Investment Evaluation Summary (IES)

Project Details:

Project Name:	Emergency Response - Major Repair
Project ID:	00966
Thread:	System Operations
CAPEX/OPEX:	OPEX
Service Classification:	Standard Control
Scope Type:	B
Work Category Code:	EMMAJ
Work Category Description:	Emergency Response - Major Repair
Preferred Option Description:	Option 1 - Operational activities associated with attending and rectifying system faults and emergencies major repairs
Preferred Option Estimate (Nominal Dollars):	$35,000,000

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
Unit ($)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Volume	1	1	1	1	1	1	1	1	1	1
Estimate ($)										
Total ($)	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000

Governance:

Project Initiator:	Jason King	**Date:**	08/04/2015
Thread Approved:	Nicole Eastoe	**Date:**	01/11/2015
Project Approver:	Nicole Eastoe	**Date:**	01/11/2015

Document Details:

Version Number:	1

Related Documents:

Description	URL
Emergency Response Asset Management Plan	-
TasNetworks Risk Metrics	http://collaborationzone.tnad.tasnetworks.com.au/business-functions/audit-risk-compliance/Risk-Management/Risk%20Management/TasNetworks%20-%20Risk%20Metrics%20FINAL.docx
TasNetworks Risk Appetite	http://collaborationzone.tnad.tasnetworks.com.au/business-functions/audit-risk-compliance/Risk-Management/Risk%20Management/TasNetworks%20-%20Risk%20Appetite%20Statement%20FINAL.docx

Section 1 (Gated Investment Step 1)

1. Background

TasNetworks distribution network is currently managed utilising various asset management strategies. These asset management strategies vary from run to failure, through to more mature condition based preventive management strategies. As a result of the these varying strategies, at times there is a need to undertake emergency response activities on the distribution network to repair or replace assets. This work is required to ensure the safe and reliable operation of the distribution network.

In addition to the asset management strategies, the distribution network is also operated in an environment for which exogenous factors influence the status of the network. Attendance and rectification of system faults and emergencies major repairs has been an area of operational expenditure over the current period, and are expected to continue to drive opex over the forthcoming period.

1.1 Investment Need

The emergency response major repair work category includes operational activities associated with attending and rectifying system faults and emergency major repairs. This work is reactive in nature and is predominantly driven by external events, such as adverse weather and failure of network assets. These events can result in network outages and/or damage to assets, and associated interruptions to customer supply. When this occurs, TasNetworks needs to undertake activities (and incur costs) to:

- Ensure the safety of the effected assets and community.
- Restore supply to customers
- Repair damaged assets.

Another critical activity covered through this work category is to identify asset failures under fault conditions.

This work is critical to ensure identification and rectification of the system fault and to minimise risk to TasNetworks employees and customers and the community broadly.

1.2 Customer Needs or Impact

TasNetworks continues to undertake customerengagement as part of business as usual and through the Voice of the Customer program. This engagement seeks in depth feedback on specific issues relating to:

• how its prices impact on its services;

• outage experiences (frequency and duration) and expectations;

• communication expectations;

• STPIS expectations (reliability standards and incentive payments); and

• Increasing understanding of the electricity industry and TasNetworks.

Customers have identified safety, restoration of faults/emergencies and supply reliability as the highest performing services offered by TasNetworks.

This operational expenditure specifically addresses the requirements of customers in the area of safety, restoration of faults/emergencies and supply reliability

Customers will continue to be consulted through routine TasNetworks processes, including the Voice of the customer program, the Annual Planning Review and ongoing regular customer liaison meetings.

1.3 Regulatory Considerations

This project is required to achieve the following operational expenditure objectives as described by the National Electricity Rules section 6.5.6(a). The specific requirements that this project meets in alignment with the forecast operating expenditure 6.5.6 (a) are as follows:

(1) meet or manage the expected demand for standard control services over that period;

(2) comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;

(3) to the extent that there is no applicable regulatory obligation or requirement in relation to:

(i) the quality, reliability or security of supply of standard control services; or

(ii) the reliability or security of the distribution system through the supply of standard control services,

to the relevant extent:

(iii) maintain the quality, reliability and security of supply of standard control services; and

(iv) maintain the reliability and security of the distribution system through the supply of standard control services; and

(4) maintain the safety of the distribution system through the supply of standard control services.

2. Project Objectives

The mergency response major repair work category (EMMAJ) is to cover costs associated with attending and restoring supply and involves replacement of assets and is identified by the person attending the fault. This allows works planning to identify and raise job numbers. At the end of the month Finance identify CAPEX costs and journal to the relevant work category.

The emergency response major event work category includes operational activities associated with attending and rectifying system faults and emergencies major repairs. This work is reactive in nature and is predominantly driven by external events, such as adverse weather and failure of network assets. These events can result in network outages and/or damage to assets, and associated interruptions to customer supply.

The management objectives for the emergency response plan, of which the emergency response major event work category is a key component, focus' on the following key areas:

a. Zero Harm will continue to be our top priority and we will ensure that our safety performance continues to improve;
b. cost performance will be improved through prioritisation and efficiency improvements that enable us provide predictable and lowest sustainable pricing to our customers;
c. service performance will be maintained at current overall network service levels, whilst service to poorly performing reliability communities will be improved to meet regulatory requirements;
d. customer engagement will be improved to ensure that we understand customer needs, and incorporate these into our decision making to maximise value to them;
e. our program of work will be developed and delivered on time and within budget; and
f. our asset management capability will be continually improved to support our cost and service performance, and efficiency improvements.

3. Strategic Alignment

3.1 Business Objectives

Strategic and operational performance objectives relevant to this project are derived from TasNetworks 2014 Corporate Plan, approved by the board in 2014. This project is relevant to the following areas of the corporate plan:

• We understand our customers by making them central to all we do.

• We enable our people to deliver value.

• We care for our assets, delivering safe and reliable networks services while transforming our business.

3.2 Business Initiatives

The business initiatives that relate to this project are as follows:

• Safety of our people and the community, while reliably providing network services, is fundamental to the TasNetworks business and remains our immediate priority.

• We care for our assets to ensure they deliver safe and reliable network services.

• We will transform our business with a focus on an appropriate approach to the management and allocation of risk.

The strategic key performance indicators that will be impacted through undertaking this project are as follows:

• Customer engagement and service – customer net promoter score.

• Price for customers – lowest sustainable prices.

• Culture and people engagement – Culture score.

• Zero harm – significant and reportable incidents.

• Network service performance – meet network planning standards.

• Network service performance – outcomes under service target performance incentive schemes.

• Sustainable cost reduction – efficient operating and capital expenditure.

4. Current Risk Evaluation

Do nothing and Option 2 are not an acceptable option to TasNetworks risk appetite.

The level of risk identified is such that a treatment plan is required to reduce the risks to a tolerable level, in line with TasNetworks' Risk Management Framework.

Option 1 presents the only option with an acceptable risk appetite.

4.1 5x5 Risk Matrix

TasNetworks business risks are analysed utilising the 5x5 corporate risk matrix, as outlined in TasNetworks Risk Management Framework.

Relevant strategic business risk factors that apply are follows:

Risk Category	Risk	Likelihood	Consequence	Risk Rating
Customer	Material supply interruption to customers.	Likely	Minor	Medium
Environment and Community	Damage to the general public and / or the environment	Possible	Moderate	Medium
Network Performance	Damage to plant and equipment with asset failure or damage that leads to poor network performance outcomes	Possible	Minor	Low
Regulatory Compliance	Regulatory non-compliance due to failure or damage of the network assets.	Possible	Moderate	Medium
Reputation	Local or state publiciy that results due to the incident.	Rare	Minor	Low
Safety and People	Damage to personnel and/or the general public. Potential shock resulting in injury or death due to electrocution.	Unlikely	Major	Medium

Section 1 Approvals (Gated Investment Step 1)

Project Initiator:	Jason King	**Date:**	08/04/2015
Line Manager:		**Date:**	
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 solution is to ensure that operational budget is available to undertake operational activities associated with attending and rectifying system faults and emergencies major repairs. The operational budget that has been allowed, is outlined in the emergency response asset management plan. The expenditure is in alignment with historical trends.

5.1 Scope

The emergency response major repair work category is to allocate costs for operational activities associated with attending and rectifying system faults and emergencies major repairs. This work is reactive in nature and is predominantly driven by external events, and involves failure and replacement of network assets. These events are a result in network un-planned outages and associated interruptions to customer supply. When this occurs filed staff are to:

- Ensure the safety of the effected assets and community;
- Restore supply to customers;
- Repair damaged assets; and
- Report it as a major repair.

A key component of this work category is to ensure that the field staff attending the system fault capture any emergency major repairs correctly.

5.2 Expected outcomes and benefits

The expected outcomes of this operational expenditure is to:

- Reduce safety risk associated with asset failure or damage;
- Reduce risk to public safety from asset failure or damage; and
- Maintain asset reliability.

5.3 Regulatory Test

The regulatory test does not apply to this expenditure.

6. Options Analysis

6.1 Option Summary

Option description	
Option 0	Do nothing
Option 1 (preferred)	Option 1 - Operational activities associated with attending and rectifying system faults and emergencies major repairs
Option 2	Option 2 - Emergency response operational expenditure reduced to half of current average and capital to remain the same

6.2 Summary of Drivers

Option	
Option 0	Do not attend and/or rectify system faults and emergency major repairs. This does not address the risks identified associated with safety and people, environmenta and community, reputation, network performance, regulatory compliance or customer. This options presents a minimum cost solution to the customer, however, it does not address the risks associated with failed or damaged assets.
Option 1 (preferred)	The emergency response major event - category includes operational activities associated with attending and rectifying system faults and emergencies major repairs. This work is reactive in nature and is predominantly driven by external events, such as adverse weather and failure of network assets. These events can result in network outages and/or damage to assets, and associated interruptions to customer

	supply. When this occurs, TasNetworks needs to undertake activities (and incur costs) to: • Ensure the safety of the effected assets and community. • Restore supply to customers • Repair damaged assets.
Option 2	The emergency response major event - category includes operational activities associated with attending and rectifying system faults and emergencies major repairs. It assumes that the operational expenditure incurred for these activities is half of what is currently incurred. This work is reactive in nature and is predominantly driven by external events, such as adverse weather and failure of network assets. These events can result in network outages and/or damage to assets, and associated interruptions to customer supply. When this occurs, TasNetworks needs to undertake activities (and incur costs) to: • Ensure the safety of the effected assets and community. • Restore supply to customers • Repair damaged assets. By reducing the operational expenditure to half of what is currently expended, it is assumed that an inappropriate amount of risk would be presented to the community and TasNetworks employees in relation to a safe network. It would also result in network performance lower than required by the customers and under the jurisdictional network performance criteria. This option assumes a constant operational expenditure and GSL payments for customers. It also assumes a constant capital investment across all distribution network assets. An NPV calculation has been completed that takes into account all operational expenditure associated with Emergency Expenditure (work category codes - EMDAA, EMMAJ, EMRES).

6.3 Summary of Costs

Option	Total Cost ($)
Option 0	$0
Option 1 (preferred)	$35,000,000
Option 2	$17,500,000

6.4 Summary of Risk

Option	Risk Assessment
Option 0	Medium
Option 1 (preferred) - Option 1 - Operational activities associated with attending and rectifying system faults and emergencies major repairs	Low
Option 2 - Emergency response operational expenditure reduced to half of current average and capital to remain the same	Medium

6.5 Economic analysis

Option	Description	NPV
Option 0	Do nothing	$0
Option 1 (preferred)	Option 1 - Operational activities associated with attending and rectifying system faults and emergencies major repairs	$0
Option 2	Option 2 - Emergency response operational expenditure reduced to half of current average and capital to remain the same	$0

6.5.1 Quantitative Risk Analysis

No quantitative risk analysis has been undertaken for this expenditure against the emergency response major repair work category.

6.5.2 Benchmarking

While TasNetworks emergency response operational expenditure is a significant component of the total operational budget, along with other 'core' activities of an efficient network business, such as customer service, asset inspection, routine and condition based maintenance. TasNetworks emergency response is strongly influenced by operating environment factors external to its control. These include:

- Environmental factors (e.g. mountainous terrain, vegetation outside of clearance, weather events, etc);
- Customer demographics (e.g. low average customer density); and
- Economic conditions (e.g. demand and supply of labour and contractors).

These environmental factors have influenced expenditure during the current period, and are expected to continue to drive opex over the forthcoming period.

TasNetworks total emergency response opex per unplanned interruption of $24 is the 6th best performing in the NEM. This data is obtained form the AER benchmarking report for 2014. TasNetworks believes that this an acceptable outcome given the environment that the network is operated within.

TasNetworks' emergency response opex per OH km is slightly higher than that of its peers but around industry average when normalised against customer.

TasNetworks' emergency response opex per OH km is slightly higher than that of its peers but around industry average when normalised against customer. TasNetworks believes that the environment in which TasNetworks operates, significantly impacts the overal emergency response opex.

6.5.3 Expert findings

The operational benchmarking report completed by Huegin in 2015 demonstrtes that the total operational expenditure for TasNetworks compares favourably to peers and broader industry in all categories. The only category where TasNetworks does not have demonstrably lower cost performance than industry averages is emergency response opex, which is a function of the operating environment, rather than managerial efficiency. TasNetworks is a sparsely populated network with a considerable spread of customers in rural areas. As such, it has a high level of radial network and significant assets required to reach customers. Parts of Tasmania also have rainfall levels similar to the NSW north coast. It is believed that these key aspects of the environment for which we operate the network, impact on the operational expenditure associated with the emergency response.

6.5.4 Assumptions

TasNetworks has assumed that the level of expenditure for rectifying system faults and emergency major repairs will continue at a similar level into the future. TasNetworks anaticipates that over time the expenditure required will reduce as forecast capital projects will result in a decrease in operational emergency expenditure over time.

All costs are in 2014/15 dollars.

Section 2 Approvals (Gated Investment Step 2)

Project Initiator:	Jason King	**Date:**	08/04/2015
Project Manager:		**Date:**	

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