorisation of a test as system fatal vs. non-fatal
- Validation sensitivities adjusted for meter types eg interval vs accumulation meters
- Threshold of exceptions eg high/low consumption values.

2.3.2 Recommendations

PWC Management should:

- 1 Review and agree the definition of validation tests by applying current business knowledge eg. data analysis of consumption to determine range of expected high/low range, review of erroneous bills previously issued, feedback from customer complaints process etc.
- 2 Assess the impact of changing the definition of validation tests (weighing benefits of improved bill accuracy and reduced costs of customer complaints and reissuing bills against the potential cost of increased workload for Billing staff)
- 3 Agree the frequency of review of validation definitions eg
 - On a periodic basis
 - In the event of a significant change eg new meter configurations (solar etc).

2.3.3 Agreed management action

- 1 The parameters for Meter Data Validation will be included in the User Acceptance Testing (UAT) for the Networks/Jacana Transition. Testings are due to begin in Jan/Feb 2018. The completion is estimated to 30 June 2018.
- 2 PWC will monitor the tests and assess the impact of the validation process.

- 3 Once the validation tests are concluded PWC will evaluate the results and determine future validations tests periodicity and triggers.

2.3.4 Responsibility

Action owner: Customer Service Centre (CSC)

Due date: 30/06/2018

Appendices

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Appendix A Scope of controls procedures

The table below details the scope of controls agreed by PwC Australia with the Commission to meet the control objectives.

Internal Audit – Billing and Customer Management

A number of controls in scope have been reviewed by Jacana Energy's Internal Auditors, Merit Partners, in a recent review of billing and customer management processes. PwC Australia obtained the Internal Audit report which was finalised with Management comments by Jacana Energy on 29-August-2017.

The scope of the Internal Audit report included processes performed by Jacana Energy and those performed by Power and Water Corporation on behalf of Jacana Energy as part of the Transitional Services Agreement. The scope relates to the period from 01 July 2016 to 31 December 2016.

PwC Australia has not validated the work performed by Merit Partners.

Test approach

PwC Australia's scope has been defined and agreed with the Commission as follows:

- No testing was performed by PwC Australia where:
 - No exceptions were identified by IA testing
 - Exceptions were identified by IA testing, and JE/PWC Management has accepted the accuracy of the finding.
- Additional testing was performed by PwC Australia where:
 - Exceptions were identified by IA testing, but PWC Management has not accepted the accuracy of the finding (two controls in scope relating to (1) set up of concession card customers and (2) review of exceptions from the auto edit billing process).
 - Controls were not in scope for IA testing.

Detailed testing results

Process	Control objectives	Control description	Result – Internal Audit	Additional testing performed by PwC Australia
Customer account management	<ul style="list-style-type: none"> Customers are accurately identified in the billing systems in line with the EPO and WSPO Meter configurations are accurately captured in the customer's account profile 	Quality assurance controls to verify that customer details are accurately recorded in RMS and connections are correctly classified for billing purposes	Exceptions identified by Internal Audit (Merit Partners)	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>None</p>
	<ul style="list-style-type: none"> Customers are accurately identified in the billing systems in line with the EPO and WSPO Meter configurations are accurately captured in the customer's account profile 	Review of exception report identifying significant changes to customer details eg change from a residential to commercial classification or from flat rate to Switch2Six rate	Exceptions identified by Internal Audit (Merit Partners)	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>None</p>
	<ul style="list-style-type: none"> Customers are accurately identified in the billing systems in line with the EPO and WSPO 	Review of exceptions identified by Billing Summary Reports	Exceptions identified by Internal Audit (Merit Partners)	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>None</p>
	<ul style="list-style-type: none"> Customers are accurately identified in the billing systems in line with the EPO and WSPO 	Controls regarding the reconciliation of concession card customer data between PwC and Department agency and system configuration for treatment of concession card data for billing.	Exceptions identified by Internal Audit (Merit Partners)	<p>PwC has not accepted the observation or recommendations made by Merit Partners.</p> <p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.1; <i>Reconciliation of concession card customer data between PwC and Department of Health.</i></p> <p>Results</p> <p>No exceptions noted.</p>

Scope of controls procedures

Process	Control objectives	Control description	Result – Internal Audit	Additional testing performed by PwC Australia
Metering	<ul style="list-style-type: none"> Meter reading validations flag potential incorrect meter readings and exceptions are monitored 	Management review of consumption billed to consumption generated (kWh Consumption Data spreadsheet)	Exceptions identified by Internal Audit (Merit Partners)	<p>Validated by enquiry with PWC and JE:</p> <ul style="list-style-type: none"> Power Networks perform a 12-month reconciliation of actual meter reads against Market Operator settlement statements Jacana Energy perform a monthly reconciliation of network charges invoiced by PWC and network charges for consumption billed as per RMS billing system. <p>Power Networks</p> <ul style="list-style-type: none"> Obtained draft documentation of methodology for Market Operator – I-NTEM Settlement Comparison Settlement System calculates the difference at the Pool Price Point between: <ul style="list-style-type: none"> Total Generator meter quantities generated Total Retailer trading interval meter quantities less technical losses <p>Jacana Energy</p> <ul style="list-style-type: none"> Exceptions identified by Internal Audit <p>Response by PwC Australia</p> <p>No further testing.</p> <p>JE Management has accepted the finding and has developed an action plan.</p>
	<ul style="list-style-type: none"> The billing system is set up to facilitate data flows from different meter types/configurations 	Controls regarding unmetered revenue (streetlights and traffic lights)	Exceptions identified by Internal Audit (Merit Partners)	<p>PWC Management has accepted the finding and implemented an action plan.</p> <p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.2; <i>Controls regarding unmetered revenue (streetlights and traffic lights)</i></p> <p>Results</p> <p>No exceptions noted.</p>
	<ul style="list-style-type: none"> The billing system is set up to facilitate data flows from different meter types/configurations 	Interfaces between MV90 and MVRs and RMS are monitored for completeness and accuracy of data transfers. Exceptions are resolved in a timely manner.	n/a	<p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.3; <i>Interfaces between MV90 and MVRs and RMS are monitored for completeness and accuracy of data transfers. Exceptions are resolved in a timely manner.</i></p> <p>Results</p> <p>No exceptions noted.</p>

Scope of controls procedures

Process	Control objectives	Control description	Result – Internal Audit	Additional testing performed by PwC Australia
	<ul style="list-style-type: none"> Meter reading validations flag potential incorrect meter readings and exceptions are monitored 	Meter data validation activities performed within MV90 and MVRs on receipt of data from smart meters and handheld devices respectively. If the data received fails these validation tests, the exception is reviewed on a daily basis by the Metering team.	n/a	<p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.4; <i>Meter data validation activities performed within MV90 and MVRs</i></p> <p>Results</p> <p>No exceptions noted.</p>
	<ul style="list-style-type: none"> Where actual meter readings are not available, estimated/substituted meter readings are calculated in line with the approved methodology 	If an actual read cannot be obtained, a customer is billed on a substitute reading which is automatically calculated by RMS in line with PwC's approved methodology.	n/a	<p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.5; <i>If an actual read cannot be obtained, a customer is billed on a substitute reading which is automatically calculated by RMS in line with PwC's approved methodology.</i></p> <p>Results</p> <p>No exceptions noted.</p>

Scope of controls procedures

Process	Control objectives	Control description	Result – Internal Audit	Additional testing performed by PwC Australia
Pricing	<ul style="list-style-type: none"> Changes to tariffs are appropriately reviewed and approved prior to set up 	Tariff changes are prepared in a spreadsheet and approved prior to implementation into RMS	Exceptions identified (potential design weakness in review process)	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>PwC Australia has performed substantive testing of customer invoices issued in July 2017</p> <p>Results</p> <p>Refer to Schedule 2.</p>
	<ul style="list-style-type: none"> Changes to tariffs are appropriately reviewed and approved prior to set up 	IT change management control regarding update of RMS billing system in line with approved tariff spreadsheet	Exceptions identified	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>PwC Australia has performed substantive testing of customer invoices issued in July 2017</p> <p>Results</p> <p>Refer to Schedule 2.</p>
	<ul style="list-style-type: none"> Tariffs are completely and accurately set up within the billing system 	New control recommended by Internal Audit – Exception reports identifying tariff changes to be reviewed and resolved in order to identify erroneous and/or unauthorised changes.	Exceptions identified by Internal Audit (Merit Partners)	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>PwC Australia has performed substantive testing of customer invoices issued in July 2017</p> <p>Results</p> <p>Refer to Schedule 2.</p>
	<ul style="list-style-type: none"> Testing is performed to ensure changes to tariffs are operating as expected 	Post implementation review of tariff changes ie review and sample testing of customer bills issued from RMS subsequent to tariff change.	Exceptions identified	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Procedures</p> <p>PwC Australia has performed substantive testing of customer invoices issued in July 2017</p> <p>Results</p> <p>Refer to Schedule 2.</p>

Scope of controls procedures

Process	Control objectives	Control description	Result – Internal Audit	Additional testing performed by PwC Australia
Billing	<ul style="list-style-type: none"> Billing validations flag potential incorrect meter readings and exceptions are monitored 	Review of exception reports resulting from the auto-edit process	Exceptions identified by Internal Audit (Merit Partners)	<p>PwC has accepted some, but not all, of the observations and recommendations made by Merit Partners.</p> <p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.6; <i>Review of exception reports resulting from the auto-edit process</i></p> <p>Results</p> <p>Exception noted. Recommendations are detailed in Finding 2.3 Lack of periodic review of system thresholds for metering and billing validation tests</p>
	<ul style="list-style-type: none"> Customers are accurately identified in the billing systems in line with the EPO and WSPO 	Controls relating to logging, investigation, and resolution of customer complaints including root cause analysis and development of action plans to fix process issues and control weaknesses.	<p>Exceptions identified by Internal Audit (Merit Partners)</p> <p>Internal Audit currently underway (KPMG)</p>	<p>JE Management has accepted the finding and developed an action plan.</p> <p>Internal Audit is currently underway for the complaints management process and controls. PwC Management will review outcomes and agree action plans in response.</p> <p>Procedures</p> <p>No further testing.</p>
	<ul style="list-style-type: none"> Billing validations flag potential incorrect meter readings and exceptions are monitored 	System configuration to automatically workflow review and resolution of non-fatal billing validation tests	n/a	<p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.7; <i>System configuration to automatically workflow review and resolution of non-fatal billing validation tests</i></p> <p>Results</p> <p>PwC Australia has discussed with PwC the potential for a queue management system that would automatically workflow the non-fatal exceptions to the CSC group.</p> <p>PwC has confirmed it is a business decision not to pursue this path but instead continue with the manual exceptions review process.</p>
	<ul style="list-style-type: none"> Billing validations flag potential incorrect meter readings and exceptions are monitored 	Configuration of system validation tests, such as high/low thresholds, are periodically reviewed ie every 1-2 years and in the event of a significant change	n/a	<p>PwC Australia has performed controls testing.</p> <p>Procedures</p> <p>Refer to test procedures documented for control # 4.8; <i>Configuration of system validation tests, such as high/low thresholds, are periodically reviewed ie every 1-2 years and in the event of a significant change</i></p> <p>Results</p> <p>Exception noted. Recommendations are detailed in Finding 2.3 Lack of periodic review of system thresholds for metering and billing validation tests.</p>

Appendix B Related charges approved by PWC Board

Table 7 Related charges approved by PWC Board

Description	Hours ¹	Related charge approved by PWC Board November 2013	Applied to published tariffs effective 01 July 2017?
Electricity account establishment – establish or transfer a new or existing account	BH	\$56.00	Yes
	AH	\$67.00	No
Electricity disconnection/reconnection – unpaid accounts – retail administrative costs for electricity disconnections and reconnections due to unpaid accounts	BH	\$30.00	Yes
	AH	\$86.00	Yes
Water and sewerage account establishment – establish or transfer a new or existing account	BH	\$56.00	Yes
Water restrictor – retail administrative costs to install or remove water restrictor during business hours (in addition to water services charge of \$55.00 to install/remove water restrictor)	BH	\$40.00	Yes
Reprint customer statement/invoice – reprint one or multiple invoice/statements at customer's request (per item)	-	\$8.50	Yes
Billing data provision – provide detailed account history information at customer's request (per request)	-	\$32.00	Yes
Rebill account at customer request	-	\$25.00	No
Refunds – process more than one account refund per year (per additional refund)	-	\$43.00	No
Hourly rate – retail administrative costs associated with providing value added services at the customer's request	-	\$100.00	No
Search fee for outstanding final accounts	-	\$25.00	No
Legal fee – retail administrative costs to initiate legal action for accounts where disconnection of supply or water restrictors is not effective ie property unit plans	-	\$100.00	No

Source: PWC Board Paper, 21 November 2013.

Note: Business hour (BH) connections are from Monday to Friday, 6.00am to 3.00pm. After hours (AH) are outside these times.

Appendix C Tariffs Published Online

Electricity, Water and Sewerage Tariffs and Charges published online

The table below lists all electricity, water and sewerage service charges as published by Jacana Energy (JE) and Power and Water Corporation (PWC) on their websites:

<https://jacanaenergy.com.au/>

<http://www.powerwater.com.au/>

Test approach

Testing was performed to agree the charges to:

- a Regulated pricing order (effective 1 July 2017)
- b Regulated pricing order (effective prior to 1 July 2017) where the website continues to publish historic rates for reference
- c Schedule of alternative control services under the 2014 network price determination as approved by PWC's Board
- d Other Management approval processes

Conclusion

Exception has been identified; 2.1 Lack of periodic review of related service charges.

Detailed testing results

Company website	Utility	Item Description	Tariff agreed?	Exception?
PWC	Water	Water tariffs (charge for each kilolitre used)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Water	A fixed daily charge based on the size of the meter or connection	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Sewerage	Sewerage tariffs – Domestic	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Sewerage	Sewerage tariffs – Non-domestic with 0-2 sanitary fittings	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Sewerage	Sewerage tariffs – Non-domestic with 3+ sanitary fittings	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Water and sewerage	Water and sewerage service charges including establishment of new water account, transfer of existing water account, special meter readings, removal of water restrictor	Miscellaneous charge approved by PWC Board in 2013	Yes

Company website	Utility	Item Description	Tariff agreed?	Exception?
PWC	Electricity	Domestic – Standard meter	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Electricity	Domestic – Prepayment meter	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Electricity	Commercial – Standard meter	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Electricity	Commercial – Time of use meter (no minimum)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Electricity	Electricity rate – Public Benevolent Institution (PBI)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
PWC	Electricity	Power service charges including new connections, reconnection after failure to pay, special meter readings, new prepayment meter connection	Miscellaneous charge approved by PWC Board in 2013	Yes
JE	Electricity	Three Phase at customer's request (when only Single Phase is deemed necessary)	Alternative control services approved by PWC Board	None noted
JE	Electricity	Provision of Time of Use meter – Single Phase	Alternative control services approved by PWC Board	None noted
JE	Electricity	Provision of Time of Use meter – Three Phase	Alternative control services approved by PWC Board	None noted
JE	Electricity	Reprogramming of meter (CT or No CT) – visit required	Alternative control services approved by PWC Board	None noted
JE	Electricity	Reprogramming of meter (CT Meter) – no visit required	Alternative control services approved by PWC Board	None noted
JE	Electricity	Reconnection (No CT Meter)	Alternative control services approved by PWC Board	None noted
JE	Electricity	Reconnection (CT Meter)	Alternative control services approved by PWC Board	None noted
JE	Electricity	Special meter reading requested by customer	Alternative control services approved by PWC Board	None noted
JE	Electricity	Installation of prepayment meter	Alternative control services approved by PWC Board	None noted
JE	Electricity	Reprint invoice	Miscellaneous charge approved by PWC Board in 2013	Yes
JE	Electricity	Data provision: Billing only	Miscellaneous charge approved by PWC Board in 2013	Yes
JE	Electricity	Domestic tariff (regulated)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
JE	Electricity	Domestic tariff (regulated)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
JE	Electricity	Domestic tariff (regulated)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
JE	Electricity	Caravan park resident tariff (regulated)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted

Tariffs Published Online

Company website	Utility	Item Description	Tariff agreed?	Exception?
JE	Electricity	Commercial tariff (regulated)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
JE	Electricity	Commercial tariff (regulated)	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
JE	Electricity	Public Benevolent Institution (PBI) tariff	Agreed to the regulated pricing order (effective 1 July 2017)	None noted
JE	Electricity	Electricity service charges – PV installation charge (single phase)	Alternative control services approved by PWC Board	None noted
JE	Electricity	Electricity service charges – reconnection 3 phase and single phase and reconnection (CT)	Alternative control services approved by PWC Board	None noted
JE	Electricity	Electricity service charges – prepayment meter installation and special meter read	Alternative control services approved by PWC Board	None noted
JE	Electricity	Switch to Six tariff – domestic time of use tariff – historic rate	Agreed to the regulated pricing order (effective 1 January – 30 June 2017)	None noted
JE	Electricity	Switch to Six tariff – domestic time of use tariff – current rate	Agreed to the regulated pricing order (effective 1 July 2017 – 30 June 2018)	None noted

Appendix D Sample testing invoices

B.1 Electricity charges and consumption values

Test approach

PwC Australia selected a sample of 25 electricity invoices issued to customers between 01-Jul-2017 and 31-Jul-2017 with pricing regulated under the Electricity Pricing Order (ie contestable customers using less than 750 MWh per annum). For the sample of 25 electricity invoices, we agreed:

- Pre-July 2017 tariff to pricing order
- Post-July 2017 tariff to pricing order
- Pensioner concession tariff to RMS customer account profile
- Related service charges to PWC Board approved schedule (Nov-2013)
- Metering consumption kWh to Gentrack Consumption History Summary – MVRs DERETE report
- Number of days to Gentrack Consumption History Summary – MVRs DERETE report
- Recalculated electricity invoice values based on bill components; tariffs, number of days, consumption values, related service charges and concession discount.

Conclusion

No exceptions noted.

Sample testing invoices

Detailed testing results

#	Customer No.	Invoice agreed to regulated pricing order before 01-July-2017		Invoice agreed to regulated pricing order after 01-July-2017		Invoice agreed to source metering systems		Ancillary charge agreed to schedule/pensioner concession agreed to RMS account profile?	Invoice value recalculated and agreed to invoice?	Exception noted?
		Agreed to regulated tariff?	Agreed to fixed daily charge?	Agreed to regulated tariff?	Agreed to fixed daily charge?	Date range agreed to invoice?	Consumption agreed to invoice?			
1	101971310	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
2	1013499619	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Yes	Yes	No
3	102949813	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
4	109426511	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
5	104404510	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
6	1010159310	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
7	104816815	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
8	105426410	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
9	1012089912	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
10	103318915	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
11	109323013	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
12	1013263710	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
13	109861911	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
14	102862112	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
15	1015474410	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
16	102862913	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
17	107375240	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
18	107406613	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
19	105013011	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No

Sample testing invoices

#	Customer No.	Invoice agreed to regulated pricing order before 01-July-2017		Invoice agreed to regulated pricing order after 01-July-2017		Invoice agreed to source metering systems		Ancillary charge agreed to schedule/pensioner concession agreed to RMS account profile?	Invoice value recalculated and agreed to invoice?	Exception noted?
		Agreed to regulated tariff?	Agreed to fixed daily charge?	Agreed to regulated tariff?	Agreed to fixed daily charge?	Date range agreed to invoice?	Consumption agreed to invoice?			
20	101136114	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
21	1012084311	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
22	107661311	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
23	1017711510	Yes	Yes	Not applicable	Not applicable	Yes	Yes	Not applicable	Yes	No
24	102734110	Yes	Yes	Yes	Yes	Yes	Yes	Not applicable	Yes	No
25	101579818	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

B.2 Water and Sewerage charges and consumption values

Test approach

PwC Australia selected a sample of 25 water and sewerage invoices issued to customers between 01-Jul-2017 and 31-Jul-2017 with pricing regulated under the Water and Sewerage Pricing Order. We agreed:

- Pre-July 2017 tariff to pricing order
- Post-July 2017 tariff to pricing order
- Metering consumption KL to Gentrack Consumption History by meter
- Number of days to Gentrack Consumption History by meter
- Number of sewerage fittings to RMS customer account profile
- Total charge agreed with expected charge.

Conclusion

No exceptions noted.

Detailed test results

Ref #	Customer No.	Pre-July 1 tariff agrees with Water Pricing Order?	July 1 onwards tariff agrees with Water Pricing Order?	July 1 onwards fixed daily charge agrees with Sewerage Pricing Order?	Total charge agrees to expected charge?	Invoice consumption agrees with metering source system?	Exception noted?
1	201005411	Yes	Yes	Not applicable – water only	Yes	Yes	No
2	201041310	Yes	Yes	Yes	Yes	Yes	No
3	201058010	Yes	Yes	Yes	Yes	Yes	No
4	201073910	Yes	Yes	Yes	Yes	Yes	No
5	201090112	Yes	Yes	Yes	Yes	Yes	No
6	2011928910	Not applicable – refund		Not applicable – water only	Yes	Yes	No

Sample testing invoices

Ref #	Customer No.	Pre-July 1 tariff agrees with Water Pricing Order?	July 1 onwards tariff agrees with Water Pricing Order?	July 1 onwards fixed daily charge agrees with Sewerage Pricing Order?	Total charge agrees to expected charge?	Invoice consumption agrees with metering source system?	Exception noted?
7	2013309910	Yes	Yes	Yes	Yes	Yes	No
8	2014572810	Yes	Yes	Not applicable – water only	Yes	Yes	No
9	201893611	Yes	Yes	Yes	Yes	Yes	No
10	202578911	Yes	Yes	Yes	Yes	Yes	No
11	203094111	Yes	Yes	Yes	Yes	Yes	No
12	203464612	Yes	Yes	Yes	Yes	Yes	No
13	203918110	Yes	Yes	Yes	Yes	Yes	No
14	204196110	Yes	Yes	Yes	Yes	Yes	No
15	204649810	Yes	Yes	Yes	Yes	Yes	No
16	205293910	Yes	Yes	Yes	Yes	Yes	No
17	205693312	Yes	Yes	Not applicable – water only	Yes	Yes	No
18	206128112	Yes	Yes	Yes	Yes	Yes	No
19	206325713	Yes	Yes	Yes	Yes	Yes	No
20	206375813	Yes	Yes	Yes	Yes	Yes	Yes
21	206687710	Yes	Yes	Not applicable – water only	Yes	Yes	No
22	208029910	Yes	Yes	Yes	Yes	Yes	No
23	3014267610	Not applicable – sewerage only		Yes	Yes	Yes	No
24	3016699611	Not applicable – sewerage only		Yes	Yes	Yes	No
25	306725310	Not applicable – sewerage only		Yes	Yes	Yes	No

Appendix E Recalculation of estimated reads

The table below provides detail of the recalculation of estimated reads for a cross-section of customer types and utilities.

The historical actual record was based on invoice data stored in the consumption history summary for the customer.

Worked example ref #1:

- Period end of the estimated read is 06-Apr-2017
- Collect consumption data for the previous 12 months (data available for period 12-Apr-2016 to 04-Jan-2017) = 302 kWh
- Calculate average daily usage based on consumption data available for the previous 12 months = 302 kWh ÷ 356 days = 0.8 kWh per day
- Use this daily usage to recalculate the estimated = 0.8 daily kWh x 92 days = 78.0 kWh
- Compare recalculation to actual system estimate = 78.0 – 0 = 78.0 kWh variance.

						Estimated read as per Gentrack invoice				Historical actual record for customer			Recalculation of estimated read				
Sample						A		B		C		D	E = D ÷ C		F = A x E		G = B – F
Ref.															Difference between Gentrack estimate and recalculated estimate		
Utility	Meter	Customer type	Installation ID	Meter ID	Period start	Period end	Days	Estimated kWh	Date of last actual read	Days	Historical actual kWh	Daily usage as per historical records	Recalculation of estimate	Difference between Gentrack estimate and recalculated estimate % Variance			
1	Water	Water	Other	206815610	98057740	5-Jan-17	6-Apr-17	92	0	12-Apr-16	89	2					
										12-Jul-16	91	14					
										11-Oct-16	91	121					
										4-Jan-17	85	165					
										356	302	0.8	78.0	78.0	0%		

Recalculation of estimated reads

Sample						Estimated read as per Gentrack invoice				Historical actual record for customer			Recalculation of estimated read			
						A		B		C		D	E = D + C	F = A x E	G = B – F	
2	Water	Water	Domestic	203159310	16W702595	21-Apr-17	20-Jul-17	91	30	15-Jul-16	80	24				
										18-Oct-16	95	30				
										17-Jan-17	91	30				
										20-Apr-17	93	30				
										359	114		0.3	28.9	- 1.1	-4%
3	Elec	Basic	Commercial	1010709310	114193	5-Jan-17	6-Apr-17	92	980	12-Apr-16	89	1222				
										12-Jul-16	91	953				
										11-Oct-16	91	860				
										4-Jan-17	85	829				
										356	3864		10.9	998.6	18.6	2%
4	Elec	Basic	Domestic	1012111310	168545	7-Jan-17	5-Apr-17	89	330	7-Apr-16	90	329				
										6-Jul-16	90	449				
										5-Oct-16	91	532				
										6-Jan-17	93	408				
										364	1718		4.7	420.1	90.1	27%
5	Elec	Basic	Domestic	1012339810	172832	7-Jan-17	5-Apr-17	89	1790	6-Apr-16	89	1790				
										6-Jul-16	91	1423				
										4-Oct-16	90	1187				
										6-Jan-17	94	1330				
										364	5730		15.7	1,401.0	- 389.0	-22%

Recalculation of estimated reads

Sample						Estimated read as per Gentrack invoice				Historical actual record for customer			Recalculation of estimated read			
						A		B		C		D	E = D + C	F = A x E		G = B – F
6	Elec	Basic	Domestic	1013293210	190905	7-Jan-17	5-Apr-17	89	150	6-Apr-16	89	3				
										6-Jul-16	91	0				
										5-Oct-16	27	128				
										6-Jan-17	93	318				
										300	449		1.5	133.2	- 16.8	-11%
7	Elec	Basic + PV	Domestic	101889710	187161	21-Jun-17	14-Sep-17	86	2572	20-Sep-16	96	3502				
										14-Dec-16	85	4331				
										9-Jan-17	26	1014				
										22-Mar-17	72	2646				
										279	11493		41.2	3,542.6	970.6	38%

Appendix F Auto edit exception codes

The following tables provide details of the Gentrack exception codes as part of the auto edit billing process.

If a bill fails 'System Fatal' exception, it will be automatically excluded from the bill sequence. The invoice will have to be raised manually by a Billing agent.

If a bill fails a 'Non-Fatal' exception, the exception will be reviewed and investigated by a Billing agent. If no action is taken, the bill will automatically invoice after three (3) days.

Table 8 Auto edit exception codes

Code	Description	Class
1	No Consumption This Period	Non-Fatal
2	Credit Consumption	Non-Fatal
3	Consumption Over The Optimal High	Non-Fatal
4	Consumption Under The Optimal Low	Non-Fatal
5	No NZSIC code	System Fatal
6	No Current Reading	System Fatal
7	Removed Meters	Non-Fatal
8	No Current Consumer – No Bill	System Fatal
9	Billing Suspended – No Bill	System Fatal
10	Final Logged Ahead, This Bill May Proceed	Non-Fatal
11	No Meters on Install in metered sequence	System Fatal
12	Disconnected – No Bill	System Fatal
13	Not on M/R Schedule	System Fatal
14	On Out-Of-Cycle Sched – No Bill, No Edit	System Fatal
15	On Final Sched – No Bill, No Edit	System Fatal
16	Exceed Maximum Number of Days	Non-Fatal
17	Below Minimum Number of Days	Non-Fatal
18	No Tariff or Tariff Does Not Exist on File	System Fatal
19	Meter Tariff/Multiplier Changed Since Last Bill	Warning
20	Meter Register Removed – Not Used	Warning
21	Zero Day on Interim – No Edit, No Bill	System Fatal
22	Invalid Fixed Charges	System Fatal
23	No Previous Reading Date	System Fatal
24	Current Reading Date is Older Than Previous	System Fatal
25	No Data For High/Low Test	Non-Fatal
26	Estimate Entered For IEST.SuPPRESS	System Fatal
27	Consumption On Vacant Installation	System Fatal
28	Estimated More Than Max Consecutive Times	Non-Fatal
29	Associated Master Meters	Warning
30	Incomplete Incoming Slave For Master Meters	System Fatal
31	No Estimation Available	System Fatal
32	No Fixed Charge Code For Metered Installation	Warning
33	Statement Consumer – Edit But No Bill	System Fatal

Code	Description	Class
34	Estimate Suppressed – No Bill On Interim Run	System Fatal
35	Estimate Based on Last Year	Warning
36	Estimate Based on Previous Period	Warning
37	Estimate Based On Daily Average of Tariff	System Fatal
38	Estimate Based On Store Procedure on Tariff	Warning
39	Estimate Based On Other Method	Warning
40	Estimate Suppressed – Bill On Fixed Charge	Warning
41	Disconnected Installation With Consumption	System Fatal
42	New Consumer	Non-Fatal
43	Final Sequence But Reading Type Not Final	Warning
44	Billing Sequence Reading Date Different	Non-Fatal
45	Estimate Suppressed – No Bill on Any Run	System Fatal
47	Incorrect Last Bill Balance	System Fatal
48	TOU Installation	Warning
90	Install Billing Quarter is Incorrect	Non-Fatal
91	Reading Date Outside The Current Quarter	Non-Fatal

Source: Auto Edit Exception Processing – Retail Work Instruction, File number F2009/6001, 18-Dec-2009.

Table 9 Auto edit fatal exceptions

Ref	Description	Exception type
1	Pensioner Concession Not Granted	System Fatal
4	Not Billed – Consumer With Future Entry Date	System Fatal
5	Not Billed – On-Hold in Non-Fatal	System Fatal
6	Not Billed – Invalid Installation	System Fatal
7	Not Billed – Zero Days on Interim Run	System Fatal
8	Not Billed – No Current Consumer	System Fatal
9	Not Billed – Billing Suspended	System Fatal
10	Not Billed – Zero Balance and No Transaction	System Fatal
11	Not Billed – Not on M/R Schedule	System Fatal
12	Not Billed – Final Pending	System Fatal
13	Disconnected – No Bill	System Fatal
14	Not Billed – Out-of-Cycle Pending	System Fatal
15	Not Billed – On Statement	System Fatal
16	Not Billed – Non-metered Already Billed	System Fatal
17	Not Billed – Error Creating Transaction	System Fatal
18	Not Billed – No Current Readings	System Fatal
19	Not Billed – Invalid Charge code or Plan	System Fatal
20	Not Billed – Bad Reading	System Fatal
21	Not Billed – No Reading	System Fatal
22	Not Billed – Fixed Charge Has no GL Code	System Fatal
25	Not Billed – Error Refunding Bond	System Fatal
26	Not Billed – Gas Property Details Not Set	System Fatal
27	Not Billed – Master Consumer Not on Schedule	System Fatal
30	Not Billed – No Meter for Metered Sequence	System Fatal

Source: Auto Edit Exception Processing – Retail Work Instruction, File number F2009/6001, 18-Dec-2009.

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