

# Investment Evaluation Summary (IES)



## Project Details:

<b>Project Name:</b>	Network Operation Innovation
<b>Project ID:</b>	00903
<b>Thread:</b>	Non Network Solutions
<b>CAPEX/OPEX:</b>	CAPEX
<b>Service Classification:</b>	Standard Control
<b>Scope Type:</b>	C
<b>Work Category Code:</b>	NNNOC
<b>Work Category Description:</b>	Non Network Solutions Network Optimisation Capex
<b>Preferred Option Description:</b>	Option 1 is to investigate emerging innovations, evaluate their application to TasNetworks, and develop the appropriate innovations into package capable of timely deployment in response to operating TasNetworks.
<b>Preferred Option Estimate (Nominal Dollars):</b>	\$500,000

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
<b>Unit (\$)</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Volume</b>	1	1	1	1	1	1	1	1	1	1
<b>Estimate (\$)</b>										
<b>Total (\$)</b>	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000

## Governance:

<b>Project Initiator:</b>	Andrew Fraser	<b>Date:</b>	01/04/2015
<b>Thread Approved:</b>	Andrew Fraser	<b>Date:</b>	19/10/2015
<b>Project Approver:</b>	Stephen Jarvis	<b>Date:</b>	19/10/2015

## Document Details:

<b>Version Number:</b>	1
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## Related Documents:

Description	URL
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# Section 1 (Gated Investment Step 1)

## 1. Background

TasNetworks Innovation strategy encompasses the following:

- Remote monitoring, control & automation;
- Generation and storage;
- Demand side initiatives;
- Improved network utilisation;
- Applied research; and
- Intelligent new infrastructure.

The technologies trialled will allow the network to operate more efficiently, and also facilitate demand management, embedded generation and distributed generation, electric vehicles and other technologies.

The Network Innovation team identifies business needs to address network capacity, reliability or asset management issues and matches the relevant technology solution.

### 1.1 Investment Need

Investment in network operation innovation can allow for network augmentation deferrals. In some cases it can provide lower operating costs compared to traditional network support options such as mobile generators.

### 1.2 Customer Needs or Impact

TasNetworks continues to undertake a consumer engagement 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 it prices impact on its services
- current and future consumer energy use
- outage experiences (frequency and duration) and expectations
- communication expectations
- STPIS expectations (reliability standards and incentive payments)
- Increase understanding of the electricity industry.

TasNetworks Consumers have identified safety, restoration of faults/emergencies and supply reliability as the highest performing services offered by TasNetworks. Consumers also identified that into the future they believe that affordability, green, communicative, innovative, efficient and reliable services must be provided by TasNetworks.

This project specifically addresses the requirements of consumers in the areas of;

- Restoration of faults/emergencies and supply reliability
- affordability, innovative, efficient and reliable services 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 capital and operational expenditure objectives as described by the National Electricity Rules section 6.5.7(a) and 6.5.6(a).

#### 6.5.7 (a) Forecast capital expenditure

- (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.

#### 6.5.6 (a) Forecast operating expenditure

- (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 aim of the project is to identify opportunities for emerging new technologies to be trialled or implemented to improve TasNetwork's operation of the network.

## 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:

- the customer, and a strong commitment to delivering services they value
- an engaged workplace with strong cultural qualities and people who will be great ambassadors for TasNetworks
- a high performing culture with clear accountabilities for deliverables
- an appropriate approach to the management and allocation of risk
- a well run, efficient business, that delivers sustainable returns to the Tasmanian community and is resilient to future challenges.

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
- Zero harm – significant and reportable incidents
- Network service performance – outcomes under service target performance incentive schemes
- Sustainable cost reduction – efficient operating and capital expenditure

## 4. Current Risk Evaluation

Moderate safety risk to TasNetworks staff due to the introduction of new technology.

### 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
Environment and Community	Impacts on the environment need to be factored in asset management plans that may encompass end of life disposal and site clean-up.	Possible	Negligible	Low
Safety and People	Safety procedures and operational guidelines need to be developed providing adequate knowledge to operational staff.	Possible	Moderate	Medium

## Section 1 Approvals (Gated Investment Step 1)

<b>Project Initiator:</b>	Andrew Fraser	<b>Date:</b>	01/04/2015
<b>Line Manager:</b>		<b>Date:</b>	
<b>Manager (Network Projects) or Group/Business Manager (Non-network projects):</b>		<b>Date:</b>	
[Send this signed and endorsed summary to the Capital Works Program Coordinator.]			

<b>Actions</b>			
<b>CWP Project Manager commenced initiation:</b>		<b>Assigned CW Project Manager:</b>	
<b>PI notified project initiation commenced:</b>		<b>Actioned by:</b>	

## Section 2 (Gated Investment Step 2)

### 5. Preferred Option:

The trial of a new technology incurs operational expenditure to facilitate the success of the project. They may include costs such as demand management payments to contracted customers, network support generator payments, network deferral payments and other operating costs associated with the trial.

#### 5.1 Scope

The project scope includes the need identification; concept design; trial; design, testing, installation, commissioning documentation, training and documenting the project benefits.

#### 5.2 Expected outcomes and benefits

The preferred solution will result in efficiencies from the Network Operation budgets.

#### 5.3 Regulatory Test

This project is exempt from the Regulatory Test for Distribution as the most expensive credible option is below \$5 Million.

## 6. Options Analysis

At this stage the technology used in the next revenue period is unknown. This makes traditional option analysis difficult. Instead this analysis is done in stages:

- Identify the innovation opportunity for a problem;
- Liaise with internal and external stakeholders regarding the demand management
- Develop health, safety & environmental, training and other supporting documentation for the demand management technology.

### 6.1 Option Summary

Option description	
Option 0	Do Nothing - Results in continuing on the same paths for asset management, employing the traditional tools and techniques for managing this assets. This represents a lost opportunity to take advantage of innovations that continually present themselves.
Option 1 (preferred)	Option 1 is to investigate emerging innovations, evaluate their application to TasNetworks, and develop the appropriate innovations into package capable of timely deployment in response to operating TasNetworks.

### 6.2 Summary of Drivers

Option	
Option 0	Continue on same asset management path.

Option 1 (preferred)	Advantages include lower cost and higher efficiency.
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### 6.3 Summary of Costs

Option	Total Cost (\$)
Option 0	\$0
Option 1 (preferred)	\$500,000

### 6.4 Summary of Risk

Safety assessments such as HazOps that identify possible issues will be carried out early in the project to reduce the safety risk to TasNetworks staff.

### 6.5 Economic analysis

Option	Description	NPV
Option 0	Do Nothing - Results in continuing on the same paths for asset management, employing the traditional tools and techniques for managing this assets. This represents a lost opportunity to take advantage of innovations that continually present themselves.	\$0
Option 1 (preferred)	Option 1 is to investigate emerging innovations, evaluate their application to TasNetworks, and develop the appropriate innovations into package capable of timely deployment in response to operating TasNetworks.	\$0

#### 6.5.1 Quantitative Risk Analysis

#### 6.5.2 Benchmarking

#### 6.5.3 Expert findings

#### 6.5.4 Assumptions



## Section 2 Approvals (Gated Investment Step 2)

<b>Project Initiator:</b>	Andrew Fraser	<b>Date:</b>	01/04/2015
<b>Project Manager:</b>		<b>Date:</b>	

<b>Actions</b>			
<b>Submitted for CIRT review:</b>		<b>Actioned by:</b>	
<b>CIRT outcome:</b>			