Jemena Electricity Networks (Vic) Ltd

2016-20 Electricity Distribution Price Review Regulatory Proposal

Revocation and substitution submission

Attachment 8-11 Business case for RIN actuals

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Regulatory Information Notice Reporting

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PREFACE

The aim of this report is to describe the reason why Jemena Electricity Networks (Vic) Ltd (**JEN**) needs to invest in people, processes and systems, in order to build a business capability to comply with the Australian Energy Regulator's (**AER's**) new RIN reporting requirements to provide 'actual' data instead of estimated data for regulatory purposes.

Meeting this new reporting obligation is not a straightforward exercise and there are many ways that JEN could respond to these new requirements. For example, there is considerable uncertainty of what constitutes 'actual' data. This document explores these issues and settles on an option that, in Jemena's opinion, achieves the best balance between compliance and cost.

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ABBREVIATIONS

AER	Australian Energy Regulator
BI	Business Intelligence
CA	Category Analysis
EB	Economic Benchmarking
ERP	Enterprise Resource Planning
FTE	Full-Time Equivalent
JEN	Jemena Electricity Networks (Vic) Ltd
NPC	Net Present Cost
PB	Parsons Brinkerhoff
RAB	Regulatory Asset Base
RINs	Regulatory Information Notices
SAPN	SA Power Networks

OVERVIEW

Economic regulation seeks to mimic, as best it can, the cost and price outcomes of a competitive market in circumstances where competition is not possible. The two key ways a regulator can achieve this outcome is by:

- Creating incentives for regulated businesses to be cost efficient and to price their outputs to reflect these efficient costs; and/or

- Benchmarking the economic efficiency of the regulated businesses. This benchmarking seeks to identify the relative economic efficiency of regulated businesses to determine which businesses need to improve efficiency and by how much.

Regulators, including the Australian Energy Regulator (**AER**), generally employ both these approaches to ensure the interests of consumers are looked after. In both approaches the regulator requires high quality information. For example, the regulator needs information to monitor whether and the extent to which regulated businesses are becoming more efficient as a consequence of the incentives created by the regulatory arrangements. To effectively undertake economic benchmarking it is imperative that the regulator measure businesses on a like-for-like basis to ensure they don't draw incorrect conclusions about the relative efficiency of regulated businesses. It is therefore important that the regulator has standardised data to ensure that any variations in measured efficiency truly reflect differences in costs and not inconsistencies in the data applied to the regulator's measures.

For this reason the AER has sought to progressively improve the quality of information it requires from regulated businesses. Jemena Electricity Networks (Vic) Ltd (**JEN**) supports the AER's efforts to improve the quality of the data it gathers and uses to manage its regulatory obligations. These improvements will help ensure the regulatory process results in a fair outcome for customers and a commercially sustainable outcome for regulated businesses.

In support of its aim to improve the quality of regulation, the AER now requires regulated businesses to collect and provide it with, *actual* business data as distinct from *estimated* values from 2015 onwards, in compliance with the AER's Regulatory Information Notices (**RINs**).[1] This poses as a potential significant challenge for JEN.

While there is some scope under the new arrangements to provide estimated regulatory data this needs to be justified. Importantly, the AER requires the information provided under the RINs to be audited and for the business to provide an assurance report attesting to the veracity of the data. In its 2013 Better Regulation document the AER said that these new RIN data requirements would:

> "… *deliver a positive net benefit and maximise social benefit, despite the additional costs required to implement on both sides*" [2]

These new AER regulatory data requirements create significant challenges for JEN and, no doubt, other regulated businesses. JEN will have to ensure that:

- Its data recording systems and processes are in place to capture the correct data in a timely manner. Given the change in regulatory data JEN will need to invest in its systems and information collection processes to satisfy these new regulatory data requirements.

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1 JEN Regulatory Information Notice issued under section Division 4 of Part 3 of the National Electricity (Victoria) Law

2 AER, *Better Regulation* | *Explanatory Statement* | *Expenditure Forecast Assessment Guideline*, November 2013

- Data provided to the AER fully meets the requirements of the AER's RIN. It is JEN's view that as prescriptive as the RIN Instructions and Definitions are, judgements will still need to be made by each business as to what constitutes 'actual' data and what is estimated data. Even where it seems straightforward recording 'actual' data, such as the physical capacity of key assets, uncertainty still exists. For example, the capacity of key infrastructure varies according to what might be regarded as being "normal circumstances". To the extent that any judgement exists and each business is required to provide an audit and an assurance report to the AER, it is inevitable that those responsible for validating the data will err on the side of conservatism to guard against sanctions from misreporting data. The requirement for audits and assurances of the data will naturally have implications for the nature and costs of the data capture processes and systems that are developed to allow a business to confidently comply with the AER's requirements.

These challenges are amplified by the AER's definition of what constitutes 'actual' data. JEN's understanding of the AER definition and interpretation of what constitutes 'actual' data is open to interpretation. This creates a significant compliance risk for JEN, especially in light of the requirement to undertake an audit of the data and to provide an assurance of the accuracy of the data.

To determine whether such a risk existed and the extent of this risk, JEN commissioned an independent review by KPMG of JEN's obligations in respect of the provision of 'actual' data.[3] KPMG confirmed JEN's view that the AER's definition of 'actual' data leaves a significant amount of room for interpretation and they went on to say:

> "… *if Jemena is unable to provide Actual information where it is required to do so, it may not be in compliance with the RIN requirements. We will consider the impact of this on our audit/review reports by having regard to the magnitude of non-compliance and potentially issue a qualified audit or review report, if the non-compliance is assessed as material to the overall RIN response.*[4]

It is critical to JEN's Board that the business is not issued a qualified review report for non-compliance as the Board takes its compliance obligations seriously. This issue has become more acute in the context of the AER's rejection of JEN's July 2015 proposal to the AER for a step change in opex to comply with the new RIN reporting requirements and the AER's related observation that:

> "… *we are concerned Jemena has been overly conservative in its interpretation of the term 'actual' information*" and noted that "*actual physical information, for example, allows for the possibility that Jemena has undertaken some sampling to derive that information as against having recorded every instance*"[5].

Whilst the AER rejected JEN's RIN step change, the AER has recognised that RIN data requirements will result in additional costs to business. On this basis, the AER has invited JEN to develop a business case to support the changes to systems and information collection processes required to comply with the RINs. This document sets out and discusses JEN's evaluation of the options to develop its systems and information collection processes so that it can confidently comply with its RIN obligations.

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3 KPMG, *Letter outlining the definition of "Actual Information"*, 11 December 2015

4 KPMG, Letter outlining the definition of "Actual Information", 11 December 2015, p. 16

5 AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating expenditure*, October 2015, p 7-79

JEN considers it has four main options for responding to the change in requirements to provide 'actual' data:

Option 1: Do nothing – This option involves maintaining the existing level of compliance, with no system, process or people changes. This option is the lowest cost as it involves no incremental expenditure but has a certain risk of material non-compliance and therefore is not acceptable to JEN.

Option 2: Non-system based compliance – This option involves no system changes but will involve some manual process work-arounds to improve compliance. The change in processes will require the ongoing use of additional resources (mainly staff) to comply with the AER's new requirements by the commencement of the reporting period where 'actual' data is required. This option is relatively low cost ($9.60m Net Present Cost (**NPC**) over 5 years) but also presents a material non-compliance risk. JEN takes its compliance obligations seriously and therefore this option is not seen as acceptable.

Option 3: System changes involving interim work-arounds – This option involves developing new systems and related processes to comply with the AER's requirements over the next 12-18 months, supported by interim manual work-arounds (as per Option 2) until the system configuration changes, field devices and relevant training have been fully deployed (as per Option 4 below).

JEN aims to be materially compliant from the start of the 'actual' reporting period whilst system changes are being delivered. This option is the most costly (at $11.31m NPC over 5 years) of the four considered as it involves the use of staff to manage the manual work arounds until the system upgrades are complete. In addition to being the most costly option, the use of manual work arounds creates an interim risk of being non-compliant. Finally, given the lead times to implement the manual process component it is unlikely to be deployed, with any degree of robustness, prior to the system solution being ready. For these reasons JEN does not prefer this option.

Option 4: System changes with no interim work-arounds – This option involves developing system and related processes over the course of 12 to 18 months. This is a staged approach which focusses on complying with the Economic Benchmarking (**EB**) RIN from December 2016 and from July 2017 for the Category Analysis (**CA**) RIN.

While this option results in an interim risk of non-compliance, with the AER's forbearance, JEN will be able to establish cost efficient data capture and processing systems for the long term. This staged development will the lowest cost (approximately $7.49m NPC over 5 years) of the three options that involve taking action to comply with the AER's new data requirements.

JEN prefers this Option 4 because it maximises the opportunity to comply with the AER's requirements for the lowest cost (in cost value terms) of the proactive options. However, this option may potentially require some compliance leeway for a short period in order to avoid the higher costs of manual work-arounds while systems and processes undergo staged development.

A summary of the options analysed to report actual RIN data is outlined in Table OV–1.

Table OV–1: Options analysis to comply with RINs

Option	1. Do Nothing	2. Non- system based compliance	3. Transition to system enabled RIN reporting with interim workaround	4. Transition to system enabled RIN reporting with no interim workaround
Non-Recurrent capex ($m)	-	-	2.12	2.12
Non-Recurrent opex ($m)	-	0.50	6.82	3.00
Recurrent opex ($m)	-	2.21	0.57	0.57
NPC ($m) (5 years)	-	9.60	11.31	7.49
Inherent risk	Extreme	High	Significant	Moderate
Residual risk	High	Significant	Moderate	Low
Advantages / Disadvantages	Leaves JEN open to prosecution and significant financial penalties due to non-compliance with RIN requirements	Completeness of data entry is increased, but there is a lack of control over quality data entry.	Completeness of data entry is enhanced by mandating completion of particular data entry fields before a record can be submitted as final 'Period of 12-18 months where JEN is non-complaint	Completeness of data entry is enhanced by mandating completion of particular data entry fields before a record can be submitted as final

1. BACKGROUND

1.1 PROPOSAL

1.1.1 AIM OF REPORT

The AER has acknowledged that its change in data reporting requirements, focussing on the provision of 'actual' regulatory data, will necessitate some system and process changes for JEN. The AER has acknowledged that these changes will result in additional business costs – upfront and ongoing. This report sets out JEN's economic evaluation of the key options it can practically choose between. The aim of this analysis is to develop a strategy for funding for these unavoidable compliance changes.

More specifically this report:

- Reviews the current state of JEN information collection processes and systems with respect to its ability to meet the AER's RIN requirements
- Identifies and evaluates the key alternatives for meeting the AER's new RIN obligations, and
- Recommends a preferred option that is consistent with the AER Expenditure Assessment Guidelines and is the least cost having regard to the level of compliance.

1.1.2 PROCESS

In the lead up to developing and considering compliance options, JEN had consulted with the AER on 28 August 2015[6] to confirm the understanding of the RIN reporting requirements prior to JEN's submission to the AER, "*Submission to Jemena Electricity Network Ltd 2016-20 regulatory proposal*".

On 10 June 2015, the AER confirmed that "*NSPs must provide Actual information, as defined in the [EB and CA RIN]. This applies to all variables except those that exempted in the [EB and CA] RIN's instructions and definitions*"[7] JEN understood and acknowledged it was therefore obliged to change its systems and processes to best meet these new RIN requirements.

In the seven week period between the time of the AER's advice and the 13 July 2015 submission on the 2016-20 EDPR process JEN undertook an initial assessment of the changes required to systems, information collection processes and people to be compliant. Recognising the financial and non-financial 'actual' information required for the RINs is open to interpretation, the increase in JEN's compliance activities has already led to a significant amount of unfunded costs. This unexpected and unavoidable cost negatively affects JEN's financial position. In the 13 July submission JEN made an initial cost estimate to meet the new data provision obligations of $19.65m.

The AER reviewed and questioned JEN's initial assessment in its preliminary decision in October 2015.[8] In this initial review, the AER indicated that it believed JEN had taken an overly conservative approach to the definition of what constituted 'actual' data and has provided JEN an opportunity to develop a more detailed business case to support our submission for funding of these new systems and information collection processes.

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6 RINs - Meeting with the AER 28 Aug 15_final.pdf

7 Email from Andrew Ley, RIN information for the 2015 regulatory year [SEC=UNCLASSIFIED], 10 Jun 2015

8 AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating expenditure*, October 2015, p 7-79

In response, JEN used the results of a review commissioned earlier and conducted by professional engineering services firm, Parsons Brinkerhoff (**PB**), to assess our proposed measures required to meet the new 'actual' data standard. JEN subsequently sought advice from KPMG on the findings of the PB report to determine whether KPMG, as our external auditors, believed the proposed measures would likely yield 'actual' data for which a positive assurance report could be provided.

In the course of this review process JEN has developed and refined its approach for producing 'actual' regulatory data. The costings that feature in this review reflect this process of refinement. JEN is now confident that the new data collection and processing arrangements can be achieved at an even lower cost than our preliminary estimate previously provided to the AER. In a large part these savings derive from a less stringent compliance standard in response to the AER's criticism that our understanding of its requirements was "overly conservative".

1.1.3 ABILITY TO ACHIEVE SYSTEM CHANGES

JEN has a plan to become compliant with the AER's RIN reporting objectives 18 months from the time the funding and business case is approved. JEN is well placed to achieve this timetable given the recent experience gained from replacing legacy Enterprise Resource Planning (**ERP**) systems. These replacement systems involved a detailed review and redesign in the categorisation and management of data.

Over the past few years JEN has designed and implemented many other major IT system changes including:

- Replacement of legacy SAP systems (more than 12-years old) that provided capability for enterprise management, asset management as well as financial management and accounting
- Retirement of legacy systems applications as a result of the SAP program including SAP and non-SAP applications
- Developing and commissioning the AMI advanced meter systems based on SAP IS-U/Itron IEE MDM and Silver Spring UIQ, NMS, which was subject to separate allowances but a major part of the overall JEN program of work
- Compliance with AMI and market and regulatory obligations, as well as met non energy regulation obligations and changes
- Relocation from the legacy data centres infrastructure platforms and services that had reached end of life due to constraints on expansion—the transition was completed in 2012-13 into 2 outsourced data centres
- Replacing the core IT Infrastructure including a back log of end of life systems with new technologies to be more efficient and more cost effective
- Replacing desktop and laptop standard operating environments as well as the Microsoft Office application solutions
- Conducting a number of systems consolidations, replacements and retirements enabled by new technologies, cloud based software as a service and the new capability introduced by the above project.

For each of these projects, JEN has carefully assessed whether the project is a mandatory or a prudent and efficient investment.

1.2 PROJECT OBJECTIVES AND ASSESSMENT CRITERIA

1.2.1 OBJECTIVES

As it stands JEN's systems, processes and data do not currently meet the AER's 'actual' reporting requirement. The objective of the RIN reporting project is to ensure that:

- JEN's systems are capable of efficiently capturing, processing and reporting 'actual' data that complies with the AER's requirements, while ensuring
- JEN's systems and processes continue to provide the data its needs to run the business efficiently.

It is important to JEN that the needs of the business and the regulator are equally served as efficiently as possible.

Like most businesses, JEN has a number of legacy systems that were designed to serve pre-existing purposes and since they were often originally developed to work independently, they don't always work harmoniously. As indicated above JEN has been continually improving these systems to operate in a more integrated and effective manner. This process of improvement to JEN's IT systems is ongoing.

The change in RIN reporting that requires 'actual' data will have implications for the design and operation of multiple systems. It is important for efficiency that any changes in JEN's systems, to meet the AER's requirements, are consistent with JEN's ongoing efforts to improve the efficiency of its IT systems.

1.2.2 ASSESSMENT CRITERIA

JEN will judge the success of the RIN reporting project according to following criteria:

- The data provided to the AER to comply with its requirements. More specifically, JEN will deem the RIN reporting project to achieve this criterion when the reporting system produces regulatory data to a standard that allows its auditor to provide an unqualified report to allow JEN to provide an assurance report to the AER
- The RIN reporting systems are delivered according to the agreed timetable
- The RIN reporting systems are delivered on budget.

2. RIN REPORTING PROJECT SCOPE

In this section the nature and extent of system, process and data changes involved in the RIN reporting project are outlined. The aim of this description of the project scope is to convey the magnitude of the task before JEN to ensure its systems and processes are able to reliably meet the AER 'actual' data requirements in respect of the CA and EB RINs.

2.1.1 MAGNITUDE OF THE TASK

As indicated above, JEN has now thoroughly reviewed, together with its advisers PB and KPMG, its level of compliance in respect of the ability to produce 'actual' data as compared to 'estimated' regulatory data. In particular, KPMG has analysed the data points contained in the audited and reviewed RIN templates to determine whether JEN's data would be classified under the AER's definition as 'actual' or 'estimated'.

The results of this analysis are presented in Table 2–1. The results are presented as a percentage of data points that are classified as either 'actual' or 'estimated' and categorised according to whether that data is financial or non-financial and also according to whether the data relates to the EB or CA RIN.

Adjacent to each percentage value presented in Table 2–1 is a coloured symbol indicating the deemed level of risk of non-compliance. The red symbol indicates an extreme level of non-compliance risk; orange indicates a high level of non-compliance risk; and, green indicates a moderate level of risk. In no category is JEN's data in such a state that it faces little to no non-compliance risk. This analysis indicates that JEN has a major task ahead to ensure that it complies with the AER's new 'actual' data requirements.

Table 2–1: Evaluation of current RIN reporting compliance

	Financial Information		Non-Financial Information	
	Estimated	Actual	Estimated	Actual
EB RIN	68% ♦	32% ♦	15% ♦	85% ♦
CA RIN	90% ♦	10% ♦	22% ♦	77% ♦

The relatively low percentage of actual financial information (32% ♦) in the EB RIN, is primarily due to the volume of financial data estimated in the Regulatory Asset Base (**RAB**) template. All 198 RAB financial data points, which make up 65% of the total 303 financial data points, have been estimated. However, the AER does not mandate actual data for the RAB template, stating that:

> "*When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for asset lives it must do so; otherwise DNSP must provide Estimated Information*".[9]

Once an adjustment has been made to account for the allowance for RAB related estimates in the EB category the revised results are presented in Table 2–2. While the allowance for RAB adjustments for the EB RIN certainly improves the extent of JEN's compliance, significant compliance gaps remain unless system and information collection process changes are made.

[9] AER, *Economic benchmarking RIN, Instructions ad definitions, Jemena Electricity Networks (Vic) Ltd* (ACN 064 651 083), p27

Table 2–2: Evaluation of current RIN reporting compliance – with allowed RAB estimates for EB RIN

	Financial Information		Non-Financial Information	
	Estimated	Actual	Estimated	Actual
EB RIN	3% ♦	97% ♦	15% ♦	85% ♦
CA RIN	90% ♦	10% ♦	22% ♦	77% ♦

According to KPMG the extent of JEN's compliance may not be unusual. In the "*Jemena Electricity Networks (Vic) Ltd Report to the Board of Directors Special Purpose Financial report and Regulatory Audits – 31 December 2014"* KPMG states that it "*benchmarked JEN against two other DNSPs and note that JEN's proportion of estimated information within RIN C is broadly comparable, albeit this is a small sample*."

2.2 CURRENT STATE OF SYSTEMS AND PROCESSES

Whilst JEN's ERP replacement in the 2011 regulatory period provides a strong foundation for the RIN reporting cycle, it needs a number of adjustments to facilitate the data entry at the specified level of detail for the RINs. In addition, it should be noted that both inputs and outputs of the new ERP require manual intervention. These legacy processes, unless addressed by the field mobility (key inputs) and Business Intelligence (**BI**) Suite projects (key reporting outputs), will inhibit JEN's ability to efficiently collect and report RIN data in a cost efficient manner, regardless of the proposed system configuration changes proposed. This is in large part because the level of detail required by the RINs is so detailed. To capture this more detailed data field staff would be required to complete additional paper forms. Already, field staff are required to select which subset of the 24 forms available to choose from are applicable when completing each job. Staff are currently required to manually record time against each job and each relevant activity for that job.

Paper based manual data capture systems suffer inherent quality issues:

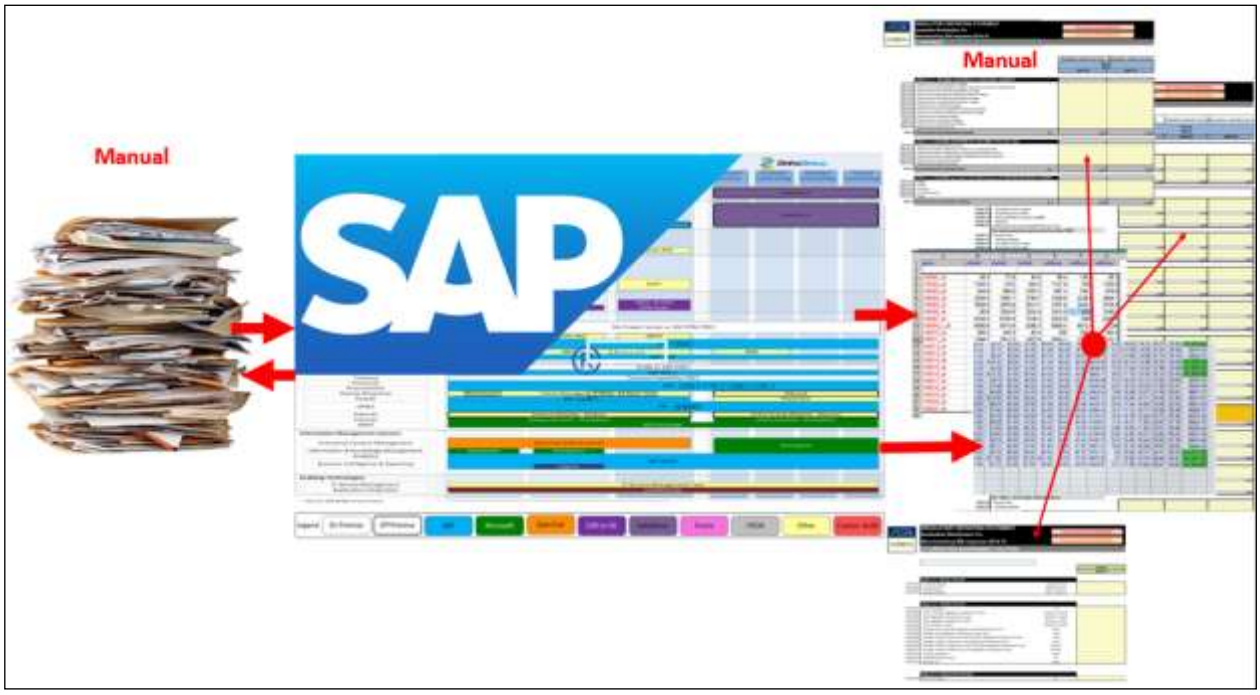
- There is a misalignment of skills between field services (construction and asset management) and administrative tasks (data capture) which means it is difficult to coordinate field staff to collect accurate business data
- The complexity and volume of data being recorded (and potential duplication of data capture) results in errors; the more work increases the risk of error
- Much of the recording of data is at the end a work process when staff are fatigued, this in turn leads to error
- Paper based forms do not enforce mandatory data recording (unlike a system based solution which have mandatory and enumerated fields, which enforce and ensure quality data) meaning the data could be absent at the time of data entry into systems.

Additional detailed data capture required to meet the AER's requirements will inevitably complicate this already difficult, error prone data entry stage. Systems and processes will need to be improved to avoid additional costs and errors. For example, the employment of 'at the source' data entry systems, which will avoid the need for follow-up data collection (and often correction) during ex-post audits or downstream data entry, will ensure the capture of 'actual' data is more efficient and accurate.

JEN's new SAP ERP, represented in Figure 2–1, operates in the centre of legacy systems that are used to input data into the ERP and for processing the output of the ERP system. This pre and post data processing involves manual processes that inhibit the ability to maximise the existing system functionality. In the past JEN has

sought to manage the costs of this pre and post manual data manipulation by keeping, capturing and processing data at a high level. While this existing arrangement was fit-for-purpose in the past, the more detailed data and analysis required by the AER's new 'actual' data requirements will mean that these existing manual pre and post data processing will no longer suffice. Major system and process changes will be required to meet the AER's 'actual' data standard. Many of these changes will need to occur at the data capture stage. Importantly, JEN's recently upgraded ERP solution has the capacity, with some modification, to incorporate this more detailed raw data, once captured.

Figure 2–1: Summary high level process



The part of the RIN reporting project that involves improving data capture in the field is referred to as the Field Mobility project. This project has been initiated for internal purposes but also as a direct consequence of the AER's new 'actual' data reporting requirements. The aim of the Field Mobility project is make the collection of data in the field simpler, more efficient and more accurate. The objective of the Field Mobility project is to provide JEN and the AER more detailed information on which to make, respectively, more informed business and regulatory decisions.

Regardless of the method used, whether it be electronically via field mobility or manually via additional forms, the more detailed data capture required for the new RIN templates will necessitate a substantial change for field services staff. It will be important for JEN to manage the transition carefully to ensure the project objectives are met while not adversely affecting the quality of services to customers.

2.2.1 SCOPE INFLUENCED BY COMPLIANCE RISKS

JEN carries the risk of civil penalties for non-compliance to the RIN requirements. To this end JEN must find a balance between developing systems and processes that ensure compliance and minimising the costs of developing and operating systems and processes necessary to comply. The main compliance risk derives from the extent to which interpretation exists on what constitutes 'actual' data. Depending on the interpretation adopted, the systems and processes can be more or less involved and, hence, more or less expensive.

To understand the potential scale of the choices available JEN conducted an assessment of the modifications required to produce 'actual' data in accordance with the AER's RIN requirements. More specifically, the basis of

this assessment was the 'basis of preparation' which accompanies each RIN and outlines whether the data was deemed 'actual' or 'estimated' data. The potential gap between the increased RIN reporting requirement and the current available information to meet that requirement was assessed by reviewing each category within each RIN and making a determination as to the reason for the use of an estimate. For example, the reasons for using an estimate rather than providing 'actual' data could range from the current business processes not capturing the required data to the current systems not being able to record or process 'actual' data.

The AER has provided guidance as to what should be considered 'actual' and this has been taken into account where this guidance has been provided, noting that in many instances there is significant scope for inconsistency in how different businesses might interpret 'actual' or 'estimated' data.

Table 2–3 provides examples where data issues will need to be addressed.

Table 2–3: Examples of definitional issues

RIN Data Table	Guidance from the AER	Document Source
Table 3.3.4.2 Remaining Asset Lives (meters, assets with long and short lives)	When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for asset lives it must do so; otherwise DNSP must provide Estimated Information.	AER, *Economic benchmarking RIN For distribution network service providers – Instructions and Definitions*. November 2013, p28
Tables 3.4.3.1 to 3.4.3.4 Annual system maximum demand characteristics (MW and MVA measures) require JEN to provide actual annual system maximum demand characteristics at various levels and connection points	We have amended the definition of coincident maximum demand to refer to the demand at the zone substation or terminal station at the time of when the summation is greatest, which is then weather normalised in response to submissions requesting clarity on which point in time maximum demand calculations should be done.	AER,, *Better regulation, explanatory statement, Regulatory Information Notices to collect information for economic benchmarking*, November 2013, p41
Table 3.4.3.5 Average power factor conversion for low voltage distribution lines requires JEN to report the actual average power factor conversion for low voltage distribution line	If either the MW or MVA measure is unavailable the average power factor conversion can be calculated as an approximation based on best engineering estimates. When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for power factor conversion variables it must do so; otherwise DNSP must provide Estimated Information.	AER, *Economic benchmarking RIN For distribution network service providers – Instructions and Definitions*. November 2013, p31
Table 3.5.2.1 - 1.3 Transformer Capacities requires JEN to report the distribution transformer capacity owned by High Voltage HV Customers	When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for Distribution Transformer capacity owned by High Voltage Customers it must do so; otherwise DNSP must provide Estimated Information	AER, *Economic benchmarking RIN For distribution network service providers – Instructions and Definitions*. November 2013, p33-34
Table 3.6.3 - 1.4 Quality of Service: System Losses requires JEN to report actual system losses (JEN proposes to calculate losses at aggregate level for calendar year in same way as for DLF calculations, which is on a	N/A	

RIN Data Table	Guidance from the AER	Document Source
financial year basis. This appears acceptable)		
Table 3.7.2 Average number of trees per vegetation maintenance span requires JEN to report the actual Average number of trees per vegetation maintenance span	DNSP must outline its estimation approach for the Average Number of Trees per Vegetation Maintenance Span in its Basis of Preparation. If DNSP does not have Actual Information for the Average number of trees per vegetation Maintenance Span it must, estimate this variable using one or a combination of the following data sources: • Encroachment Defects (e.g. ground or aerial Inspections, LiDAR) and/or records of vegetation works scoping, or GIS vegetation density data; • Field surveys using a sample of Maintenance Spans within each vegetation management zone to assess the number of mature trees within the maintenance corridor. Sampling must provide a reasonable estimate and consider the nature of Maintenance Spans in urban versus rural environments in determining reasonable sample sizes. When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the average number of trees per vegetation management span it must do so; otherwise DNSP must provide Estimated Information.	AER, *Economic benchmarking RIN For distribution network service providers – Instructions and Definitions*. November 2013, p40
Table 3.7.2 Standard vehicle access requires JEN to report the actual distance (km) of standard vehicle access	If DNSP does not have Actual Information on these variables, then it must estimate data for the most recent Regulatory Year	AER, *Economic benchmarking RIN For distribution network service providers – Instructions and Definitions*. November 2013, p39
Table 3.3.4.2 Remaining Asset Lives (meters, assets with long and short lives)	When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for asset lives it must do so; otherwise DNSP must provide Estimated Information.	AER, *Economic benchmarking RIN For distribution network service providers – Instructions and Definitions*. November 2013, p28
Template 2.2 requires JEN to report actual Repex dollars and volume by detailed categories	The total expenditure for the capex and opex for each service classification in Regulatory Template 2.1 must be mutually exclusive and collectively exhaustive. Total expenditure for capex must be reported on an “as-incurred” basis.	Regulatory Information Notice issued under section Division 4 of Part 3 of the National Electricity (Victoria) Law Appendix E: Principles and Requirements

RIN Data Table	Guidance from the AER	Document Source
Table 2.2.1 1.2 Service Line by: Connection Voltage, Customer Type and Connection Complexity requires JEN to report actual expenditure and volume for Service Line by: Connection Voltage, Customer Type and Connection Complexity	We acknowledge that NSPs will need to use estimation techniques and apply allocations, such as allocating customers from billing systems, to provide the data in accordance with the asset categories.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014
Table 2.2.2 Asset Volumes requires JEN to report actual asset volume by asset groups and various metrics	JEN must provide total volume of assets currently in commission and replacement volumes of certain asset groups by specified aggregated metrics. In instances where this information is estimated JEN must explain how it has determined the volumes, detailing the process and assumptions used to allocate asset volumes to the aggregated metrics.	Regulatory Information Notice issued under section Division 4 of Part 3 of the National Electricity (Victoria) Law Appendix E: Principles and Requirements, p62
Table 2.3.1 AUGEX Asset Data – Substation Civil Works requires JEN to report actual costs of substations civil works	DNSPs may input estimates of augex project information where it does not keep and maintain particular information requested in the final RIN templates.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p45
Table 2.3.2 2.2 AUGEX Asset Data – Sub-transmission Lines requires JEN to report actual Poles and Towers (Added/ Upgraded) in relation to sub-transmission lines (for HV and LV feeders, the final RINs no longer required information on Poles and Towers (Added/ Upgraded)	For HV and LV feeders, the final RINs no longer require information on 'Towers/poles added' and 'Towers/poles upgraded'.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p39
Table 2.5.1 Subdivision connections requires JEN to report actual connection numbers by connection type and various metric categories. RIN consultations noted that (among other things), subdivision connections are not reported or forecast on this basis (ie. simple v complex connections)	We will accept estimates of expenditure against the connections categories in the category analysis RIN. DNSPs should disclose its estimation method in the basis of preparation.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p70-71
Table 2.5.1 Net Circuit km Added requires JEN to provide actual volume of net circuit added by voltage level and customer type (RIN consultations noted that net circuit length added (and MVA added) could be estimated using GIS data)	We will accept estimates of the metrics of connections services. DNSPs should disclose its estimation method in the basis of preparation.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p68-69
Table 2.5.1 Augmentation Total Spend requires JEN to provide actual augmentation spend by voltage level and customer type.	N/A	
Table 2.5.1 Subdivision Cost per Lot requires JEN to provide actual connection expenditure per lot for Subdivision customers.	N/A	
Table 2.5.2 Commercial/Industrial and Subdivision Connections requires JEN to report the actual cost in relation to Subdivision and Commercial/Industrial connection by the level of complexity,	We will accept estimates of expenditure against the connections categories in the category analysis RIN. DNSPs should disclose its estimation method in the basis of preparation.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March

RIN Data Table	Guidance from the AER	Document Source
connection voltage level and HV/upstream asset.(RIN consultations noted that subdivision connections are not reported or forecast on this basis (ie. simple v complex connections).		2014, p70-71
Table 2.7.1 LBRA and HBRA, Maintenance Spans and Trees requires JEN to report actual length of maintenance spans for LBRA and HBRA, Maintenance Spans and Trees (Table 2.7.1)	JEN is exempted from its obligation to provide only actual information for Subsequent Regulatory Years for the following items (that is, may provide estimated information on an ongoing basis): (a) Average number of trees per maintenance span as requested in regulatory template 2.7;	Regulatory Information Notice issued under section Division 4 of Part 3 of the National Electricity (Victoria) Law Appendix E: Principles and Requirements, p18
Table 2.7.2 LBRA and HBRA, Contractor Liaison and other expenditure requires JEN to report actual expenditure by zone (LBRA and HBRA) for the following costs: LBRA and HBRA, Contractor Liaison and other expenditure (Table 2.7.2)	JEN is exempted from its obligation to provide only actual information for subsequent regulatory years for the following items (that is, may provide estimated information on an ongoing basis): (a) Average number of trees per maintenance span as requested in regulatory template 2.7;	Regulatory Information Notice issued under section Division 4 of Part 3 of the National Electricity (Victoria) Law Appendix E: Principles and Requirements, p18
Table 2.8.1 Descriptor Metrics Routine and non-routine Maintenance requires JEN to report actual asset quantity inspected/maintained by maintenance activity and maintenance asset category (RIN consultations noted that little or no data is available for quantity of asset group)	The NSP can make estimates/assumptions and submit these to us	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p116
Table 2.8.2 Cost Metrics Routine and Non-routine Maintenance requires JEN to report actual maintenance costs (routine/non-routine) by maintenance activity and maintenance asset category (RIN consultations noted difficulties with business' systems capturing routine and non-routine maintenance separately)	The NSP can make estimates/assumptions and submit these together with the numbers	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p116
Table 2.9.1 Emergency Response Expenditure requires JEN to report the actual total emergency response expenditure and by major events.	In response to DNSPs' concerns and difficulties in collecting the data, we have inserted instructions in the RIN regarding the reporting of MED costs via the following processes: • reporting of MED costs via direct cost capture reporting (i.e. specific allocated cost code) if available • reporting of MED costs via capturing operating and maintenance (O&M) costs that were booked to the O&M codes on those days. While it may not capture all costs caused by the major events on those MED days, this will provide a good approximation.	AER, *Better Regulations, Explanatory statement, Final regulatory information notices to collect information for category analysis,* March 2014, p118
Table 4.1.3 Public Lighting requires JEN to report the actual unit rate of replacement	N/A	

RIN Data Table	Guidance from the AER	Document Source
and maintenance for public lighting by light type and road category		

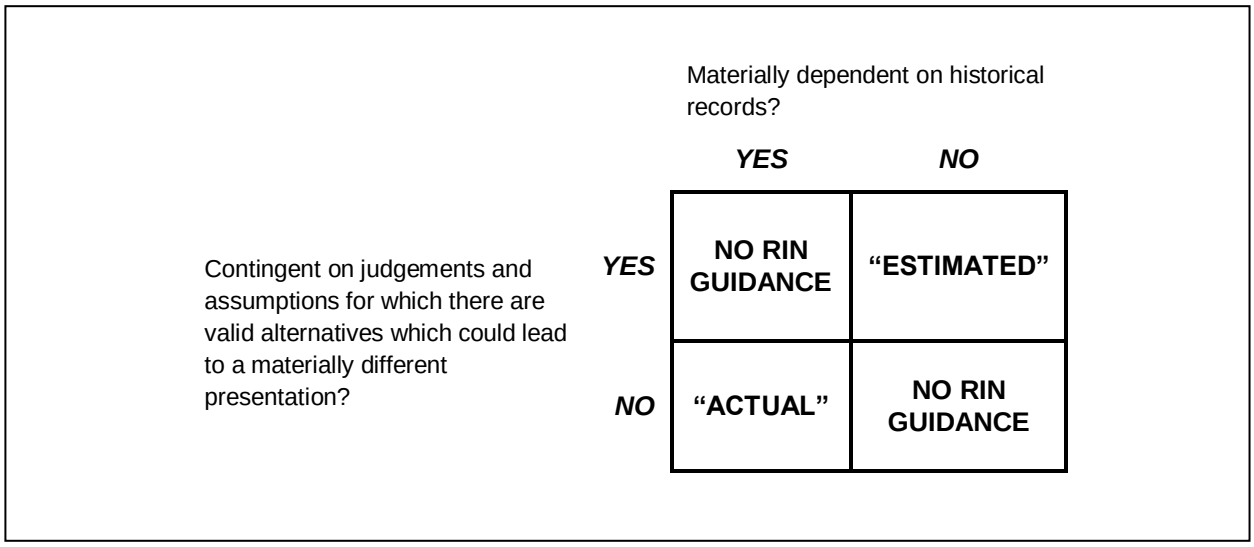
More generally, the AER's definition of what constitutes 'actual' data is reliant on meeting the following two independent conditions relating to the source and nature of the information (as set out in the attached KPMG letter attached):

1 It is materially dependent on historical records that are used in the normal course of business (that is, the source of the information)

2 Not contingent on judgements and assumptions for which there are valid alternatives that could lead to a materially different presentation (that is, the nature of the information).

The difficulty with these conditions is that any requirement for judgement or an assumption is independent of whether the resulting data is recorded in historical records used in the normal course of business. Therefore in a situation where information is materially dependent on historical records upon which JEN must manipulate or process the information to meet RIN requirements (that is, to make judgements and assumptions), there is currently no clear RIN guidance provided. This is illustrated in Figure 2–2.

Figure 2–2: Limited definitional guidance



To protect against the absence of guidance in these instances, JEN is duty bound to apply the precautionary principle to developing systems and information collection processes to capture, record and process 'actual' data as it will be subject to civil penalties and reputational loss if JEN is deemed not to comply with the RIN requirements.

2.3 SCOPE INCLUSIONS

Given the above, the following systems, processes and data fixes will be addressed to ensure JEN can confidently comply with the AER's RIN requirements.

- Updates to interfaces to allow the efficient exchange of data between systems

- Creation of, or update to, data entry screens to capture specific data objects required for RIN reporting
- Development of reports that tie the related information together for simpler, faster and auditable RIN reporting
- Change business processes to ensure relevant RIN data is captured
- Data collection exercises to capture data not required in the ordinary course of business (such as number of trees per maintenance span and accessibility to poles/spans by standard vehicle) and loading data already captured via spreadsheets, for IT Assets and some SCADA assets, into our SAP solution.
- Training of staff impacted by system and process changes such as planning and allocation of jobs, proper completion of jobs on the system, for RIN reporting purposes
- Change management to guide staff entrenched in the current business processes into a new level of detail and stricture involved in the new processes.

It should be noted that the accuracy of the financial information is dependent on the accuracy and completeness of the source systems or sub-ledgers. This accuracy and completeness will be facilitated by the dependent Field Mobility project, which will allow mobile data capture to feed the correct values at the right level of detail from the sub ledgers through to the General Ledger.

2.4 SCOPE EXCLUSIONS

This business case excludes the costs associated with Field Mobility and deployment of the Business Intelligence suite as these are already captured in other business cases.

2.5 PROJECT SCHEDULE

Following the review of the RIN requirements, the extent to which JEN currently complies with these requirements, and the changes necessary to systems and processes to ensure JEN can confidently comply with its RIN obligations, JEN expects it will take up to 18 months to achieve its objectives.

3. OPTIONS ANALYSIS

3.1 OPTIONS CONSIDERED

While there are many different options available to meet the AER's RIN requirements JEN has developed a tractable set of options that it believes cover the reasonable range of options. These are summarised in Table 3–1

Table 3–1: Summary of four RIN reporting project options

Option	Description
Option 1: Do nothing	This option involves maintaining the existing level of compliance, with no system, process or people changes. This option is the cheapest as it involves no incremental costs but has a high risk of non-compliance.
Option 2: Non-systems based compliance	This option involves no system changes but will involve some manual process work-arounds to improve compliance. The change in processes will require the ongoing use of additional resources (mainly staff) to comply with the AER's new requirements by the commencement of the reporting period where 'actual' data is required. This option is relatively low cost but leaves material non-compliance risk.
Option 3: Transition to system enabled RIN reporting with interim workaround	This option involves developing new systems and related processes to comply with the AER's requirements over the next 12-18 months, supported by an interim manual work-arounds (as per Option 2) until the system configuration changes, field devices and relevant training have been fully deployed (as per Option 4 below). JEN aims to be materially compliant from the start of the 'actual' reporting period whilst system changes are being delivered. This option is the most costly of the four considered as it involves the use of staff to manage the manual work arounds until the systems are established. In addition to being the most costly option the use of the manual work arounds creates an interim risk of being non-compliant.
Option 4: Transition to system enabled RIN reporting with no interim workaround	This option involves the development of system and related processes over the course of 12 to 18 months. This is a staged approach to delivery focusses on complying with the EB RIN from December 2016 and from July 2017 for the CA RIN. While this option results in an interim risk of non-compliance, with the AER's forbearance, JEN will be able to establish cost efficient data capture and processing systems for the long term. This staged development will the lowest cost of the three options that involve taking action to comply with the AER's new data requirements. JEN prefers this Option 4 because it maximises the opportunity to comply with the AER's requirements for the lowest cost of the proactive options. However, this option may potentially require some compliance leeway for a short period in order to avoid the higher costs of manual work-arounds while systems and processes undergo staged development.

3.2 KEY ASSUMPTIONS AND DEPENDENCIES

Costings for these four options for the RIN reporting project have been developed based on the following assumptions:

- JEN will be required to complete RIN reporting for CA and EB RINs
- For the regulatory year 2015 JEN will be required to provide 'actuals' to achieve majority compliance on the EB RIN and from regulatory year 2016 for the CA RIN
- Business cases on which this RIN reporting Business Case is dependent will be funded and
- Any proposed system changes can be made within one calendar year.

Dependencies for this RIN reporting project include:

- BI suite
- Field Mobility work stream.

Table 3–2 outlines a brief summary of dependant business cases identified as predecessors to the RIN configurations

Table 3–2: Description of project dependencies

Business Case dependencies	Description of RIN reporting impact
Business intelligence business case	Development and implementation of the necessary Business Intelligence capability to enhance data analysis enabling more advanced asset performance and reliability management to provide insights that drive better decision making (including predictive decisions), asset management, customer outcomes, and regulatory reporting
Field Mobility work stream (Field Services)	Field Mobility allows time and attendance to be recorded and allocated to specific jobs. It also allows projects to be closed real time and all costs posted.

3.3 OPTION IDENTIFICATION AND ANALYSIS

The following section provides a more detailed explanation of each of the four options summarised in Table 3–1 and recommends a preferred solution and provides the reasons for this recommendation.

3.3.1 OPTION 1 – DO NOTHING

The 'Do nothing' approach involves JEN making no systems changes to enable the delivery of the EB and CA RINs. It focuses on maintaining the existing level of compliance, with no system, process or people changes.

3.3.1.1 Option 1 – non-recurrent project costs

Not applicable as this option making no changes to current systems or processes.

3.3.1.2 Option 1 recurrent project costs

As this option involves making no changes to current systems or processes there are no incremental recurrent costs involve for this option.

3.3.2 OPTION 2 – NON SYSTEM BASED COMPLIANCE

Option 2 utilises current systems, modifying manual processes where applicable. No system changes have been included. In the context of meeting the AER's mandate to provide actual data within the timeframe allowed, the improvement, where possible, of business processes and the implementation of manual workarounds has been factored in, as has the effort to capture data at the level of detail required in the RINs on an ongoing basis. This option requires ongoing manual processes for some data collection and reporting.

The ongoing impediment to the business' ability to deliver BAU tasks, as resources are diverted towards RIN reporting, has also been considered in terms of the resourcing required. Additional staff will be required to deliver this option and this has been factored into the cost estimates. The required additional staffing to meet the RIN reporting requirements within the specified time frame and to a level of detail that will be materially compliant, while continuing to deliver core business activities, is set out in Table 3–3.

Table 3–3: Additional staffing requirements for Option 2

No. of resources	Resource type	Rationale for inclusion
2	Maintenance Planner	Required to prepare (paper based) plans at sufficient level of detail to enable data capture at CA RIN levels
2	Project Manager	For major projects/construction work required to prepare (paper based) plans at sufficient level of detail to enable data capture at CA RIN levels
5	Field Services Administrator	1 Field Services Administrator to be allocated to each region to perform the administrative data capture, freeing up technical field staff and apprentices to focus on core delivery, lessening the impact on customer service
2	Data Entry Clerk	Required to update systems centrally (where data entry screens available) or consolidated spreadsheet (where data entry to the ERP is not possible). A data entry clerk will be stationed at each Depot
2	Data Governor	Required to centrally coordinate and manage and set the data quality standards across the business, with most emphasis on Field Services where the majority of the data is produced
6	Contractor	Engaged for only three months of each year to back fill JEN staff involved in RIN reporting

These additional staff are essential to allow JEN to meet AER's RIN data requirements to a materially compliant standard. However, the use of more staff to undertake more manual work-arounds in order for JEN to comply with its data reporting obligations is neither a scalable nor sustainable approach. Manual processes are inherently error prone and even more manual processes will increase the likelihood of errors. The increase in manual work-arounds will also result in more time consuming and complex audit process and is less likely to result in an unqualified audit certification.

3.3.2.1 Option 2 non-recurrent project costs

The project costs under Option 2 relate only to the manual process changes required and a component of training and change management to maximise compliance. Even so, some investment in systems to allow these additional manual processes will require some investment, particularly in relation to CA RIN compliance. These costs are set out for 5 financial years in Table 3–4.

Table 3–4: Non recurrent project costs for Option 2

Cost component	Cost type	Financial year					Total
		2016	2017	2018	2019	2020	
Labour Costs	Opex						
Sub-Total		**0**	**0**	**0**	0	0	0
Labour Costs	Opex	500,000					500,000
Sub-Total		**500,000**	**0**	**0**	0	0	500,000
Total		**500,000**	**0**	**0**	**0**	**0**	**500,000**

3.3.2.2 Option 2 recurrent project costs

As described above, Option 2 would require an additional staff to ensure compliance. While the quantity of additional staff is set out in Table 3–5 sets out the costs of these additional staff. This data is provided for the 5 year period from 2016 to 2020 for each of the EB and CA RINs.

Table 3–5: Recurrent cost for Option 2

Cost component	Cost type	Financial year					Total
		2016	2017	2018	2019	2020	
Labour Costs	Opex	99,222	99,222	99,222	99,222	99,222	496,108
Sub-Total		**99,222**	**99,222**	**99,222**	**99,222**	**99,222**	**496,108**
Labour Costs	Opex	2,110,222	2,110,222	2,110,222	2,110,222	2,110,222	10,551,109
Sub-Total		**2,110,222**	**2,110,222**	**2,110,222**	**2,110,222**	**2,110,222**	**10,551,109**
Total		**2,209,443**	**2,209,443**	**2,209,443**	**2,209,443**	**2,209,443**	**11,047,217**

3.3.3 OPTION 3 – TRANSITION TO SYSTEM ENABLED RIN REPORTING WITH INTERIM WORKAROUND

Option 3 involves developing and employing a more developed version of JEN's current ERP system. The changes in the functionality of the ERP will naturally mean that there will be associated changes to JEN's processes. For example, a separate data capture and cleaning exercise of existing data is required to support long term efficiency and permit the system based capture of data required to comply with the AER RINs. This option also involves increases in staffing levels and associated training for an interim solution required to facilitate increased RIN compliance during the period where the RIN system capability is not yet available and is in the process of being delivered.

3.3.3.1 Option 3 non-recurrent project costs

As the system solution will be delivered in 12 to 18 months, the project costs include the effort to deliver revamped systems as well as a period of manual workarounds to facilitate compliance during the period in which the systems are being developed. The level of manual effort required is assumed to be the same as Option 2 to allow JEN to be materially compliant from the start.

The non-recurrent costs associated with Option 3 is set out in Table 3–6

Table 3–6: Non recurrent project costs for Option 3

Cost component	Cost type	Financial year					Total
		2016	2017	2018	2019	2020	
Labour Costs	Opex	494,519	422,454				916,973
System Changes	Capex	225,000	0				225,000
Sub-Total		**719,519**	**422,454**				**1,141,973**
Labour Costs	Opex	4,004,455	2,471,798				6,476,253
System Changes	Capex	1,897,900	0				1,897,900
Sub-Total		**5,902,355**	**2,471,798**				**8,374,153**
Total		**6,621,874**	**2,894,252**				**9,516,125**

3.3.3.2 Option 3 recurrent project costs

The recurrent costs for Option 3 include the ongoing data governance required to maintain compliance as well as an expected increase in Audit costs as a result of process and system changes. These Option 3 recurrent costs are set out in Table 3–7.

Table 3–7: Recurrent costs for Option 3

Cost component	Cost type	Financial year					Total
		2016	2017	2018	2019	2020	
Labour Costs	Opex		13,547	13,547	13,547	13,547	54,188
Sub-Total			**13,547**	**13,547**	**13,547**	**13,547**	**54,188**
Labour Costs	Opex		560,813	560,813	560,813	560,813	2,243,250
Sub-Total			**560,813**	**560,813**	**560,813**	**560,813**	**2,243,250**
Total			**574,359**	**574,359**	**574,359**	**574,359**	**2,297,438**

3.3.4 OPTION 4 – TRANSITION TO SYSTEM ENABLED RIN REPORTING WITH NO INTERIM WORKAROUND

Option 4 achieves compliance to the AER's RIN requirements using a staged approach to delivery, focussing initially on compliance with the EB RIN from December 2016 and from July 2017 for the CA RIN.

This option avoids the significant overhead associated with interim work around processes. This approach provides not only a financial benefit by avoiding costs it also minimises the distraction to existing staff. This cost

of diverting staff arises if JEN uses manual processes in the interim period during a rapid delivery schedule, where any new 'interim solution' could become outdated requiring further training as the solutions are deployed and processes re-designed.

Option 4 enables and supports compliance:

- In the most cost effective manner expected from a prudent operator
- Reduces the potential price impact on JEN's customers
- Has the least significant impact on staff as the program is delivered over a period of 12-18 months.

3.3.4.1 Option 4 Non-recurrent project costs

The non-recurrent project costs include the system enhancements required to capture and record data at the detail level required by the RINs and allow the timely production of the RINs, without the need for additional resourcing over and above existing levels. These Option 4 non-recurrent project costs are set out in Table 3–8. As can be seen from this table, these non-recurrent costs are confined to 2016 only.

Table 3–8: Non-recurrent project costs for Option 4

Cost component	Cost type	Financial year					Total
		2016	2017	2018	2019	2020	
Labour Costs	Opex	372,843	372,843				745,686
System Changes	Capex	112,500	112,500				225,000
Sub-Total		**485,343**	**485,343**				**970,686**
Labour Costs	Opex	1,416,687	1,416,687				2,833,374
System Changes	Capex	948,950	948,950				1,897,900
Sub-Total		**2,365,637**	**2,365,637**				**4,731,274**
Total		**2,850,980**	**2,850,980**				**5,701,960**

3.3.4.2 Option 4 recurrent costs

The recurrent costs include the ongoing data governance required to maintain compliance as well as an expected increase in audit costs as a result of process and system changes. These Option 4 recurrent project costs are set out in Table 3–9. Notably, these recurrent project costs only commence when the systems have been developed. There are no recurrent costs associated with manual work-arounds in the transition period while the systems are being developed.

Table 3–9: Recurrent costs for Option 4

Cost component	Cost type	FTE	Financial year					Total
			2016	2017	2018	2019	2020	
EB RIN								
Labour Costs	Opex			13,547	13,547	13,547	13,547	54,188
Sub-Total				**13,547**	**13,547**	**13,547**	**13,547**	**54,188**
CA RIN								

Cost component	Cost type	FTE	Financial year					Total
			2016	2017	2018	2019	2020	
Labour Costs	Opex			560,813	560,813	560,813	560,813	2,243,250
Sub-Total				**560,813**	**560,813**	**560,813**	**560,813**	**2,243,250**
Total				**574,359**	**574,359**	**574,359**	**574,359**	**2,297,438**

4. RISK ANALYSIS

Jemena's risk management policy strives to ensure that we take a systematic and strategic approach to identifying and managing risk and meeting business objectives. This policy explicitly recognises that JEN must take some risks in undertaking its core functions and pursuing opportunities. The adopted risk profile is balanced against the potential efficiency savings from assuming some risk.

Jemena's risk appetite is reflected in the risk consequence materiality table which is contained in the Risk Management Manual. The parameters for risk consequence materiality vary by the nature of risks and are defined based on a five-point scale, ranging from minor to catastrophic. Magnitude of consequence is determined with respect to Jemena's risk capacity, risk appetite and organisational objectives.

4.1 OPTION 1 – "DO NOTHING" MAJOR BUSINESS RISKS

Risk ID	Business Objective	Risk Type	Risk Title	Risk Description (Risk Line Item)	Root Causes (contributing factors)	Current Controls	Adequacy of controls	Current Consequences	Current Likelihood	Current Risk Rating	Action Plans	Target Consequences	Target Likelihood	Target Risk Rating
1	Compliance	Regulatory and Legal Compliance	Inadequate data controls	Data not captured to a level of detail required by the AER under RIN requirements	Insufficient controls applied to the collection and storage of data required for compliant RIN reporting	Manual verification and checking.	Inadequate	Catastrophic	Almost Certain	Extreme	JEN may need to capture certain data elements in MS Excel which may lead to potential inaccuracies in data leading to lack of business confidence in utilising the data to make informed decisions. May also pose data integrity issues and increased audit costs	Catastrophic	Unlikely	High

Risk ID	Business Objective	Risk Type	Risk Title	Risk Description (Risk Line Item)	Root Causes (contributing factors)	Current Controls	Adequacy of controls	Current Consequences	Current Likelihood	Current Risk Rating	Action Plans	Target Consequences	Target Likelihood	Target Risk Rating
2	Compliance	Regulatory and Legal Compliance	Financial Penalties	Prosecution following non-compliance with RIN requirements	Non-compliance with regulatory RIN obligations	None	Inadequate	Major	Possible	High	No action plan	Major	Possible	High
3	Compliance	Regulatory and Legal Compliance	National Electricity Law Financial Penalties	Penalty under section 28N of the NEL for not complying with the Notice. If the AER has reason to believe this provision has been contravened, it may issue an infringement notice for a pecuniary penalty under section 74 of the NEL. The maximum penalty is $4,000 for a natural person and $20,000 for a body corporate.	Non-compliance with regulatory RIN obligations	None	Inadequate	Major	Possible	High	No action plan	Major	Possible	High

Risk ID	Business Objective	Risk Type	Risk Title	Risk Description (Risk Line Item)	Root Causes (contributing factors)	Current Controls	Adequacy of controls	Current Consequences	Current Likelihood	Current Risk Rating	Action Plans	Target Consequences	Target Likelihood	Target Risk Rating
4	Compliance	Regulatory and Legal Compliance	Civil Financial Penalties	AER may also institute civil proceedings under Section 59 of the NEL seeking orders including a civil penalty. The maximum civil penalty the AER can seek for a natural person is $20,000 and $2,000 for every day during which the breach continues and for a body corporate, respectively $100,000 and $10,000.	Non-compliance with regulatory RIN obligations	None	Inadequate	Major	Possible	High	No action plan	Major	Unlikely	Significant

4.2 OPTION 2 – "NON SYSTEM BASED COMPLIANCE" MAJOR BUSINESS RISKS

Risk ID	Business Objective	Risk Type	Risk Title	Risk Description (Risk Line Item)	Root Causes (contributing factors)	Current Controls	Adequacy of controls	Current Consequences	Current Likelihood	Current Risk Rating	Action Plans	Target Consequences	Target Likelihood	Target Risk Rating
1	Compliance	Regulatory and Legal Compliance	New reporting regime adoption	New business processes undefined and/or misunderstood			Inadequate	Severe	Likely	High	Provide ongoing training and support processes to maximise take up of RIN reporting procedures	Severe	Possible	Significant
2	Manage Risk	Financial	Project Governance	Project governance risks associated with delivering initiatives using a standard project lifecycle approach including scope, budget, schedule and quality.	Unacceptable scoring of measures against which the project is monitored, i.e. Schedule, Scope, Quality, Risk Management and Cost		Fair	Serious	Possible	Moderate	Adopt standard project governance processes	Serious	Unlikely	Low
3	Compliance	Regulatory and Legal Compliance	Financial Penalties	Prosecution following insufficient compliance with RIN requirements			Fair	Major	Possible	High		Major	Unlikely	Significant

4.3 OPTION 3 – "TRANSITION TO SYSTEMS SOLUTION" MAJOR BUSINESS RISKS

Risk ID	Business Objective	Risk Type	Risk Title	Risk Description (Risk Line Item)	Root Causes (contributing factors)	Current Controls	Adequacy of controls	Current Consequences	Current Likelihood	Current Risk Rating	Action Plans	Target Consequences	Target Likelihood	Target Risk Rating
1	Compliance	Regulatory and Legal Compliance	New reporting regime adoption	New business processes undefined and/or misunderstood			Fair	Major	Unlikely	Significant	Ensure there are adequate training and support processes to maximise take up of RIN reporting procedures	Major	Rare	Moderate
2	Manage Risk	Financial	Project Governance	Project governance risks associated with delivering initiatives using a standard project lifecycle approach including scope, budget, schedule and quality.	Unacceptable scoring of measures against which the project is monitored, i.e. Schedule, Scope, Quality, Risk Management and Cost		Fair	Major	Rare	Moderate	Adopt standard project governance processes	Serious	Unlikely	Low
3	Compliance	Regulatory and Legal Compliance	Financial Penalties	Prosecution following insufficient compliance with RIN requirements			Fair	Major	Unlikely	Significant		Major	Rare	Moderate

4.4 OPTION 4 – "TRANSITION TO SYSTEM ENABLED RIN REPORTING WITH NO INTERIM WORKAROUND" MAJOR BUSINESS RISKS

Risk ID	Business Objective	Risk Type	Risk Title	Risk Description (Risk Line Item)	Root Causes (contributing factors)	Current Controls	Adequacy of controls	Current Consequences	Current Likelihood	Current Risk Rating	Action Plans	Target Consequences	Target Likelihood	Target Risk Rating
1	Compliance	Regulatory and Legal Compliance	New reporting regime adoption	New business processes undefined and/or misunderstood			Fair	Major	Rare	Moderate	Ensure there are adequate training and support processes to maximise take up of RIN reporting procedures	Serious	Unlikely	Low
2	Manage Risk	Financial	Project Governance	Project governance risks associated with delivering initiatives using a standard project lifecycle approach including scope, budget, schedule and quality.	Unacceptable scoring of measures against which the project is monitored, i.e. Schedule, Scope, Quality, Risk Management and Cost		Fair	Major	Rare	Moderate	Adopt standard project governance processes	Serious	Unlikely	Low
3	Compliance	Regulatory and Legal Compliance	Financial Penalties	Prosecution following insufficient compliance with RIN requirements			Fair	Major	Rare	Moderate		Serious	Unlikely	Low

5. FINANCIAL ANALYSIS OF PREFERRED OPTION

5.1 OPTION 4 – TRANSITION TO SYSTEM ENABLED RIN REPORTING WITH NO INTERIM WORKAROUND

A fully enabled systems solution that achieves compliance using a staged approach to delivery is JENs preferred option.[10]

Option 4 focusses on compliance with the EB RIN from December 2016 and the CA RIN from July 2017. Option 4 enables—to the maximum extent possible—compliance for the full regulatory year commencing in 2018:

- In the most cost effective manner expected from a prudent operator
- Reduces the potential price impact on JEN's customers
- Has the least significant impact on staff as the program is delivered over a period of 12-18 months.

5.2 OPTION 4 – PROJECT COSTS

Table 5–1: Project costings for Option 4 ($2015)

Cost component	Cost type	FTE	Financial year					Total
			2016	2017	2018	2019	2020	
EB RIN								
Labour Costs	Opex		372,843	372,843				745,686
System Changes	Capex		112,500	112,500				225,000
Sub-Total			**485,343**	**485,343**				**970,686**
CA RIN								
Labour Costs	Opex		1,416,687	1,416,687				2,833,374
System Changes	Capex		948,950	948,950				1,897,900
Sub-Total			**2,365,637**	**2,365,637**				**4,731,274**
Total			**2,850,980**	**2,850,980**				**5,701,960**

5.3 OPTION 4 – PROJECT COST ASSUMPTIONS

The assumptions made in costing this project include:

- Conducting site visits to 73 High Voltage Customers to collect data specific to the EB RIN

[10] See Appendix A1 for detailed modelling.

- One-off data collection exercises to calculate average trees per maintenance span and determine standard vehicle access to poles in high bush fire risk areas
- JEN has used standard templates which aid in defining resources and costs for IT projects.
- Change management and training costs, primarily for Field Services staff who will face the most significant change in the amount of data they must collect and the way they must collect it.
- Change management and training have been validated against JENs previous experience with similar changes in data collection process and methodology in Field Services in 1998 and 2003 to 2008 in comparable projects.

5.4 OPTION 4 – RECURRENT COSTS

Table 5–2: Recurrent costings for Option 4 ($2015)

Cost component	Cost type	FTE	Financial year					Total
			2016	2017	2018	2019	2020	
EB RIN								
Labour Costs	Opex			13,547	13,547	13,547	13,547	54,188
Sub-Total				**13,547**	**13,547**	**13,547**	**13,547**	**54,188**
CA RIN								
Labour Costs	Opex			560,813	560,813	560,813	560,813	2,243,250
Sub-Total				**560,813**	**560,813**	**560,813**	**560,813**	**2,243,250**
Total				**574,359**	**574,359**	**574,359**	**574,359**	**2,297,438**

5.5 OPTION 4 – RECURRENT COST ASSUMPTIONS

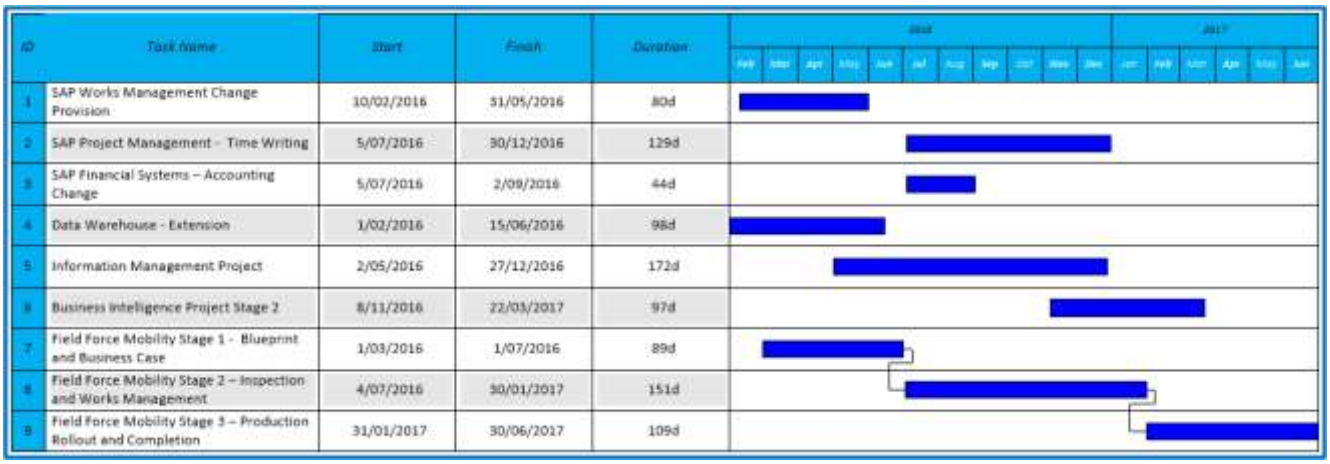
The recurrent costs include the cost of ongoing data governance (comprising 2 data governors and 3.7 full-time equivalent (**FTE**) support staff required to maintain data quality required for compliant RIN reporting.

It is also expected that audit costs will increase. This is as a result of substantial changes in processes and systems as well as the granular level of detail of data that will be collected and therefore need to be audited.

5.6 TIMETABLE

It is expected that the vast majority of the systems designed and implementation would occur over the course of the 2016 calendar year with some project components being completed in the first half of 2017. The timing of the key project stages is shown in Figure 5–1.

Figure 5–1: Option 4 project timetable



ID	Task Name	Start	Finish	Duration
1	SAP Works Management Change Provision	10/02/2016	31/05/2016	80d
2	SAP Project Management - Time Writing	5/07/2016	30/12/2016	129d
3	SAP Financial Systems – Accounting Change	5/07/2016	2/09/2016	44d
4	Data Warehouse - Extension	1/02/2016	15/06/2016	98d
5	Information Management Project	2/05/2016	27/12/2016	172d
6	Business Intelligence Project Stage 2	8/11/2016	22/03/2017	97d
7	Field Force Mobility Stage 1 - Blueprint and Business Case	1/03/2016	1/07/2016	89d
8	Field Force Mobility Stage 2 – Inspection and Works Management	4/07/2016	30/01/2017	151d
9	Field Force Mobility Stage 3 – Production Rollout and Completion	31/01/2017	30/06/2017	109d

5.7 FINANCIAL BENEFITS

5.7.1 OPTION 4 – EXPECTED BENEFITS

The benefit of Option 4 is that JEN's regulatory reporting will be more timely and accurate and the business will have greater control over its data. More specifically, Option 4 will provide:

- More comprehensive data entry through mandating completion of particular data entry fields before a record can be submitted
- Greater data accuracy by using standard data selection, where appropriate, via drop down lists for example, and templates to guide the data collection process
- Greater efficiency through enhanced Field Mobility which will eliminate double handling of data and automate data flows from 'out in the field' to JEN's core ERP solution.

5.7.2 NATURE OF OPTION 4 COSTS

The nature of the costs involved in Option 4 include both direct and indirect costs:

- The direct costs include an increase in staff associated with more centralised monitoring and data governance, and one-off systems costs.
- The indirect costs include the cultural/morale/service impacts. This burden primarily falls on Field Service staff who will be required to:
  - Collect more detailed data
  - Ensure that the extra time collecting field data does not distract them from managing customer service issues.

5.8 COMPARISON TO OTHER DNSPS

With SA Power Networks (**SAPN**) being the only network provider that has received funding from the AER for RIN related reporting activities (RIN reporting project BC32) to meet new increased compliance

requirements there is limited comparison that can be performed against multiple network providers. However, in this section we compare and contrast JEN's Submission to SAPN's RIN proposal.

The AER had engaged the Nous Group to review SAPN's RIN Business Case. In summary Nous' recommendation to the AER was to:

- Accept the $3.7 million IT related capex investment
- Significantly reduce the proposed investment in non-IT costs from $10.4 million to $4.3m (a reduction of 57% or 54.5 FTE staff).

The total amount finally approved by the AER was $8.05m (see Table 5–3), this is similar to the cost of JEN's preferred option ($8.00m totex over 5 years).

JEN's cost estimates also compare favourably to the proposals made by United Energy ($24.3m), Powercor ($20.2m) and Citipower ($8.6m) – see Table 5–3. On the basis of these comparisons it would appear that JEN's cost estimate for the preferred option is about as efficient as the most efficient option that has been proposed and/or approved by the AER so far.

Table 5–3: Comparsion of RIN project costings

$m (real 2013-14)	2015-16	2016-17	2017-18	2018-19	2019-20	Total ($m)
SAPN non-recurrent proposal – IT capex	1.44	1.45	0.77	0.04	-	3.7
SAPN non-recurrent proposal – Non-IT capex	2.38	2.88	3.36	1.81	-	10.43
SAPN recurrent proposal	-	-	-	-	-	8.9
SAPN proposal totex						**23.0**
Nous non-recurrent recommendation – IT capex	1.44	1.45	0.77	0.04		3.7
Nous recurrent recommendation						4.35
Nous proposal totex recommendation to AER						**8.05**
$m (real 2015)	**2016**	**2017**	**2018**	**2019**	**2020**	**Total ($m)**
Powercor proposal						20.2
CitiPower proposal						8.6
United Energy proposal						24.3
JEN 13 Jul 2015 proposal						19.65
JEN 6 Jan submission (Option 4) Non –recurrent – IT capex	2.12	-	-	-	-	2.12
JEN 6 Jan submission (Option 4) Non –recurrent – IT opex	3.58	-	-	-	-	3.58
JEN recurrent proposal	-	0.57	0.57	0.57	0.57	2.30
Total						**8.00**

5.9 FINANCIAL EVALUATION AND RECOMMENDATION

Option 4 is the preferred option because it is:

- The cheapest of all the options that involve taking some action ($7.49m over 5 years compared to $11.31m for Option 3 and $9.6m for Option 2) to ensure JEN complies with its RIN obligations, and

- Option 4 will, in a relatively short time (12-18 months), deliver a system that will be most likely to reliably allow JEN to comply with its obligations.

5.10 PREFERRED OPTION

It is recommended that the work outlined under Option 4 is undertaken at an estimated NPC cost of $7.49m.

Appendix A
Option 4 – Detailed modelling

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A1. OPTION 4 - DETAILED MODELLING

($2015)		EB RIN			CA RIN			EB RIN and CA RIN		
Function	**Cost category**	**Non-recurrent**	**Recurrent (2017-20)**	**Total**	**Non-recurrent**	**Recurrent (2017-20)**	**Total**	**Non-recurrent**	**Recurrent (2017-20)**	**Total**
Project Management	Opex	109,750	0	109,750	543,750	0	543,750	653,500	0	653,500
System changes	Capex	225,000	0	225,000	1,897,900	0	1,897,900	2,122,900	0	2,122,900
Data capture	Opex	573,536	0	573,536	556,400	0	556,400	1,129,936	0	1,129,936
Change management	Opex	0	0	0	568,400	0	568,400	568,400	0	568,400
Training	Opex	12,000	0	12,000	763,424	0	763,424	775,424	0	775,424
Business improvement reporting	Opex	0	0	0	68,000	0	68,000	68,000	0	68,000
Process change	Opex	50,400	0	50,400	139,000	0	139,000	189,400	0	189,400
Audit costs	Opex	0	54,188	54,188	0	803,250	803,250	0	857,438	857,438
Support	Opex	0	0	0	194,400	0	194,400	194,400	0	194,400
Monitoring	Opex	0	0	0	0	1,440,000	1,440,000	0	1,440,000	1,440,000
Totex		**970,686**	**54,188**	**1,024,874**	**4,731,274**	**2,243,250**	**6,974,524**	**5,701,960**	**2,297,438**	**7,999,397**
Opex		745,686	54,188	799,874	2,833,374	2,243,250	5,076,624	3,579,060	2,297,438	5,876,497
Capex		225,000	0	225,000	1,897,900	0	1,897,900	2,122,900	0	2,122,900
Totex		**970,686**	**54,188**	**1,024,874**	**4,731,274**	**2,243,250**	**6,974,524**	**5,701,960**	**2,297,438**	**7,999,397**