Investment Evaluation Summary (IES)

Project Details:

Project Name:	*Metering Contestability – DNSP Impacts*
Project Id:	IT.CST.01
Thread:	Information Technology
CAPEX / OPEX:	CAPEX
Scope Type:	C
Service Classification:	Standard Control
Work Category Code:	ITC
Work Category Description:	IT & Communications
Record Point ID:	R0000150776
Preferred Option Description:	TasNetworks' DNSP Metering Contestability obligations will be implemented by making changes to a number of current vendor and in-house applications.

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
Estimate ($)	4.3M									
Total ($)	4,263,336 ($12,180,960 total including 7.9M in 16/17)									

Governance:

	IES Section 1		IES Section 2	
Business Unit Review:	[redacted]	17/06/2015	[redacted]	17/06/2015
Thread Endorsed:	[redacted]	18/05/2015	[redacted]	18/05/2015
Project Approver:				

Document Details:

Version Number:	1.0

Section 1 (Gated Investment Step 1)

1. Background

In October 2013, the Standing Council on Energy and Resources (SCER) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission).

The rule change request seeks to implement arrangements that would promote competition in the provision of metering and related services in the National Electricity Market (NEM).

The broad aims of the rule change include:

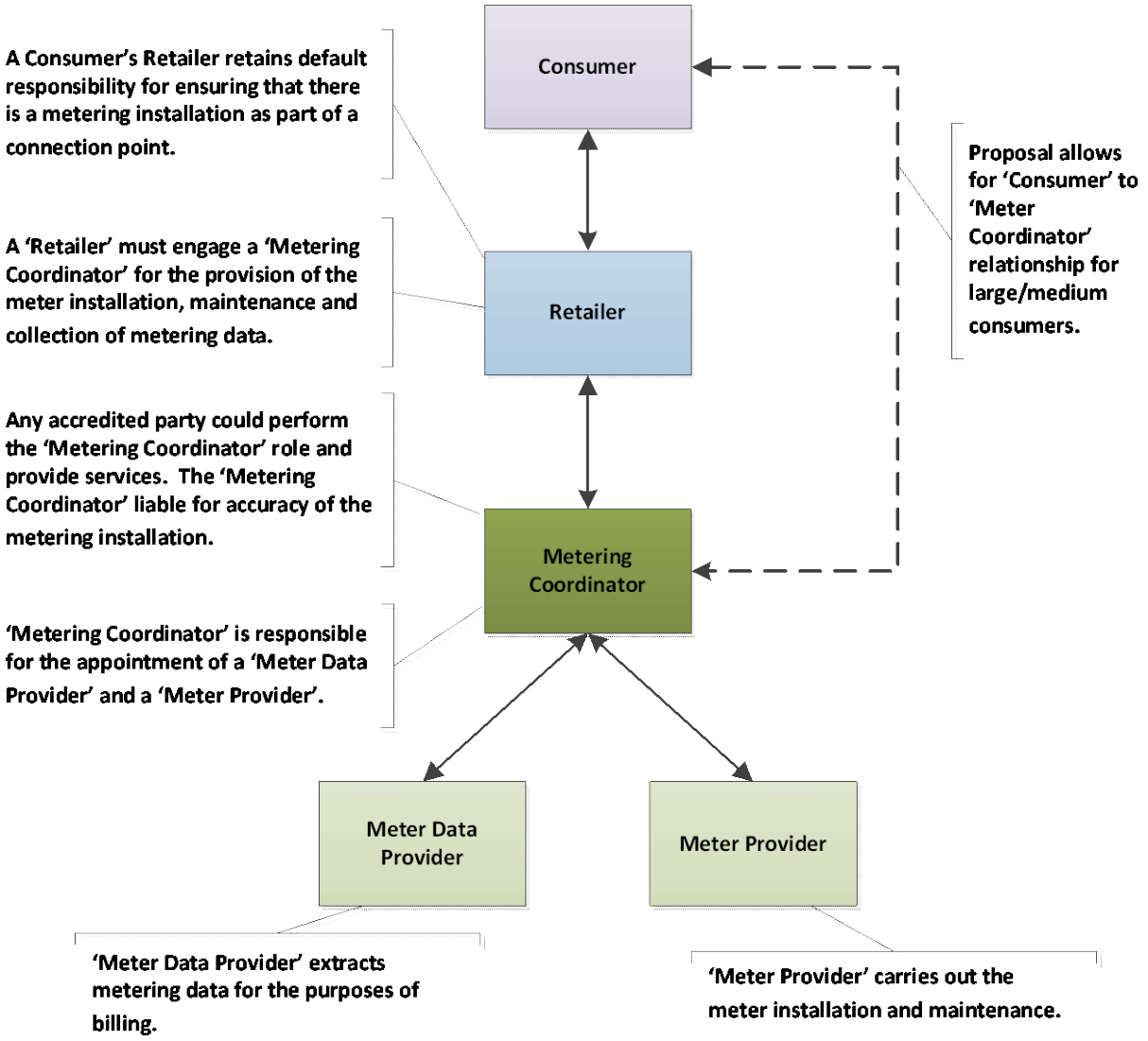
- **Better outcomes and lower costs for consumers.** The model gives consumers choice in their metering services and enables retail innovation and competition.
- **More efficient networks.** For instance, some network businesses could lower their costs significantly if they were permitted by current rules to remotely read advanced meters which are already in place. These efficiencies reduce pressure on network charges to end consumers.
- **More competition in metering services.** It ensures all customers of metering services are free to choose the most efficient option for them.
- **A basis for willing parties to negotiate.** New metering providers should compete by providing valued services to metering customers (including consumers, retailers and networks). Network businesses may contract for load control or other network services from a new metering provider; or may agree to the removal of its asset for fair compensation. However, each metering customer (including network businesses) should be free to choose.

The rule change request seeks to amend Chapter 7 of the National Electricity Rules (NER), and make other consequential changes as required, so that:

- No party has the exclusive right to provide a particular type of meter, unless a jurisdiction prescribes otherwise.
- Responsibility for coordinating metering services is separated from the roles of the Financially Responsible Market Participant or the Local Network Service Provider, by creating a new 'Metering Coordinator' role.
- Customers may engage a 'Metering Coordinator' directly[1] although this is unlikely to affect small customers.

To help understand the initiative, the following diagram shows a pictorial representation of the new proposed role for 'Metering Coordinator' and the new proposed separation of roles and responsibilities.

[1] *sourced from SCER, October 2013, "Introducing a new framework in the National Electricity Rules that provides for increased competition in metering and related services - Rule change request")*



The 'Metering Coordinator' takes on the responsible person role. A 'Metering Coordinator' can be any party that is accredited and registered with AEMO. The 'Metering Coordinator' becomes the gate keeper of obligations (including checking that only people authorised by the consumer can access smart meter information and services) and maintains liability for metrology services (integrity and data accuracy) and is responsible for the appointment of a:

- 'Metering Provider' - carries out the installation/maintenance services.
- 'Metering Data Provider' – extracts metering data for the purposes of billing.

There are two main implications for TasNetworks with the implementation of Metering Contestability:

1. TasNetworks as a DNSP entity must have the ability to interface with external 'Metering Coordinators' on a variety of meter service interactions using new yet to be defined meter service protocols. This is the focus of this initiative.

2. TasNetworks can choose to become a ‘Metering Coordinator’ which means that that it needs to have the processes and systems in place to support this.

TasNetworks DNSP obligations are expected to include:

- TasNetworks will continue to perform MPB and MDP services for existing basic meters.
- TasNetworks will remain in control of the connection processes.
- TasNetworks will need to receive and process interval data for residential/commercial customer Network bills.
- TasNetworks currently offers Controlled Load tariffs (TAS61,TAS62) for off-peak hot water. Should a customer or their Retailer request those tariffs for a smart meter customer, TasNetworks must enable this.
- TasNetworks would move customers to a monthly distribution billing cycle for any customer that had interval data available.
- It is assumed that Connection and Electrical Works Request (EWR) processes will need to change to accommodate the possibility of a Meter Coordinator being other than TasNetworks. Training will need to be provided to the electrical contracting community.
- Customer Access to Data obligations will require TasNetworks, as a DNSP, to provide access to smart meter interval data.

1.1 Investment Need

This initiative is driven by potential changes to the regulatory environment in which TasNetworks’ operates and is obligated to conform with. If TasNetworks does not comply with its regulatory obligations it may not be able to continue to operate in the manner it does now.

With the implementation of Metering Contestability, the following key issues need to be addressed:

- Residential metering has always been the responsibility of TasNetworks. Now it can be an external retailer.
- Instead of solely relying on internal staff and processes, TasNetworks will now need to interface to external companies using new market protocols.
- Residential customers always had basic metering (4 readings per year) but now can be smart/interval (17520 readings per year). TasNetworks will need to accept, validate and store far more interval data than it currently does.

Consequently TasNetworks needs to revise all of its processes and systems that deal with electricity meters and remote meter reading services and conform with new yet to be released protocols.

1.2 Customer Needs or Impact

'Contestable Metering' is a result of a need to promote competition in the provision of metering and related services in the National Electricity Market (NEM) and is therefore focussing on the needs of consumers.

Some of the consumer needs being addressed include:

- Lack of competition and customer choice. Only networks can install accumulation or interval meters. Only retailers can install smart meters[2].
- If a retailer installed a smart meter, the consumer would have to pay an 'exit fee' to cover any remaining depreciation on the network's old meter. The consumer would also pay twice for metering services, as they are not unbundled from other network services[3]. [redacted]
- There are currently no rules around consumer consent for metering upgrades in most states[4].
- Arrangements don't facilitate capturing the full supply chain benefits of smart meters, e.g. allowing other parties to access metering information and services with consumer consent[5].

1.3 Regulatory Considerations

It is assumed that the regulatory requirements for Metering Contestability will go ahead. The timeline as at early 2015 shows requirements being finalised in 2016 with implementation in 2017.

There are two other regulatory decisions that will need to be considered in parallel with Metering Contestability. They are:

- Embedded Networks (EN) – described in the initiative titled 'Embedded Networks' (IT.CST.03).
- Multiple Trading Relationships (MTR) – described in the initiative titled 'Multiple Trading Relationships' (IT.CST.02).

These initiatives are going to impact the same processes and systems that Metering Contestability does.

[2] Richard Owens, 3/12/14, "Overview of proposed metering reforms"
[3] Richard Owens, 3/12/14, "Overview of proposed metering reforms"
[4] Richard Owens, 3/12/14, "Overview of proposed metering reforms"
[5] Richard Owens, 3/12/14, "Overview of proposed metering reforms"

2. Project Objectives

The project objective is to build/enable the systems for TasNetworks to conform to its DNSP National Electricity Laws and Regulations obligation for 'Metering Contestability' to enable the new role of 'Metering Coordinator' being introduced into the market place.

3. Strategic Alignment

3.1 Business Objectives

The following table highlights the problems that the initiative will solve.

Strategic Goal	Problems this initiative will address
"we understand our customers by making them central to all we do"	• When the regulations are enabled, external Meter Coordinators (MC) and Retailers will alter their processes, without building capability, [redacted] he meter-to-cash process is not possible using manual workarounds. This will cause degradation in Customer Service through connection delays and billing issues.
"we enable our people to deliver value"	• When the regulations are enabled, external MC's and Retailers will alter their processes, without building capability, [redacted]
"we care for our assets, delivering safe and reliable network services while transforming our business"	• When the regulations are enabled, external MC's and Retailers will alter their processes, without building capability, [redacted] • The data IT asset will continue to be [redacted] • All the above issues will cause TasNetworks to fail its regulatory DNSP obligations.

3.2 Business Initiative Alignment

By supporting our customers' ability to access new market arrangements this initiative is expected to further 'TasNetworks Strategy on a Page' aims of:

- Customer net promoter score.
- Voice of the customer program.

In maintaining efficient and accurate billing this initiative supports the aims of lowest sustainable pricing.

4. Current Risk Evaluation

This chapter details the risk of 'Do Nothing'.

The TasNetworks Risk Framework details the level of risk the business finds acceptable in each category (Safety, Environment, Financial, Regulatory, Legal and Compliance, Customers, Assets, Reputation and People).

This initiative addresses Customer, Financial, Regulatory Compliance and Reputation risks, of which TasNetworks has [redacted]

Not proceeding with this initiative will result in TasNetworks being noncompliant with laws and regulations; as well as having a very high impact on the [redacted]

4.1 Risk Matrix

TasNetworks business risks are analysed utilising the corporate risk matrix, as outlined in TasNetworks Risk Management Framework.

Relevant strategic business risk factors that apply are follows:

Risk #	Risk Category	Risk	Impact	Likelihood	Consequence	Risk Rating
IT-024	Regulatory Compliance	[redacted]	TasNetworks is noncompliant with laws and regulations.	Almost Certain	Major	**Very High**
IT-025	Reputation	[redacted]	Media attention as there is currently a strong focus on pricing and competition.	Possible	Major	**High**
IT-049	Financial	[redacted]	Loss of revenue for all new and replacement metering (i.e. 12000 sites a year).	Almost Certain	Moderate	**High**

		[redacted]				
IT-050	Financial	[redacted]	Ability to interact with external service provider will be extremely limited resulting in billing and connection issues.	Likely	Negligible	Low
IT-051	Financial	[redacted]	Loss of efficiency and potentially not meeting required timelines.	Almost Certain	Minor	Medium
IT-052	Regulatory Compliance	[redacted]	Negative impact to market settlements for retailers.	Almost Certain	Major	**Very High**
IT-066	Financial	[redacted]	Higher costs to complete the initiative.	Possible	Minor	Low
IT-069	Safety & People	[redacted]	The CEO and other responsible staff may face jail time as result of compliance breaches.	Unlikely	Severe	**High**

Section 1 Approvals (Gated Investment Step 1)

Business Unit Review:	[redacted]	**Date**	17/06/2015
IT Project Initiator:	[redacted]	**Date**	18/05/2015
IT Thread Approved:	[redacted]	**Date**	18/05/2015
Manager (Network projects) or Group/Business Manager (Non-network projects):		**Date**	
[Send this signed and endorsed Summary to the Capital Works Program Coordinator.]			

Actions			
CWP Project Manager commenced initiation:		Assigned CW Project Manager:	
PI notified project initiation commenced:		Actioned by:	

Section 2 (Gated Investment Step 2)

5. Preferred option

The preferred option is to make changes to a number of current vendor and in-house applications.

This option has been selected because it has best alignment with the investment need whilst:

- Minimising the cost.
- Minimising the negative business impacts and maximising the positive business impacts.
- Maximising the strategic alignment.
- Maximising the IT strategic alignment[6].
- Minimising the project complexity.
- Minimising the risk to the organisation.

5.1 Scope

With the implementation of Metering Contestability, TasNetworks as a DNSP will have to make a number of changes to existing internal and external systems.

The high level functions in scope for this initiative includes:

- TasNetworks will require the ability to request de-energisation of a customer premise. DNSP's are also entitled to de-energise a premise in the event of illegal connections, safety issues, non-payment of connection charges. Whilst alternative actions are normal for these situations, it is still assumed that there will be occasions the DNSP needs to request a remote de-energisation.
- TasNetworks will require ability to request re-energisation of a customer premise. Any situation where the DNSP's has de-energised a premise, it will need to reverse the site state. Whilst alternative actions are normal for these situations, it is still assumed that there will be occasions the DNSP needs to request a remote re-energisation.

[6] This is a test against criteria including:

- Solutions will leverage the expertise and conformity of vendor products designed for NEM market interfaces.
- Solutions are designed for TasNetworks work practices and work processes to be as efficient and effective as possible without compromise.
- Solutions are maintainable and supported.
- Solutions are 'fit for purpose'.
- Alignment with current IT infrastructure.
- Alignment with other IT roadmap initiatives.

- Similar to how Retailers request on-demand/special reads from TasNetworks today, TasNetworks as DNSP will require the ability to request on-demand/special meter reads where it has cause to question the delivered reads in order to enable accurate and timely network bills.
- TasNetworks will require ability to communicate with the Metering Coordinator about the delivery of scheduled meter reads and other meter metrics.
- TasNetworks will require ability to request a smart meter's site status. E.g. Fault centre checks on a site's status to prevent unnecessary truck-rolls where the fault is on the consumer premise, not with the Network/connection.
- Ability to request change to a meters configuration to enable Network tariffs. E.g. Controlled Load or other variations.

These functions are expected to impact the following TasNetworks modules:

- Service Orders.
- Standing Data Management.
- Distribution Billing and Interval Data Management.

In regard to the scope, the following assumptions have been made with regard to this initiative:

- It is assumed that until a customer changes tariff, or alters their installation such that it requires meter changes, the existing Basic meters will stay in place and TasNetworks will continue to perform MPB and MDP services.
- It is assumed that TasNetworks will remain in control of the connection processes (i.e. it will play an active role in the establishment of a service and the initial energisation of the premises).
- It is assumed that basic metering will remain regulatory beyond July 2017.

Impacts to Service Orders

The following considerations/changes are needed for Service Orders (outbound requests to external metering coordinators):

- As a DNSP, TasNetworks will need changes to market interfaces to request the following services from external Metering Coordinators:
    - Re-energise a meter/site.
    - De-energise a meter/site.
    - Request On demand reading data.
    - Installation status inquiry.
- Capability to reconcile any invoices for MC services.
- Alteration of Service Order Management to cope with new roles on New Connection Service Orders.
- Other potential changes to processes of:

- Change Meter.
- Test Meter Equipment.
- Meter Fault Resolution.
- Resolve Communication Failure.
- Revenue Assurance Investigation.
- De-energisation.
- Re-energisation.
- Life Support.

Impacts to Standing Data Management

With regard to Standing Data Management, AEMC have indicated that there will be changes to role data and meter classifications (i.e. alteration to the data schema and xml schema used in transmitting site & meter information).

This would have the following impacts:

- Alterations required to the meter data management system to:
  - Store new roles and participants.
  - Store new meter classifications / attribute.
  - Facilitate modified transactions into the meter data management system.
- Alterations to the NEM market interface system set to cope with new schema and transactions for:
  - Market Interface Layer.
  - Standing Data reconciliation.
  - CATS and Transfers.

Impacts to Distribution Billing and Interval Data Management

With regard to Distribution Billing and Interval Data Management TasNetworks requires interval meter data for NUOS Billing of Retailers.

This would have the following impacts:

- Alterations required to how we receive, validate, store & access interval data due to larger volumes of domestic metering.
- Automating our requests for missing data (currently manual).
- Automating process to schedule billing of interval customers (currently manual).
- Altering meter tariff process.
- Modifications to accommodate charging exit fees (Pending policy decision to do this).

Change Management Impacts

There are various changes to processes that will need to be managed to reduce the impact on our customers. These include:

- Changed procedures for New Connections.
    - Electrical contractors need to be engaged to avoid need for multiple site visits for servicing and energisation.
    - Greater level of scheduling to coordinate with external Metering Coordinator contractors.
- Change of Network Tariff following a meter exchange will likely be a manual process. External Meter Coordinator metering work will no longer be through TasNetworks systems so will require manual intervention to ensure tariffs are correct and registered in market systems.
- Fault response processes will need changes, as field crews need to know who the Meter Coordinator is. If the Meter Coordinator is an external instead of TasNetworks replacing metering, the customer will need to raise the issue with their Retailer. TasNetworks will no longer be able to exchange a faulty meter.

High level implementation activities

High level activities identified to implement this initiative include:

- Analysis of TasNetworks obligation as a DNSP for Metering Contestability, including:
    - Identifying existing processes that will need to be changed and redrafting the 'To Be' process.
    - Identification of new processes that need to be introduced.
    - Elicitation of the full set of requirements for TasNetworks becoming compliant with the principles of 'Metering Contestability'.
    - Identification of what requirements will be delivered via in-house development resulting in separate requirements documentation sufficient for an in-house build.
    - Identification of what requirements will be delivered via a known vendor resulting in separate requirements documentation sufficient for a vendor build.
- Review and sign-off on vendor supplied functional specifications for implementation.
- Design and build of in-house components.
- Deployment and testing of in-house and vendor supplied components in TasNetworks' environments. Testing will include SIT (ensuring all vendor components work with each other), and UAT (ensuring the business are happy with the new functions delivered).
- Deployment to the TasNetworks Production environment.

- Training of staff in the new functionality and new 'To Be' processes where relevant, including creation/update of all documentation (administrative or end user).
- External Communications – Current and potential customers will need to be made aware of the new functionality.

5.2 Expected outcomes and benefits

The outcomes and benefits are considered from a TasNetworks' perspective and from an external stakeholder perspective, in this case the customer and retailer.

Outcomes and benefits have also been segregated into tangible (i.e. measureable) and intangible (not measureable). Tangible benefits will be used as part of the NPV calculations in chapter 6.

<table>
<tr>
<td>TasNetworks' perspective</td>
<td>
Tangible benefits
The benefits quantified below have been assessed as most likely to result given the assumptions made regarding the expected future state.
<table>
<tr><th>Benefit Description</th><th>Benefit</th></tr>
<tr><td>With the implementation of this initiative the risk of NECF fines will be reduced ('Do Nothing' risk IT-024 mitigated).</td><td>[redacted]
(Maximum fines for 5 years of non-compliance)</td></tr>
<tr><td>With the implementation of this initiative new roles and relationships can be stored in TasNetworks systems our system and site billing can continue ('Do Nothing' risk IT-49 mitigated).</td><td>FTE resources included below</td></tr>
<tr><td>With the implementation of this initiative, extra resources would not be required to account for loss of efficiency if the 'Do Nothing' option is selected ('Do Nothing' risks IT-050, IT-051 mitigated).</td><td>[redacted] Market Support resources</td></tr>
<tr><td>With the implementation of this initiative the risk that TasNetworks could potentially be required to outsource its metering services due to loss of accreditation is mitigated ('Do Nothing' risk IT-002 mitigated).</td><td>[redacted]</td></tr>
</table>
Intangible benefits
TasNetworks will have fulfilled its regulatory obligation.
This will have many intangible benefits including:

TasNetworks will be able to interface to external companies using new market protocols.
TasNetworks will be able to accept, validate and store interval data.
It will minimise the likelihood of high level of scrutiny during market audits as a result of market non-compliance.
The ability to deliver accurate data in a timely manner.

</td>
</tr>
</table>

	• Increase employee confidence in market systems, leading to a reduction in stress, frustration, overtime, retention issues of employees. • Decrease the likelihood of human error. • Employees will feel more valued. • Reduced reliance of working outside of systems and processes. • Adds value to our assets by enabling reliable services. • With the implementation of this initiative there will be a reduced likelihood of the CEO and other responsible staff facing jail time ('Do Nothing' risk IT-069 mitigated).
Customer and retailers perspective	This will help TasNetworks' ability to maintain valuable relationships with retailers and customers where TasNetworks can be trusted to deliver.

5.3 Regulatory Test

N/A

6. Options Analysis

Three options have been considered as described in the following chapter:

- Option 0 - Do Nothing.
- Option 1 – System enhancement - 'Metering Contestability – DNSP Impacts' will be implemented by making changes to a number of current vendor and in-house applications (preferred option).
- Option 2 – System replacement - Replace market, back office, and field systems with vendor supplied alternative that includes 'Metering Contestability – DNSP Impacts' capability. Noting that the Australian NEM interfaces are unique and will require custom development to accommodate them, this area contains a large amount of complex protocols and carries high risk.

Each option has been assessed with regard to the following criteria:

- Solution effectiveness. Solution effectiveness is tested against the 'Investment Need' (detailed in chapter titled 'Investment Need'). In simple terms, does the option achieve the project objectives?
- Cost.
- Business impact – the selected option will consider the level of change to TasNetworks environment (including during project implementation and post implementation).
- Business Strategic alignment – does the option fulfil the business objectives and current business initiatives (detailed in chapter titled 'Strategic Alignment').

- IT strategic alignment.
- Project complexity – solutions will not be un-necessarily complex. Complexity introduces risk through combination of resource requirements, increased change etc.
- Risk profile – solutions will be risk adverse.
- Ability to achieve compliance – solutions will be fully compliant with all regulatory requirements and applicable industry standards.
- Time – ability to implement within regulatory deadline. Solutions will be implemented within a suitable timeframe to ensure compliance (where relevant), minimise disruption to the business and reduce the likelihood of project requirements becoming dated.

6.1 Option Summary

Option 0 – Do Nothing

The option of 'Do Nothing' assesses the scenario where this initiative is not approved.

The 'Do Nothing' option will eventually require something to be done. If changes in the regulatory environment occur as expected and this initiative does not progress, TasNetworks will need manual workarounds for various field processes. These workarounds will have a cost and will have a negative business impact.

Criteria	Advantages	Disadvantages
Solution effectiveness	N/A	N/A
Cost	No initial CAPEX cost to consider for not delivering 'Metering Contestability – DNSP'. However, as described under disadvantages there will be a cost!	If changes in the regulatory environment occur as expected and this initiative does not progress, TasNetworks will need manual workarounds for various field processes. These will be manually intensive requiring significant additional staff.
Business impact		Should TasNetworks need manual workarounds; the change impact to the TasNetworks will be significant. Processes will become manually intensive and overly complex.
Business strategic alignment		The business objective *'we understand our customers by making them central to all we do'* will not be fulfilled due to unpredictable pricing. The business objective, *'enable our people to deliver value'* will not be fulfilled due to potential negative

		business impacts. The business objectives, *'we care for our assets, delivering safe and reliable network services while transforming our business'* will not be fulfilled due to issues with compliancy, and risk.
IT strategic alignment	N/A	N/A
Project complexity	N/A	N/A
Risk profile		See chapter titled 'Current Risk Evaluation'.
Ability to achieve compliance		TasNetworks will not have met its regulatory compliance obligations of being part of NEM.
Time - ability to implement within a deadline	N/A	N/A

Option 1 – System enhancement.

'Metering Contestability – DNSP Impacts' will be implemented by making changes to a number of current vendor and in-house applications.

As this is the preferred option, the scope has already been covered in detail in the chapter titled 'Preferred Option'.

Criteria	Advantages	Disadvantages
Solution effectiveness	It will fulfil TasNetworks 'Metering Contestability – DNSP Impacts' regulatory obligation.	
Cost	This option is the most cost effective option compared with option 2.	
Business impact	With regard to implementation, this option has the least impact to the business compared with option 2. It will only touch those parts of the business that EN impacts unlike option 2 which requires replacement of large systems that impact many processes.	
IT strategic alignment	TasNetworks market systems are contemporary and built for	

	Australia's NEM. These systems will not be considered at end of life until past 2020. It will be designed to suit TasNetworks work practices and work processes so as to be as efficient and effective as possible without compromise. It will be maintainable and supported. It will be 'fit for purpose'. It will align with current IT infrastructure. It will align with other IT road map initiatives.	
Strategic alignment	It will fulfil the business objectives of *'we understand our customers by making them central to all we do', 'enable our people to deliver value', 'we care for our assets, delivering safe and reliable network services while transforming our business'* detailed in the chapter titled 'Business Objectives'. It will align with the business initiatives detailed in the chapter titled 'Business Initiative Alignment'.	
Project Complexity	This option has less complexity compared with Option 2, as it will only touch those parts of the business that 'Metering Contestability – DNSP Impacts' impacts unlike option 2.	
Risk profile	This option has a minimal risk profile compared with Option 2.	
Ability to achieve compliance	By selecting a solution that leverages the expertise and conformity of vendor products designed for NEM market interfaces, will help ensure compliance with regulatory and industry standards. In-house components will be built to conform with regulatory and	

	industry standards.	
Time - ability to implement within a deadline	Regulatory milestones will be put in place. This option has a shorter implementation timeframe compared with Option 2, as it will only touch those parts of the business that EN impacts unlike option 2. It has been assessed as only impacting 4% of system functions and any regulatory milestones should be achievable.	

Option 2 – System replacement

Replace market, back office, and field systems with vendor supplied alternative that includes 'Metering Contestability – DNSP Impacts' capability.

This option is not feasible or appropriate for such requirements. It is included here for informational purposes.

The scope for this option goes far beyond that described for option 1. The scope will include the total replacement of market, back office, and field systems with 'Metering Contestability – DNSP Impacts' already built in. The functional requirements will be significantly greater than that for option 1 (estimated to be less than 4% of the requirements for this option). Noting that the Australian NEM interfaces are unique and will require custom development to accommodate them, this area contains a large amount of complex protocols and carries high risk.

The implementation activities will also be more expansive. Key differences in high level activities include:

- Elicitation of the full set of requirements would need to encapsulate the entire requirements for the market, back office, and field systems. The requirements would cover a big percentage of TasNetworks overall business requirements as most parts of the business would be impacted in some way. To engage all parts of the business would be resource intensive and time consuming.
- Solution evaluation and then selection will be complex. It is very unlikely that any vendor solution would meet every requirement using a single system and that proposed solutions would involve complex integrations.
- The testing effort will enormous and larger than the organisation has ever undertaken previously. As everything will be new, testing will have to be detailed and thorough. It will also require detailed performance testing to ensure the new products works within TasNetworks infrastructure.
- Every potential user group would have to be re-trained.

Criteria	Advantages	Disadvantages
Solution effectiveness	It will fulfil TasNetworks 'Metering Contestability – DNSP Impacts'	

	regulatory obligation.	
Cost		Due to the more expansive scope, it is a higher cost option compared with option 1 (option 1 is estimated to impact less than 4% of the functionality that this option proposes).
Business impact		Due to the more expansive scope, the change impact will be high compared with option 1 (option 1 is estimated to impact less than 4% of the functionality that this option proposes). During implementation, most parts of the business will be largely impacted. The business will have to be widely and intensively engaged during requirements gathering and UAT exercises. Introducing a new expansive system is going to require adjustments and compromises to existing processes which may lead to backward efficiency and effectiveness outcomes.
Business strategic alignment	The business objective *'we understand our customers by making them central to all we do'* will be fulfilled.	The business objective, *'enable our people to deliver value'* will not be fulfilled due to potential negative business impacts. The business objectives, *'we care for our assets, delivering safe and reliable network services while transforming our business'* will not be fulfilled due to issues with complexity, and risk. It may not align with the business initiatives detailed in the chapter titled 'Business Initiative Alignment', in that it will not support the aims of lowest sustainable pricing.
IT strategic alignment	Solutions will be selected that leverage the expertise and conformity of vendor products designed for NEM market interfaces. Solutions will be selected that are maintainable and supported.	The reality is that no vendor solution will 100% meet the requirements and compromises might have to be made with regard works practices/processes introducing inefficiencies. On the extreme, the compromises might even mean the solution is not 'Fit For Purpose' when delivered.

		It may result in changes to current IT infrastructure. The enormity of the project may mean it will not sensibly align with other initiatives on the IT roadmap meaning other initiatives are delayed or cancelled.
Project complexity		The complexity of this solution will be high due to the expansive scope.
Risk profile		There is a higher chance that when the solution is implemented, it will not meet TasNetworks expectations. Processes that used to work may no longer work because of new system constraints that were only identified post implementation.
Compliance	By selecting a solution that leverages the expertise and conformity of vendor products designed for NEM market interfaces will ensure compliance.	
Time - ability to implement within a deadline		Regulatory milestones will be put in place. Because of the expansive scope there is a possibility that TasNetworks will not be able to meet these regulatory milestones.

6.2 Summary of Drivers

The following table compares the options presented with regard to the criteria assessed in the previous chapter.

Criteria	Option 0	Option 1	Option 2
Solution effectiveness	N/A		
Cost			
Business Impact			
Business strategic alignment			
IT strategic alignment	N/A		
Project complexity	N/A		
Risk profile			
Ability to achieve compliance			
Time - ability to implement within a deadline	N/A		

Key			
Solution effectiveness	Addresses most requirements	Addresses some requirements	Addresses few requirements
Cost	Low	Medium	High
Business Impact	Low	Medium	High
Business strategic alignment	Good alignment	Partial alignment	Poor alignment
IT strategic alignment	Good alignment	Partial alignment	Poor alignment
Project complexity	Low	Medium	High
Risk profile	Low	Medium	High
Ability to achieve compliance	Easy	Moderate	Hard
Time - ability to implement within a deadline	Easy	Moderate	Hard

6.3 Summary of Costs

Option	Total Costs ($)
0 – Do Nothing	No capital expenditure
1 – Modify existing systems	$12,180,960
2 – Replace market, back office, and field systems	$70,000,000

6.4 Preferred Option Cost Breakdown

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
Estimate ($)	4.3M									
Total ($)	4,263,336 ($12,180,960 total including 7.9M in 16/17)									

6.5 Summary of Risk

The preferred option addresses Regulatory Compliance, Reputation and Financial risks, as analysed utilising the corporate risk matrix, as outlined in TasNetworks Risk Management Framework.

Risk Category	Risk	Impact	Mitigation	Risk Rating
Regulatory Compliance	[redacted]	TasNetworks may be noncompliant with laws and regulations.	Initiative will deliver compliant systems.	Low
Reputation	[redacted]	Media attention as there is currently a strong focus on pricing and competition.	Initiative will maintain effectiveness of billing systems.	Low
Financial	[redacted]	Loss of revenue for all new and replacement metering (i.e. 12000 sites a year).	Initiative will maintain effectiveness of billing systems.	Low
Financial	[redacted]	Ability to interact with external service provider will be extremely limited resulting in billing and connection issues.	Initiative will maintain effectiveness of billing and service order systems.	Low
Financial	[redacted]	Loss of efficiency and potentially not meeting required timelines.	Initiative will maintain effectiveness of billing and service order systems.	Low

Regulatory Compliance	[redacted]	Negative impact to market settlements for retailers.	Initiative will maintain metering data to support loss calculations.	Low
Financial	[redacted]	Higher costs to complete the initiative.	Timing of Service Order Scheduling and Field Tool initiative will need to be set to not impact this initiative.	Low
Safety & People	[redacted]	The CEO and other responsible staff may face jail time as result of compliance breaches.	Initiative results in compliance.	Medium

6.6 Economic analysis

Undertaking an NPV calculation of this initiative is largely unfeasible. The quantifiable benefits of keeping in line with regulatory and legislative changes are highly speculative, and rely upon some significant assumptions.

For the purposes of demonstrating the magnitude of the potential risks of not undertaking this initiative, a high-level assessment of the costs associated with not being compliant with the regulatory environment in which TasNetworks operates have been estimated in the calculations below.

Option No.	Option description	NPV	Reason got selection/rejection
0	Do Nothing	$0	Regulatory implications
1	Modify existing systems	$3,251,910	Greatest benefit and lowest risk
2	Replace market, back office, and field systems	-$47,146,528	Greatest cost and risk

6.6.1 Quantitative Risk Analysis

N/A

6.6.2 Benchmarking

[N/A]

6.6.3 Expert findings

[N/A]

6.6.4 Assumptions

The following are inclusive of project and financial assumptions.

Assumption ID	Assumption Description
ITA-042	It is assumed that as part of one of the major initiatives that involves significant changes to [redacted] (e.g. CST 01, 02, 03), that it will also be used as an opportunity to perform [redacted] This will require extensive regression testing of al [redacted] functionality to ensure TasNetworks customisations have been [redacted]
ITA-058	If no initiative is undertaken to facilitate metering contestability in current systems, it is estimated that no less than an extra [redacted] FTE resources [redacted] will be required to assist across the following areas: - Service Order handling. - Billing. - Disputes. - Reconciliation. - Interval data handling. - Compliance.
ITA-084	It is assumed that until a customer changes tariff, or alters their installation such that it requires meter changes, the existing Basic meters will stay in place and TasNetworks will continue to perform MPB and MDP services.
ITA-085	It is assumed that TasNetworks will remain in control of the connection processes (i.e. it will play an active role in the establishment of a service and the initial energisation of the premises).
ITA-086	It is assumed that basic metering will remain regulatory beyond July 2017.
ITA-103	If TasNetworks fail to be compliant with its Distribution Licence, the National Electricity Law, and the National Electricity Rules, it may face losing its accreditation to supply metering services, which makes up an estimated [redacted] of the total daily register charge. It has been assumed that under these circumstances, TasNetworks would be forced to engage an external contractor to provide these services. This is estimated to cost [redacted] per annum currently. If it were to be contracted out, it has been assumed to cost [redacted] (i.e. [redacted] above what it costs internally).

ITA-109	Replacing the current MDMS would be a very large initiative. This option has been put forward as the alternative option for the Metering Contestability, Embedded Networks, and Multiple Trading Relationships initiatives. High-level estimates are that replacing MDMS would cost approximately [redacted]

Section 2 Approvals (Gated Investment Step 2)

Business Unit Review:	[redacted]	**Date**	17/06/2015
IT Project Initiator:	[redacted]	**Date**	18/05/2015
IT Thread Approved:	[redacted]	**Date**	18/05/2015
Manager (Network projects) or Group/Business Manager (Non-network projects):		**Date**	
[Send this signed and endorsed Summary to the Capital Works Program Coordinator.]			

Project Initiator:		**Date:**	
Project Manager:		**Date:**	

Actions			
Submitted for CIRT review:		**Actioned by:**	
CIRT outcome:			