



Asset Management Plan

Service Performance

Record Number: R112282

Version Number: 3.0

Date: October 2017

Authorisations

Action	Name and title	Date
Prepared by	Brook Nichols, Network Performance Analyst Pankaj Mishra, Principal Asset Performance Engineer Jack Terry, Asset Performance Engineer Robert Scott, Graduate Engineer	1/10/2017
Reviewed by	S. Thaow, Asset Performance Team Leader	30/10/2017
Authorised by	Nicole Eastoe, Leader Asset Strategy and Performance	31/10/2017
Review cycle	2.5 years	

Responsibilities

This document is the responsibility of the Asset Performance Team, Tasmanian Networks Pty Ltd, ABN 24 167 357 299 (hereafter referred to as "TasNetworks").

The approval of this document is the responsibility of the Leader, Asset Strategy and Performance

Please contact the Asset Performance Team Leader with any queries or suggestions.

- Implementation All TasNetworks staff and contractors.
- Compliance All group managers.

© Tasmanian Networks Pty Ltd 2017

Record of revisions

Section number	Details
All	This document has been revised extensively from previous version.

Table of Contents

Authorisations.....	2
Responsibilities	2
1 Purpose.....	6
2 Scope	6
3 Strategic alignment and objectives.....	6
3.1 Strategic alignment.....	6
3.2 Service performance objectives	8
4 Operating environment.....	9
4.1 Internal.....	10
4.1.1 Benchmarked performance.....	10
4.1.2 Culture	10
4.1.3 Pricing	10
4.2 External.....	10
4.2.1 Customers.....	10
4.2.2 Compliance and regulation	11
5 Service performance measures.....	13
5.1 Supply reliability.....	13
5.2 Circuit outage rate	13
5.3 Supply security.....	13
5.4 Supply quality.....	14
5.5 Market impact component.....	14
5.6 Network capability.....	15
5.7 Customer service	15
6 Current service performance	16
6.1 Transmission system performance.....	16
6.1.1 Transmission STPIS performance	16
6.1.2 STPIS service component	16
6.1.3 STPIS market impact component	19
6.1.4 STPIS network capability component.....	19
6.1.5 OTTER performance	20
6.2 Distribution network service performance	21
6.2.1 System performance	23
6.2.2 Distribution STPIS performance	24

6.2.3 Category performance	25
6.2.4 Community performance	28
6.2.5 Feeder performance.....	31
6.2.6 STPIS customer service.....	31
6.2.7 Guaranteed service levels	31
6.2.8 Asset performance	33
7 Service performance management.....	33
7.1 Service performance in the end-to-end works management process.....	33
7.1.1 Needs identification	33
7.1.2 Needs assessment and options analysis	34
7.1.3 Works development	34
7.1.4 Implementation and finalisation	35
7.1.5 Works review and close	35
7.2 Service performance levers	35
7.2.1 Network planning and design	35
7.2.2 Asset management strategies	36
7.2.3 Operational management of planned and unplanned outages.....	37
7.2.4 Performance monitoring and evaluation	38
7.3 Specific initiatives	38
7.3.1 Distribution service performance	38
7.3.2 Transmission service performance	41
7.3.3 Education and awareness.....	41
8 Related standards and documentation.....	42

1 Purpose

The purpose of this asset management plan is to define TasNetworks' service performance strategy. This includes

- influencing factors on the service performance management strategy;
- key business processes that influence service performance outcomes and the associated systems that support these processes;
- current service performance levels; and
- initiatives to address poor service performance and improve the reliability of the network..

2 Scope

This document covers all aspects of transmission and distribution network activity that have a service performance outcome.

3 Strategic alignment and objectives

3.1 Strategic alignment

This asset management plan has been developed to align with both TasNetworks' Asset Management Policy and Strategic Objectives.

The asset management policy, contained within the Strategic Asset Management Plan, states 'Consistent with our vision and purpose, we strive for excellence in asset management and are committed to providing a safe working environment, value for our customers, sustainable shareholder outcomes, care for our assets and the environment, safe and reliable network services, whilst effectively and efficiently managing our assets throughout their life-cycle'.

It is part of a suite of documentation that supports the achievement of TasNetworks strategic performance objectives and, in turn, its mission. This asset management plan is not bound to a specific asset class and identifies the issues and strategies relating to whole of network service performance and the activities that can to be undertaken to address the identified issues at varying levels of the system.

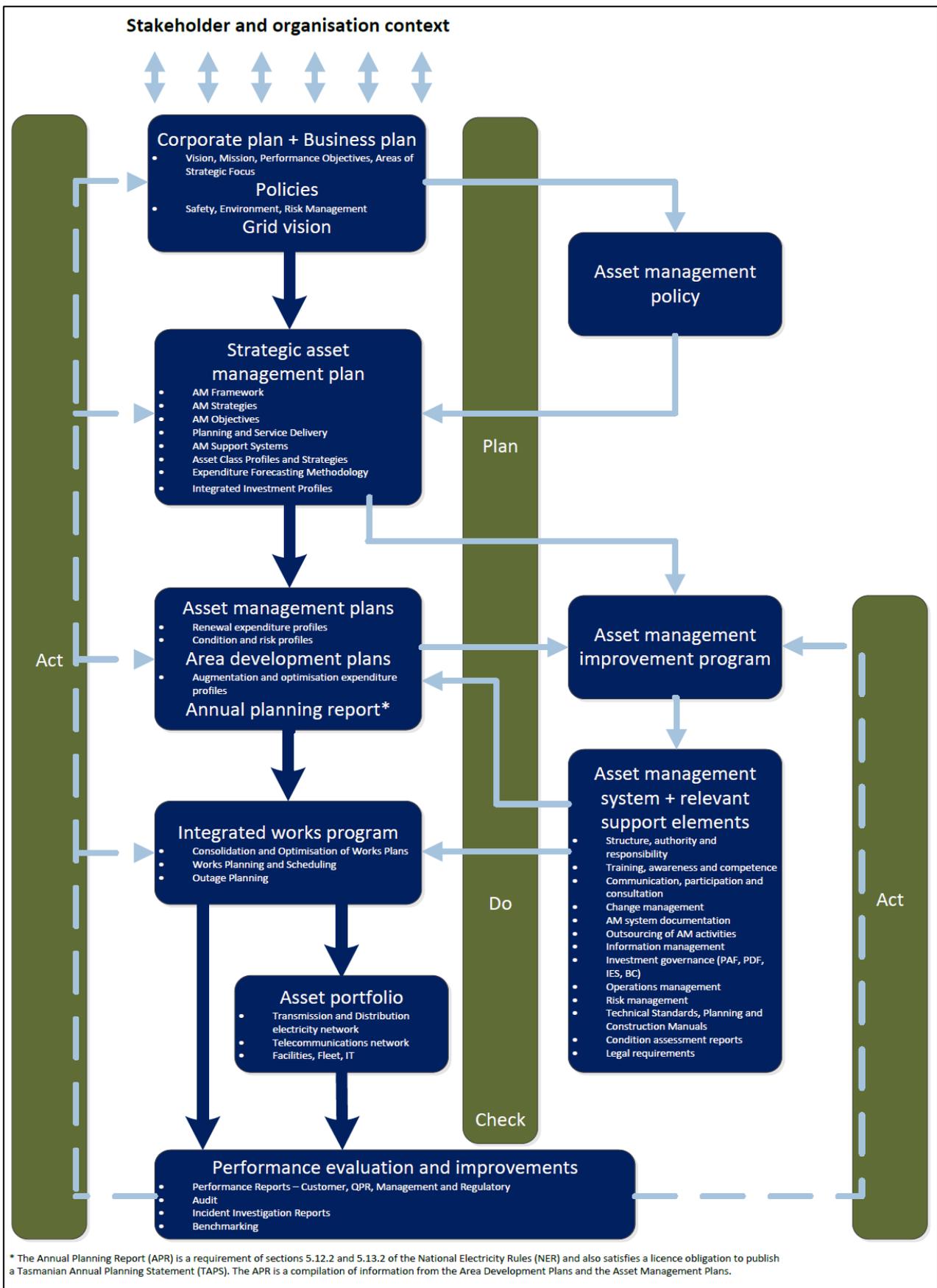


Figure 1 represents TasNetworks documents that support the asset management framework. The diagram highlights the existence of, and interdependence between, the Plan, Do, Check, Act components of good asset management practice.

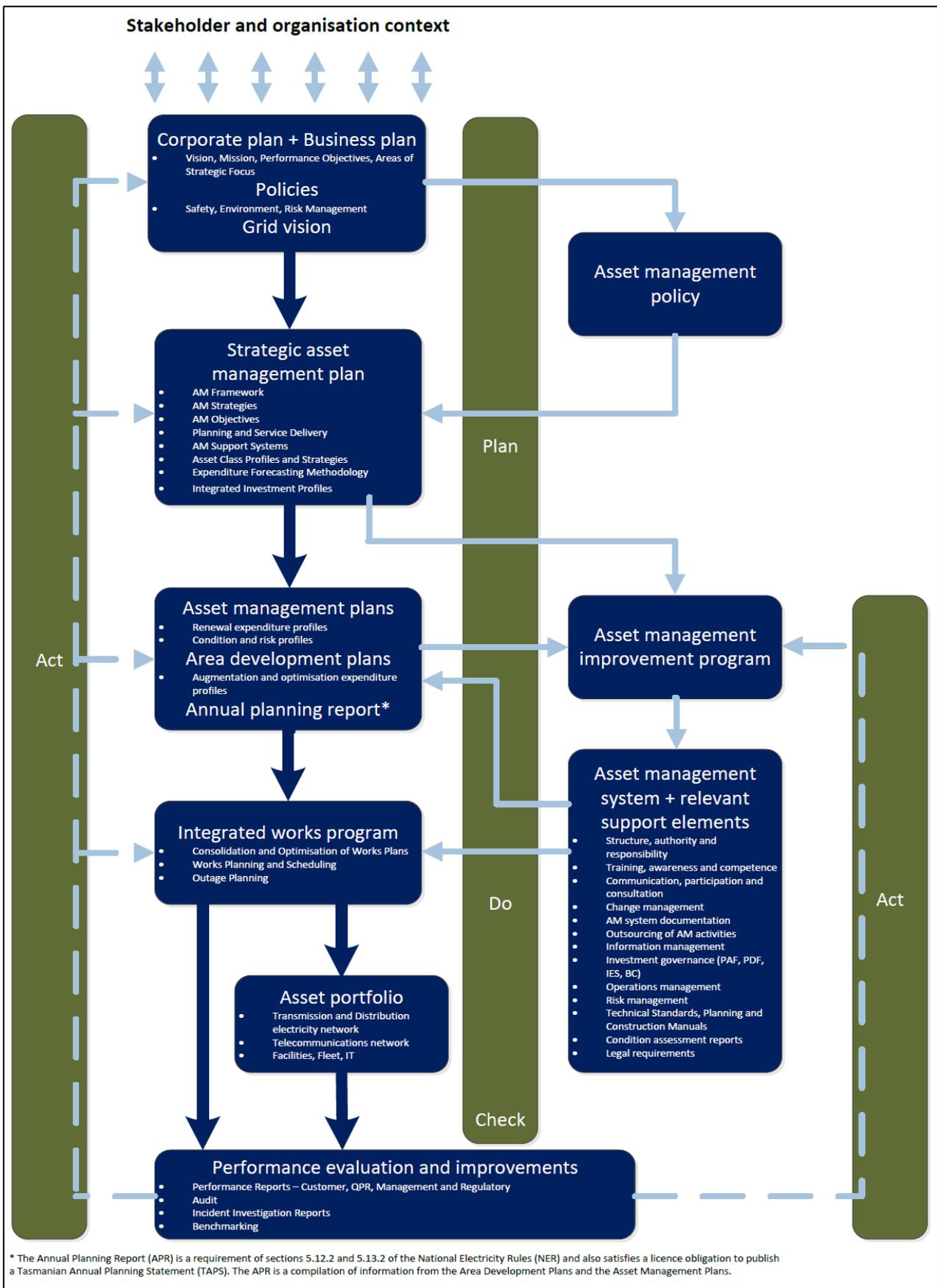


Figure 1: TasNetworks Asset Management Documentation Framework

The strategic objectives for the service performance management plan are:

- a) Safety will continue to be our top priority and we will continue to ensure that our safety performance continues to improve;
- b) 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;
- c) Cost performance will be improved through prioritisation and efficiency improvements that enable us provide predictable and lowest sustainable pricing to our customers;
- 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.

3.2 Service performance objectives

As a prudent network service provider, TasNetworks manages the network by balancing cost, risk and performance to deliver reliable levels of service and performance to its customers. Network service performance is a critical aspect of TasNetworks’ customer service and must meet the requirements of customers and the Tasmanian community, within TasNetworks’ operational context. TasNetworks’ service performance objectives are detailed in Table 1.

Table 1: Service performance objectives

Document	Objective
Asset Management Policy	“Manage our assets to meet the strategic goals, measures and initiatives outlined in the Corporate Plan”
	“Continually adapt, benchmark and improve asset management strategies and practices...”
	“Develop and continually improve asset management processes and systems to optimise asset management efficiencies and decision making processes”
	“Maintain a complete and accurate register and documentation system of all our assets”
Corporate Plan	“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”
Strategic Asset Management Plan	“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”

With consideration of the higher level strategic objectives listed above, TasNetworks’ service performance objective is:

Network 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.

The effectiveness of TasNetworks’ service performance management plan is measured through delivery on this objective, determined by outcomes against a number of lower level measures and targets (see Table 2 **Error! Reference source not found.**) defined in TasNetworks’ corporate plan. These targets have been developed for a five year outlook, but will be subject to review every 2.5 years through this asset management plan.

Table 2: TasNetworks’ service performance measures and targets

Network	Performance Measure	Performance Target
Transmission	AER STPIS outcome	25% of maximum bonus
	AER STPIS – 0.1 system minute LOS events	≤10 events
	AER STPIS – 1.0 system minute LOS events	≤3 events
Distribution	AER STPIS outcome	20% of maximum bonus
	Distribution SAIDI – Count of poorly performing reliability communities (incl. MEDs)	≤20 communities
	Distribution SAIDI – Count of poorly performing reliability communities (excl. MEDs)	≤8 communities
	Distribution SAIFI – Count of poorly performing reliability communities (incl. MEDs)	≤6 communities
	Distribution SAIFI – Count of poorly performing reliability communities (excl. MEDs)	≤4 communities
	Distribution Network SAIDI	≤187 minutes
	Distribution Network SAIFI	≤1.64 events

It can be noted that the targets against the Australian Energy Regulator’s (AER’s) service target performance incentive scheme (STPIS) are annual and have been set at 25 percent of the maximum bonus for transmission and 20 percent of the maximum bonus for distribution. Performance targets have been set at these levels to ensure that TasNetworks strives to realise latent performance improvement opportunities at low to minimal cost.

The business has the option to forego any revenue received under the STPIS, so the rewards of any performance improvements need not be passed through to customers.¹

Below each of these measures, lower level metrics are defined that contribute to each of these in different ways. Section 6 describes these metrics, including current and historical values and an assessment of performance.

4 Operating environment

TasNetworks must consider the current internal and external environments within which the business operates when setting strategies to achieve the best balance of cost, risk and performance that meet the requirements of shareholders, customers, and the business. A number of key considerations are described in more detail below.

¹ Excluding GSL performance measures

4.1 Internal

The internal operating environment includes those aspects of service performance over which TasNetworks has significant influence.

4.1.1 Benchmarked performance

As a prudent asset manager that is actively seeking to achieve sustainable pricing, it is incumbent on TasNetworks to continuously strive to identify and implement operational efficiencies, without adversely impacting on the corporate risk profile.

To assist in this process, TasNetworks regularly benchmarks the cost and performance of its operational activities against other network service providers both nationally and internationally, identifying where TasNetworks is performing well, and where further improvement may be possible. Benchmarking activities include items such as the:

- AER's annual regulatory information notices for distribution and transmission networks;
- biennial International Transmission Operations and Maintenance Study (ITOMS); and,
- Energy Supply Association's (ESAA's) annual network sector survey.

4.1.2 Culture

The delivery of TasNetworks' service performance management strategy is highly dependent on TasNetworks personnel approaching their daily activities within a cultural framework that is in alignment with TasNetworks strategic objectives. To manage service performance it is critical that TasNetworks staff understand what constitutes good, average or poor service performance, and how they are able to influence service performance through their daily activities.

To achieve this TasNetworks fosters a service performance culture through TasNetworks' culture development programs, and is continuing to develop a specific service performance education and awareness program. The outcomes of these programs will continue to feed into the service performance management strategy.

4.1.3 Pricing

To ensure TasNetworks delivers value to its customers, the impacts of performance management activities on the customer experience are balanced with pricing implications. Prudent investment in the network ensures that current levels of service are maintained across the network within the regulated allowance. Operating efficiencies and deferral of capital investment will be actively pursued across all aspects of service performance to deliver sustainable value to our customers.

4.2 External

The external operating environment includes those aspects of service performance that are predominantly imposed on TasNetworks by external bodies and over which TasNetworks has less influence.

4.2.1 Customers

TasNetworks undertakes a variety of customer engagement activities on an ongoing basis through its 'Voice of the Customer' program. TasNetworks takes these opportunities to test its service performance strategy with customers and incorporate feedback from customers into this strategy.

As a part of its 2019 revenue reset activities, TasNetworks undertook consultation with all customer groups within TasNetworks' customer segmentation wheel. Consultation activities included:

- customer engagement workshops;
- online surveys;
- exhibitions at events;
- roadshows; and
- one on one sessions.

TasNetworks' service performance strategy was presented for discussion and feedback. Common themes received from customers were:

- an overall preference for "same level of reliability at the same cost";
- importance of timely communications of outage information for distribution customers;
- sustainability and predictability in pricing as a priority for transmission customers; and
- a desire for increased communications and engagement from TasNetworks in terms of service performance investment.

4.2.2 Compliance and regulation

As a monopoly provider of transmission and distribution network services, TasNetworks is subject to a number of legislative and regulatory compliance obligations. These provide a framework and basis for TasNetworks to manage and operate its networks prudently and efficiently to deliver customer outcomes and mitigate risks to appropriate levels. Ensuring ongoing compliance will always be a critical consideration in the establishment of future asset management strategies.

TasNetworks is also subject to a number of regulatory incentive schemes, which include the distribution and transmission service incentive schemes. These ensure that network reliability, and other aspects of customer service, are appropriately considered within the business' decision making framework.

4.2.2.1 Australian Energy Regulator (AER)

At a national level the AER assesses network expenditure to ensure network service providers are prudently and efficiently managing their network. To ensure cost and risk outcomes are not achieved at the expense of service performance, the AER applies service target performance incentive schemes (STPIS) to distribution and transmission network service providers.

Both transmission and distribution schemes operate through the comparison of current service performance levels against historic values. Network service providers are subject to positive revenue adjustment when network performance betters historic levels and subject to negative revenue adjustment when network performance falls short of historic levels.

These financial incentives are expressed as a percentage of allowed revenue for a given year in a regulatory period, and are passed through to customer prices in subsequent years. With consideration for the value that customers place on particular aspects of reliability, these schemes have been designed to ensure that the value of reliability improvements are always greater than or equal to the price impacts on customers.

In years where TasNetworks receives a positive STPIS outcome, TasNetworks can elect to forego revenue to reduce impacts on customer pricing.

4.2.2.2 Office of the Tasmanian Economic Regulator (OTTER)

At a state level, the OTTER assesses transmission and distribution network service performance through quarterly and annual performance reporting and incident reporting.

In its capacity as a network service provider, TasNetworks is subject to service performance regulation by the OTTER to ensure compliance against licence requirements. The OTTER defines service performance standards for the distribution network in its Tasmanian Electricity Code (TEC) that TasNetworks must use reasonable endeavours to achieve. There are no defined service performance standards for the transmission network and no financial incentives or penalties associated with TasNetworks’ performance that is regulated by the OTTER.

Under the OTTER “*Guideline on Incident Reporting for the Tasmanian Electricity Supply Industry*”, transmission and distribution incidents that meet certain criteria set by OTTER are investigated and reported to OTTER within the prescribed timeframes

4.2.2.3 Summary of external reporting obligations

Table 3 provides a summary of TasNetworks’ reporting obligations for the AER and the OTTER. When comparing, it should be noted that while the name and intent of a number of performance measures are the same, the underlying definitions will differ. These definitions are described in more detail in documentation available from the AER website.

Table 3: AER and OTTER reporting obligations

	Measure	AER	OTTER
Transmission	Loss of supply events	✓	✓
	Outage duration	✓	✓
	Circuit outage rate	✓	
	Market impact of transmission congestion	✓	
	Network capability	✓	
	Proper operation of equipment	✓	
	Plant availability		✓
	Connection site reliability and availability		✓
Distribution	Frequency of outages (SAIFI)	✓	✓
	Duration of outages (SAIDI)	✓	✓
	Call service performance	✓	
	Guaranteed service level payments (GSLs)		✓

5 Service performance measures

Service performance varies across an electricity network, depending on many factors such as geography, weather conditions, existing network interconnectivity, vegetation density and customer criticality. This section describes the service performance measures at different levels across the distribution and transmission networks.

5.1 Supply reliability

Supply reliability is measured in terms of outage frequency and outage duration; the two factors that are considered to be most significant on customer experience.

Outage frequency reflects the effectiveness of TasNetworks' asset management strategies in the prevention of outages. It is measured using the number of loss of supply (LOS) events and average circuit outage rate for the transmission network, and a system average interruption frequency index (SAIFI) for the distribution network.

Outage duration reflects TasNetworks' effectiveness in responding to unplanned or forced outage events. It is measured using average unplanned outage duration for the transmission network, and a system average interruption duration index (SAIDI) for the distribution network.

Supply reliability performance is considered in each of the distribution and transmission STPIS'.

5.2 Circuit outage rate

Circuit outage rate is a measure of unplanned outages in the transmission system. Transmission circuits may be unavailable for service due to planned, forced or fault outages.

TasNetworks monitors circuit outage rates primarily on:

- transmission line circuits;
- transformer circuits; and,
- capacitor bank circuits.

TasNetworks also monitors the availability of supply and demand connection points as part of its reporting requirements to customers and regulators. Connection point availability data is published in the Annual Performance and Information Report to the OTTER.

5.3 Supply security

Supply security is a measure of the system resilience built into the transmission network.

Supply and demand connection points are categorised as firm or non-firm. A firm connection point is that in which full supply is maintained following the loss of a network element such as a supply transformer or transmission circuit (N-1). Conversely, a non-firm connection point is that where supply is interrupted following the loss of a network element.

Customers value firm connection points because it is more likely that supply can be maintained through planned or unplanned transmission outages. From the perspective of network design, it is important to balance the benefits of a secure supply against the additional costs associated with plant diversity.

TasNetworks determines the level of security of a firm connection point by monitoring plant outages. The instances where a firm connection point becomes non-firm due to a plant outage are reported as regulatory requirements.

The numbers of firm and non-firm connection points are shown in Table 4.

Table 4: TasNetworks’ firm and non-firm connection sites at end of 2016-17

Connection point type	Firm	Non-firm
Distribution network	30	15
Transmission-connected customer	5	6

5.4 Supply quality

TasNetworks’ customers require a high quality electricity supply to ensure that their electrical equipment and appliances:

- operate as designed and can be used to full capability;
- operate continuously when required, with minimal risk of interruption; and
- are at minimal risk of damage when connected to TasNetworks’ distribution or transmission system.

To meet these requirements it is necessary for particular parameters to be maintained within standard limits set by the National Electricity Rules (NER). These parameters are:

- frequency;
- power frequency voltage magnitude;
- voltage fluctuations;
- harmonic or notching distortion of voltage; and
- voltage balance.

Power quality meters are installed at various points in the transmission network to collect information on power quality information such as frequency and voltage fluctuations. Power quality performance is assessed against the technical requirements stated in Schedule 5.1a and 5.1 of NER on a monthly basis.

In the distribution network, TasNetworks’ measure of supply quality performance is the number of validated customer complaints regarding supply quality. Typically following a customer complaint, TasNetworks will undertake a detailed analysis using specialised measuring equipment over a reasonable period. Should TasNetworks’ measurements show that there is an issue (e.g. supply quality does not meet NER obligations), the complaint will be taken as validated. TasNetworks then addresses the supply quality issue.

5.5 Market impact component

Transmission congestion occurs when the transmission network has insufficient capacity to support the optimal dispatch of generation to meet demand at the lowest price. Generators are dispatched in merit order to maintain the transmission network state within specified limits and meet market requirements. These limits (or constraints) are mainly of three types:

- thermal constraint (the transmission line cannot carry a larger quantity of power without exceeding temperature limits);

- system stability; and
- voltage stability.

The Market Impact Component (MIC) of the transmission STPIS was introduced in 2014 to improve market operation, by providing incentives for transmission network service providers to minimise the number of planned transmission outages affecting wholesale market outcomes in the National Electricity Market (NEM). It measures the number of dispatch interval where any outage on the transmission network results in a network constraint with a marginal value greater than \$10/MWh. The MIC performance of the network is measured through a single parameter, the Market Impact of Transmission Congestion (MITC).

The MIC currently operates as a bonus only scheme with a maximum reward of up to 2% per cent of maximum allowable revenue (MAR). Under version 5.0 of the transmission STPIS, the scheme will become symmetrical, with a maximum reward and penalty of 1%. TasNetworks will move to version 5.0 of the STPIS in the next transmission revenue period.

5.6 Network capability

The Network Capability Component (NCC) was introduced to the transmission STPIS in December 2012. The NCC improves transmission capability by incentivising transmission service providers to relieve transmission constraints through the commitment of limited operational and capital expenditure to:

- improve the capability of those elements of the transmission system most significant in determining spot prices; or
- improve the availability or reliability of the transmission system at times when transmission network users place greatest value on the availability or reliability.

The NCC is designed to incentivise transmission service providers to invest in one-off projects that can be delivered through low cost operational and capital expenditure, up to a total of 1 per cent of the proposed MAR per year. AEMO validate the proposed market benefit of TasNetworks projects, which allows for the prioritisation of the projects that deliver best value for money for consumers.

5.7 Customer service

Although unrelated to network management activities, customer service forms a part of TasNetworks' service performance.

The distribution STPIS defines the telephone answering (TA) parameter as the percentage of calls to the fault line answered within 30 seconds, with the exception of calls received on Major Event Days (MEDS). TasNetworks measures and reports on the performance of its Customer Service Centre according to this definition.

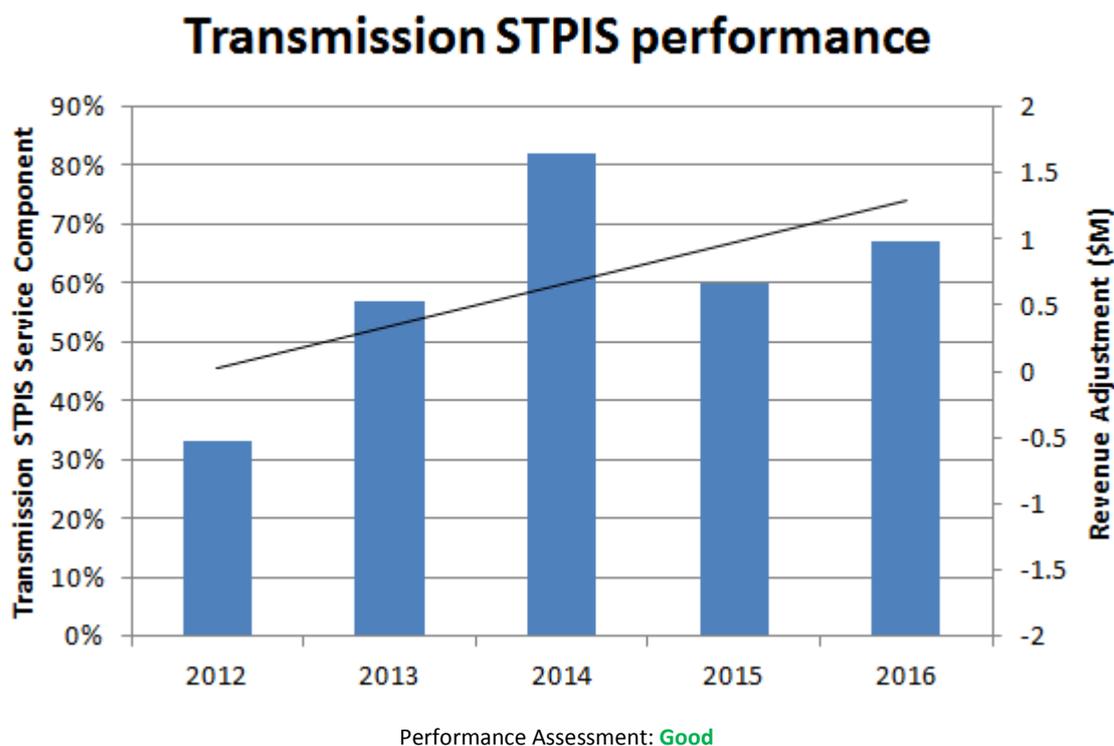
6 Current service performance

6.1 Transmission system performance

6.1.1 Transmission STPIS performance

TasNetworks' historical performance against the transmission STPIS is shown in Figure 2.

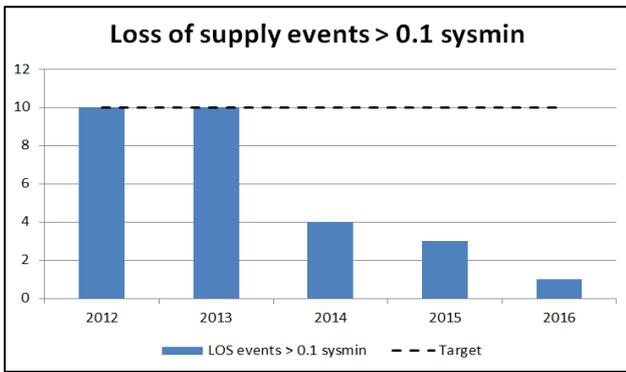
Figure 2 – TasNetworks' historical transmission STPIS performance



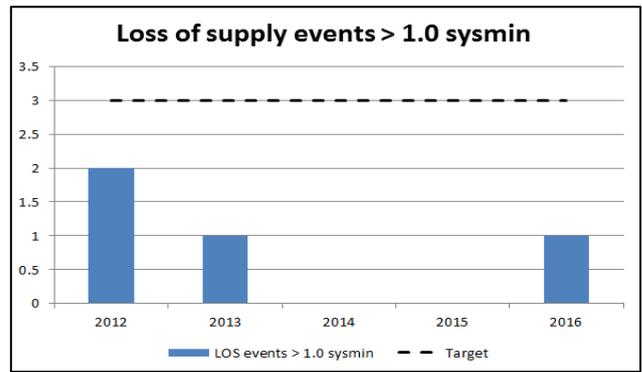
6.1.2 STPIS service component

6.1.2.1 Loss of supply events

Performance Measure		Target	Reward/Penalty % MAR
Supply reliability – outage frequency	Frequency of loss of supply events > 0.1 system minutes	≤ 10 events	±0.15
	Frequency of loss of supply events > 1.0 system minute	≤ 2 events	±0.15



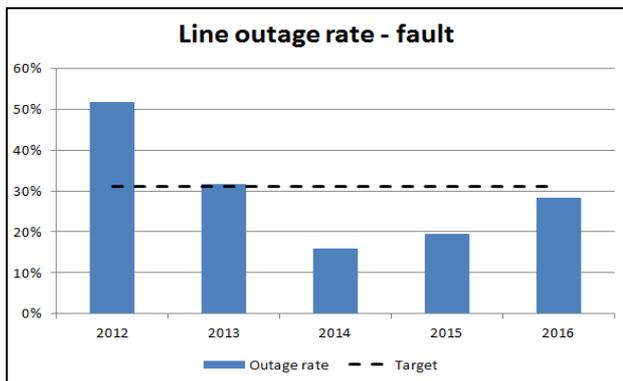
Performance Assessment: **Good**



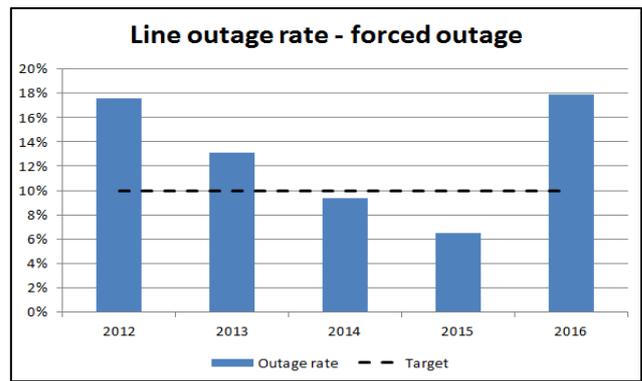
Performance Assessment: **Good**

6.1.2.2 Average circuit outage rate

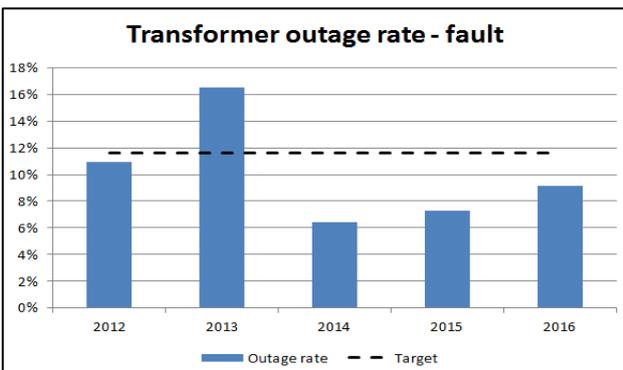
Performance Measure		Target	% MAR Penalty	% MAR Reward
Average circuit outage rate	lines outage rate – fault	≤ 31.2%	0.2	0.2
	transformers outage rate – fault	≤ 11.6%	0.2	0.2
	reactive plant outage rate – fault	≤ 3.3%	0.1	0.1
	lines outage rate - forced outage	≤ 10.0%	0.0	0.0
	transformer outage rate - forced outage	≤ 2.8%	0.0	0.0
	reactive plant outage rate - forced outage	≤ 14.0%	0.0	0.0



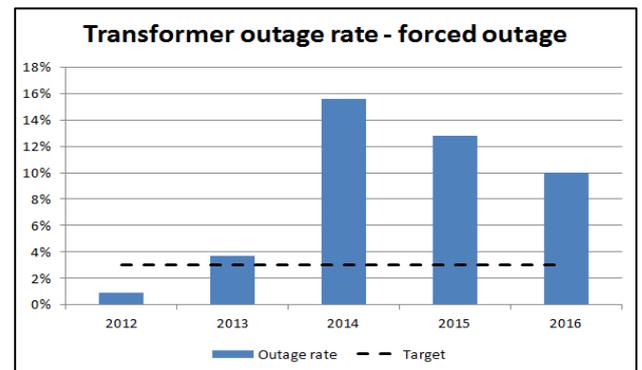
Performance Assessment: **Good**



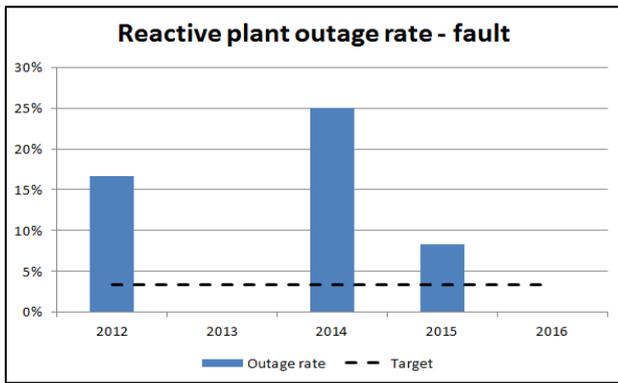
Performance Assessment: **Average**



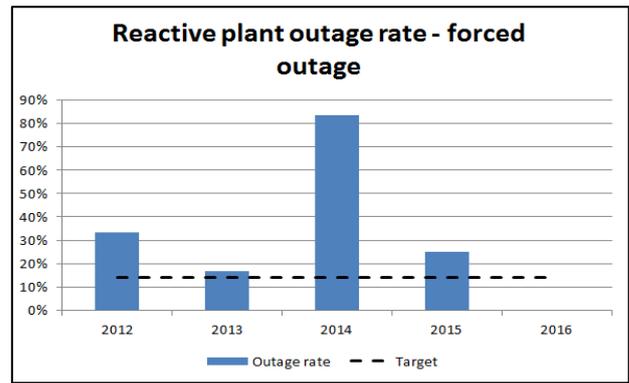
Performance Assessment: **Good**



Performance Assessment: **Poor**



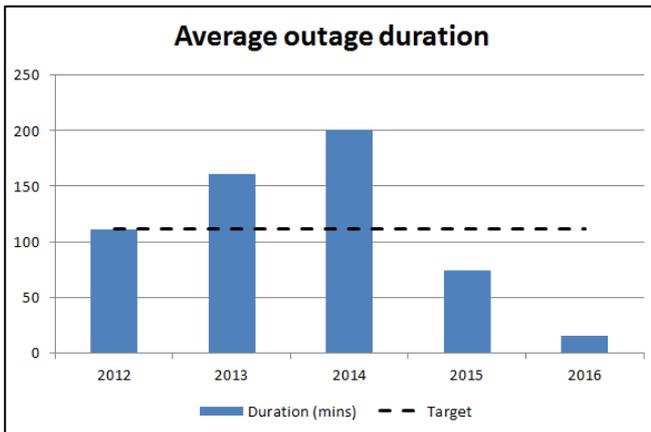
Performance Assessment: **Average**



Performance Assessment: **Poor**

6.1.2.3 Average outage duration

Performance Measure	Target	% MAR Penalty	% MAR Reward
Average outage duration	≤ 112 minutes	0.2	0.2

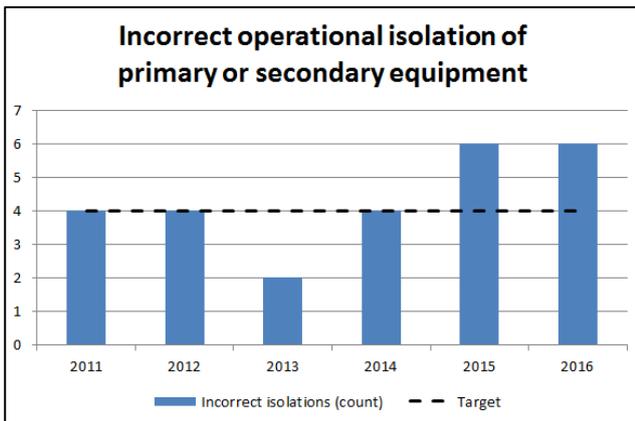
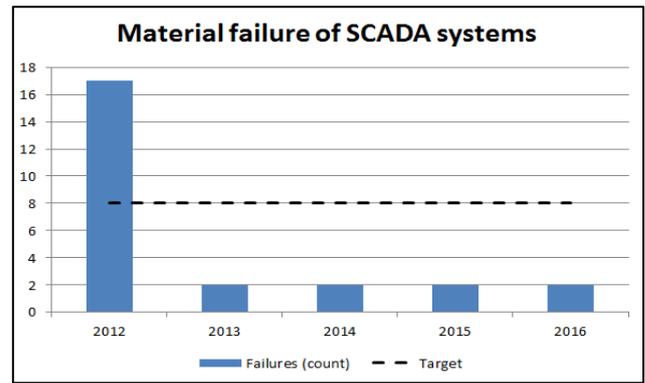
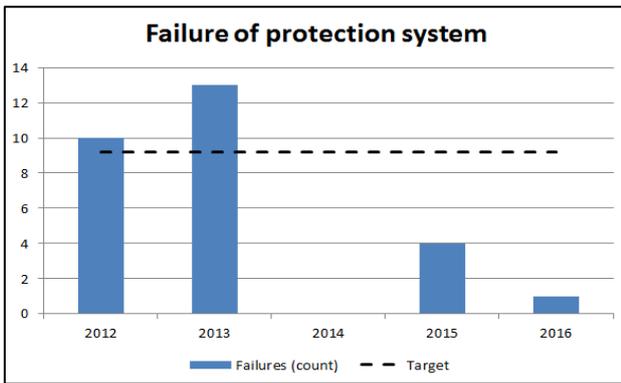


Performance Assessment: **Good**

6.1.2.4 Proper operation of equipment

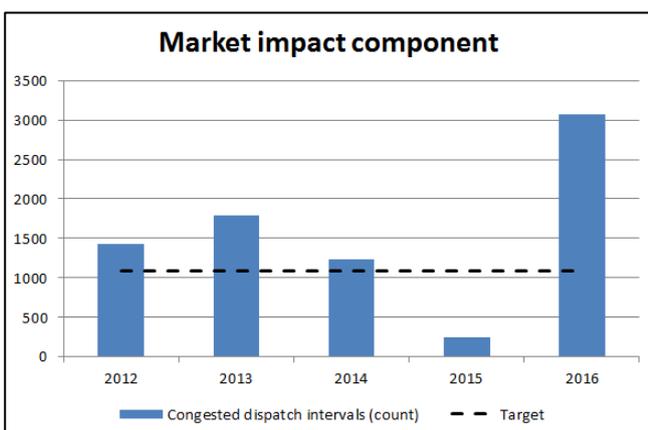
Performance Measure	Target	% MAR Penalty	% MAR Reward	
Proper operation of equipment	Failure of protection system	≤ 9.2 events	0.0	0.0
	Material failure of the Supervisory Control and Data Acquisition (SCADA) system	≤ 8 events	0.0	0.0
	Incorrect operational isolation of primary or secondary equipment	≤ 4 events	0.0	0.0

Service Performance Asset Management Plan



6.1.3 STPIS market impact component

Performance Measure	Target	Reward/Penalty % MAR
MIC	≤ 1,318 dispatch intervals	0.0–2.0



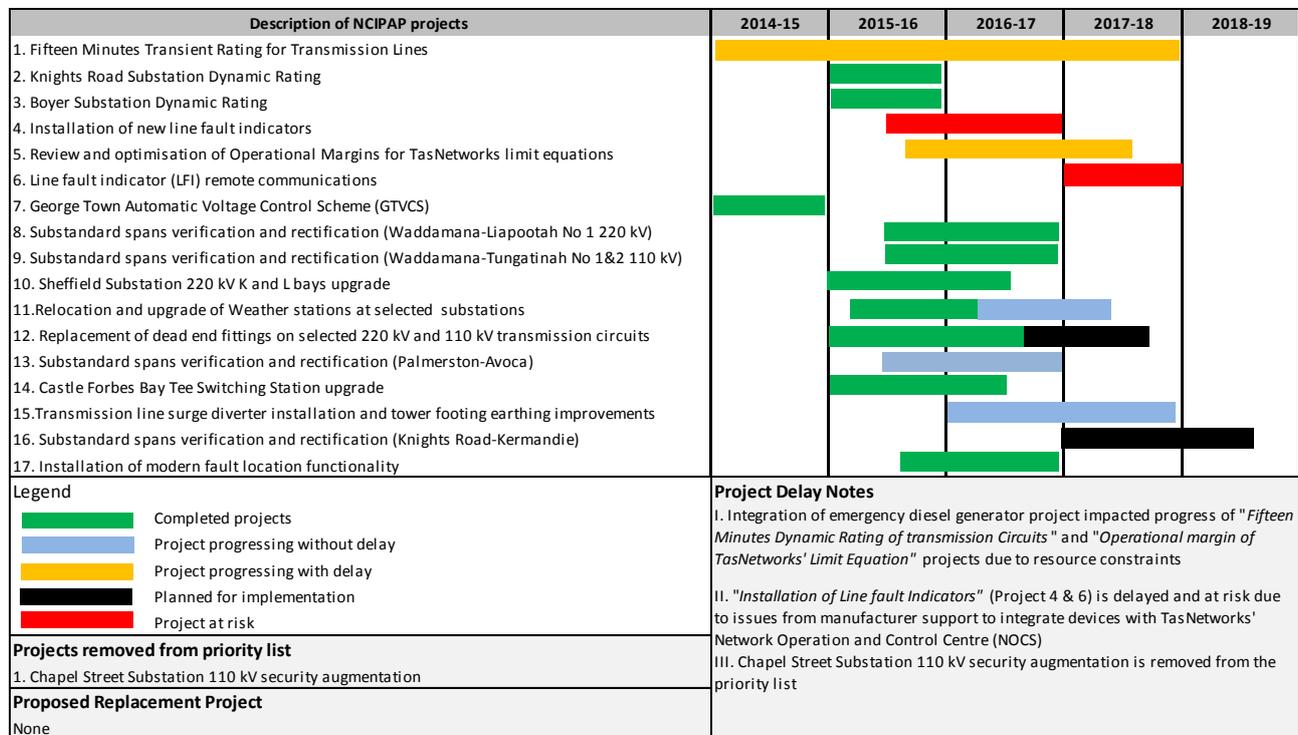
6.1.4 STPIS network capability component

Performance Measure	Target	Reward/Penalty
---------------------	--------	----------------

		% MAR Penalty
NCIPAP	100% of program implemented	0.0 ² -1.5

As shown in Figure 3, the five year NCIPAP program is currently on track for completion by December 2018.

Figure 3 – NCIPAP implementation schedule



6.1.5 OTTER performance

Service performance measures are reported to OTTER according to the guideline "Electricity Supply Industry Performance and Information Reporting Guideline V2.3 Sept 2014". The measures are essentially the same as the STPIS measures from the AER.

² In the fifth regulatory year, the % MAR penalty is increased to -2.0%, subject to the delivery of the NCIPAP projects planned for delivery.

6.2 Distribution network service performance

Distribution network service performance is reported to a number of audiences in a variety of ways, depending on each of their specific requirements. The key difference in reporting pertains to the inclusion or exclusion of particular outages according to their types and causes, as well as outages that occur on major event days³. A summary of these differences are presented in Table 5.

Table 5: Summary of regulatory and internal reporting criteria

Customer	Frequency	System				Inclusions	Exclusions
		System	Reliability Categories (5)	Reliability Community (101)	Feeders		
OTTER	Quarterly	✓	✓	✓		Planned and unplanned outages	Third party and transmission outages
OTTER	Annually	✓	✓	✓		Planned and unplanned outages	Third party and transmission outages
AER	Annually	✓	✓		✓	Unplanned and third party outages	Major event days, planned outages, customer installation faults, house fires, bush fires
TasNetworks	Monthly	✓	✓			Unplanned and third party outages	Major event days, planned outages, customer installation faults, house fires, bush fires
TasNetworks	Quarterly	✓				Planned and unplanned outages	Third party and transmission outages

The other difference in reporting relates to how the network is grouped for the purposes of performance calculations. The performance of the network is generally assessed by grouping the network at four different levels. These levels are:

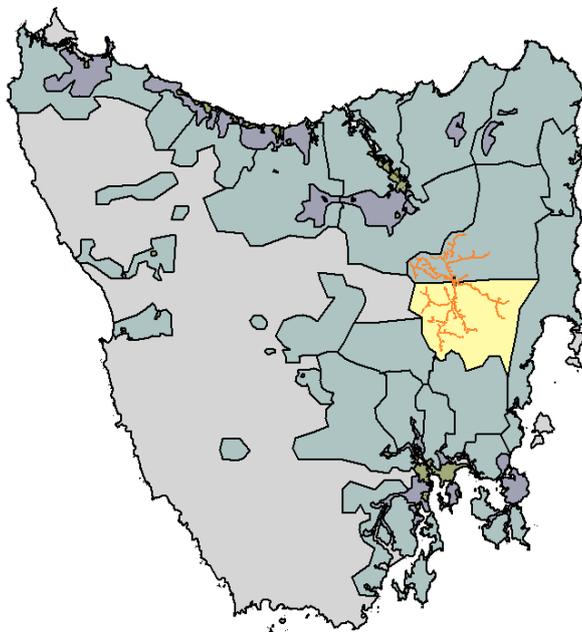
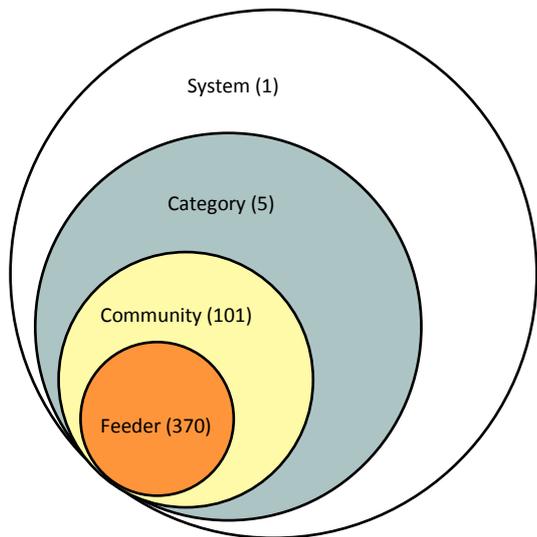
- System level (1 system);
- Category level (5 categories);
- Community level (101 communities); and
- Feeder level (370 feeders).

For the 2012-17 regulatory control period TasNetworks calculated and reported supply reliability parameters on a kVA basis. This means that the impact of an outage on the performance of the network is proportional to the kVA disconnected.

³ A major event day (MED) is when the number of system minutes caused by outages exceeds an annually calculated threshold, indicating abnormal conditions have significantly affected the reliability of the system and may be outside the control of the DNSP. TasNetworks uses the IEEE 2.5 Beta Methodology for calculating its MED threshold.

From 1 July 2017, TasNetworks will only report reliability parameters calculated on a customer basis. This means that the impact of an outage on the performance of the network is proportional to the number of customers disconnected.

With the exception of TasNetworks' historical distribution STPIS outcomes, all reliability measures hereafter are calculated on a customer basis according to future regulatory reporting requirements.

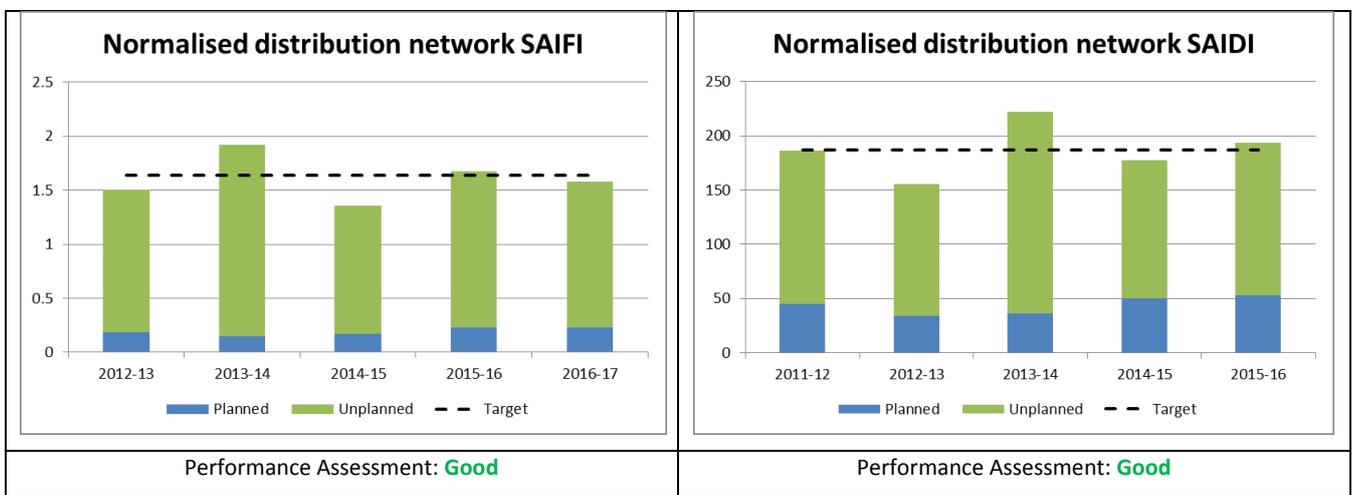


6.2.1 System performance

TasNetworks system level performance measures have been developed in alignment with the strategic objective of maintaining overall network service performance at current levels. Current levels are defined as the average SAIDI and SAIFI for the distribution network over the past five years (2011-12 to 2015-16) according to OTTER exclusion criteria, but with the effects of MEDs excluded.

Table 6: System level performance targets

Performance Measure		Target ⁴
Supply reliability – outage frequency	Normalised SAIFI	1.64 interruptions
Supply reliability – outage duration	Normalised SAIDI	186.81 minutes



The top ten outage cause contributors to SAIDI and SAIFI over the last five years are summarised in Table 7.

⁴ KPIs were set using historical performance information (2011-12 to 2015-16)

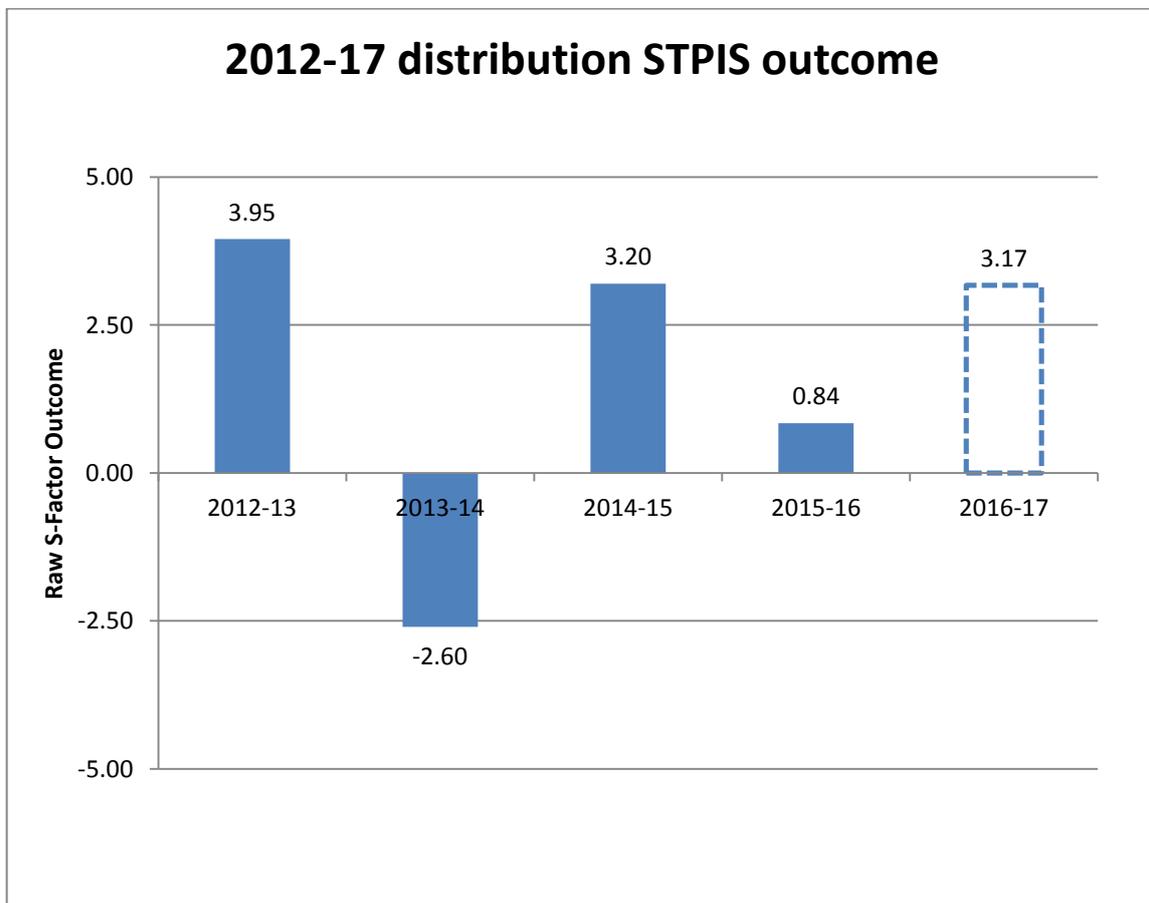
Table 7: Top 10 outage causes

Rank	SAIFI causes	% SAIFI contribution	SAIDI causes	% SAIDI contribution
1	Cannot find a cause	24.77%	Planned outage for system work	23.66%
2	Planned outage for system work	11.82%	Vegetation outside clearance	14.40%
3	Vegetation outside clearance	11.34%	Cannot find a cause	11.09%
4	Wind	4.29%	Wind	5.26%
5	Connector failure	3.79%	Cable - underground	4.80%
6	Cable - underground	2.35%	Connector failure	3.60%
7	Pole top fire	2.22%	Pole top fire	2.85%
8	Birds	2.20%	Lightning – protection operated	2.26%
9	Insulator broken/damaged	1.94%	Wind borne material	1.94%
10	U/G cable failure	1.87%	Insulator broken/damaged	1.90%

6.2.2 Distribution STPIS performance

TasNetworks’ overall distribution STPIS outcome is determined as the aggregate STPIS outcomes of the five geographic categories reported to the AER (see 6.2.3), combined with TasNetworks’ customer service performance (see 6.2.6).

TasNetworks’ historical STPIS performance is presented in Figure 4.



Performance Assessment: **Good**

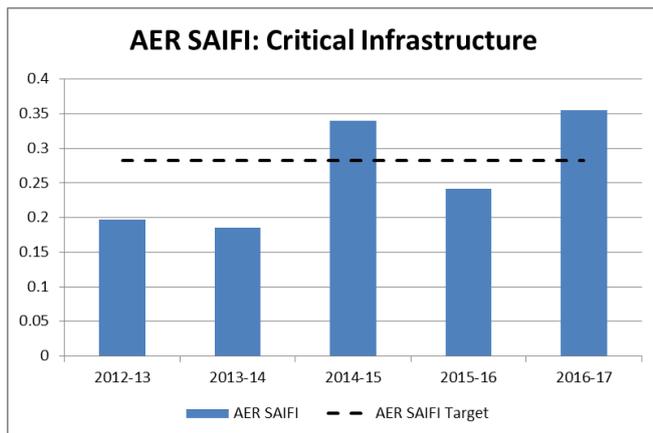
Figure 4 – TasNetworks’ historical and projected distribution STPIS performance

6.2.3 Category performance

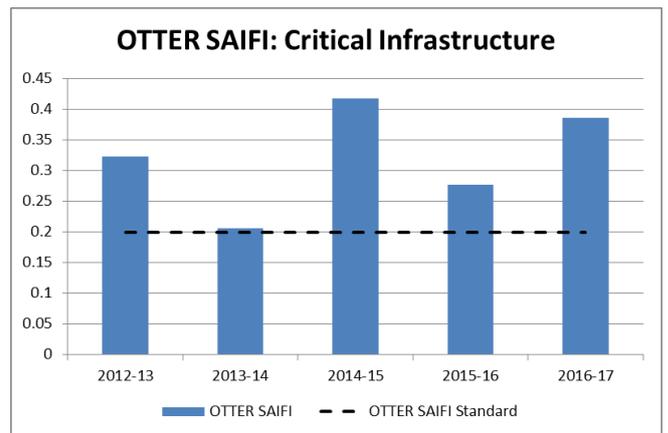
TasNetworks reports performance at the category level to the OTTER and the AER according to the timing and exclusion criteria outlined in Table 5. Performance for each regulatory body is assessed against the relevant targets and standards summarised in Table 8.

Table 8: OTTER and AER category level performance targets and standards

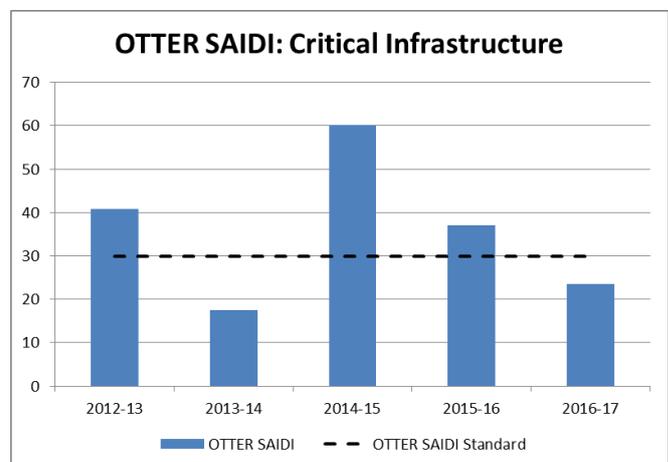
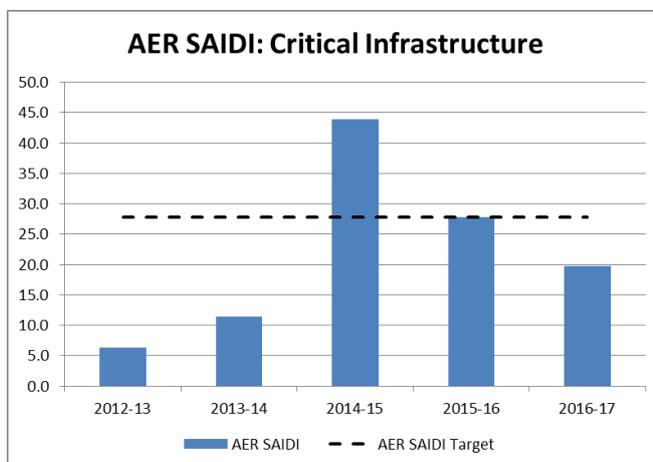
Performance Measure		AER Target	OTTER Standard
Reliability of supply (SAIFI)	Critical infrastructure	≤ 0.28 events	≤ 0.2 events
	High density commercial	≤ 0.30 events	≤ 1 event
	Urban and regional centres	≤ 1.03 events	≤ 2 events
	High density rural	≤ 2.41 events	≤ 4 events
	Low density rural	≤ 3.22 events	≤ 6 events
Reliability of supply (SAIDI)	Critical infrastructure	≤ 27.83 mins	≤ 30 mins
	High density commercial	≤ 25.32 mins	≤ 60 mins
	Urban and regional centres	≤ 81.31 mins	≤ 120 mins
	High density rural	≤ 235.29 mins	≤ 480 mins
	Low density rural	≤ 416.13 mins	≤ 600 mins



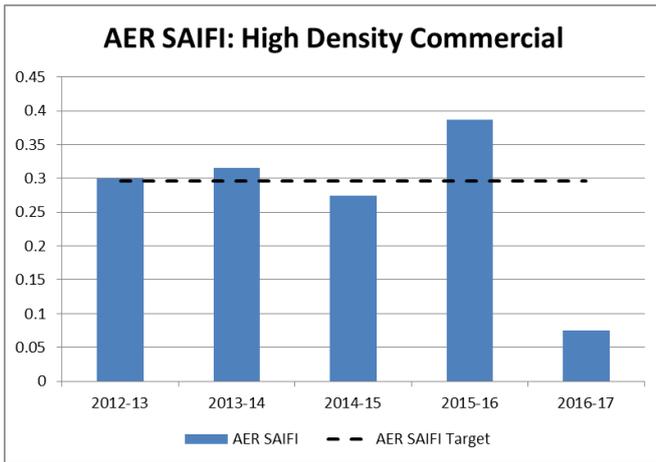
Performance Assessment: **Good**



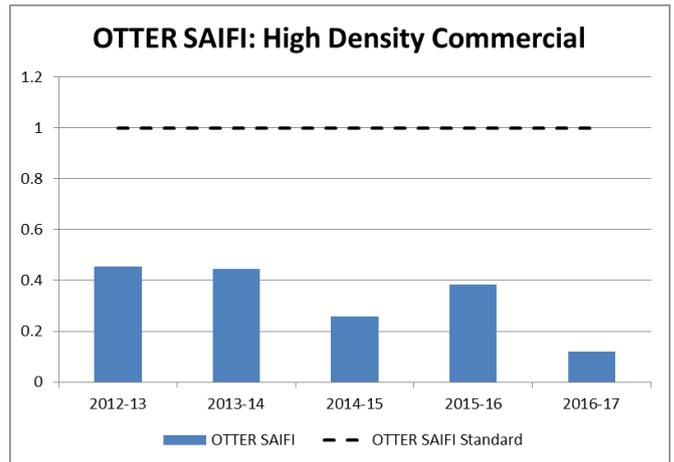
Performance Assessment: **Average**



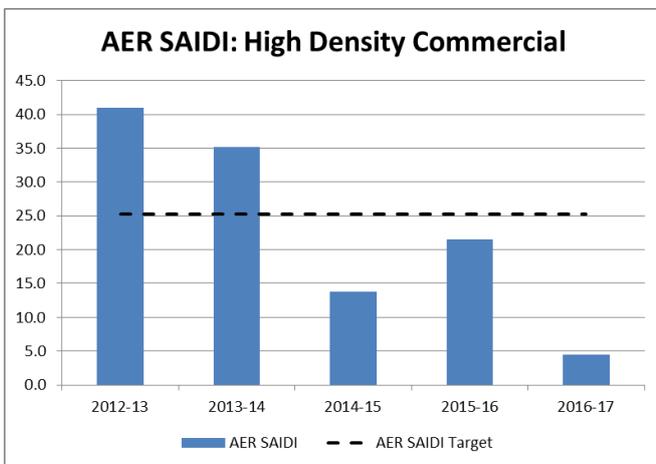
Performance Assessment: Good



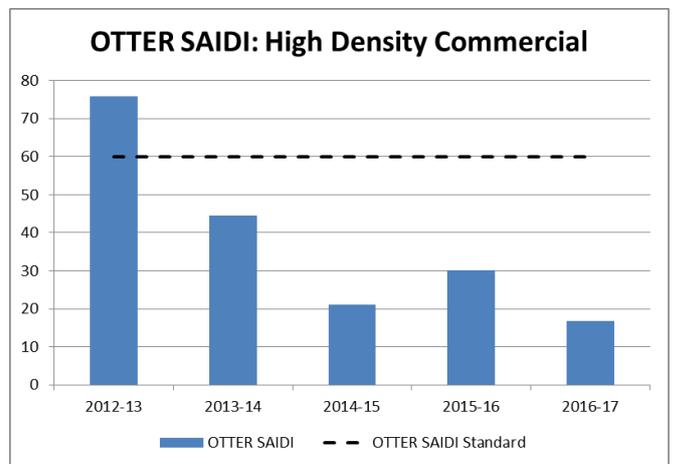
Performance Assessment: Average



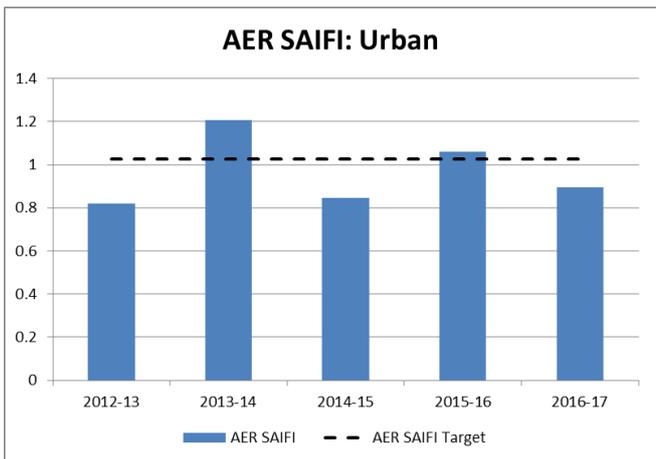
Performance Assessment: **Good**



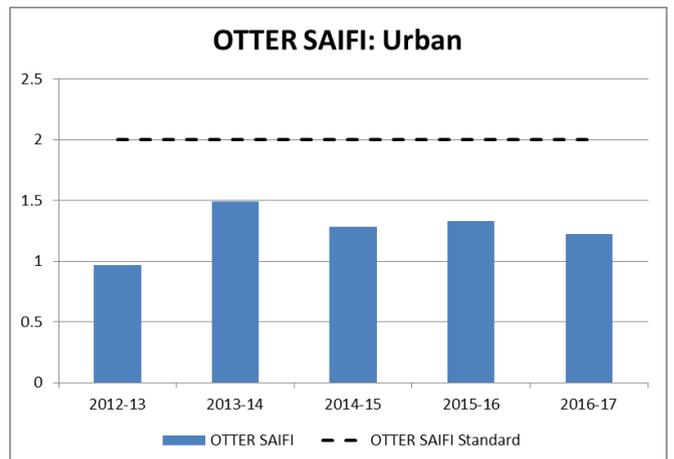
Performance Assessment: Average



Performance Assessment: **Good**

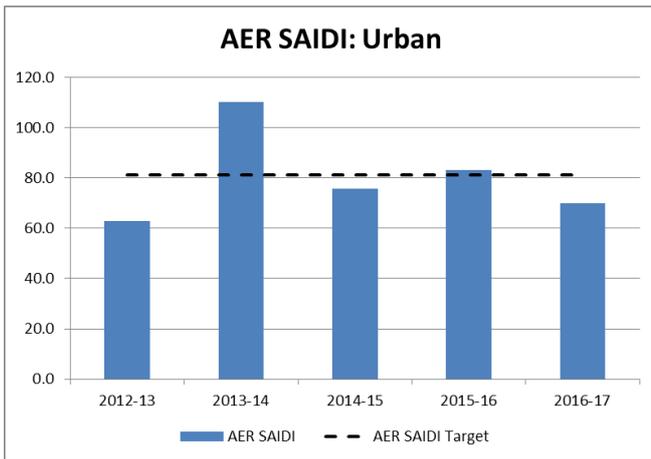


Performance Assessment: **Good**

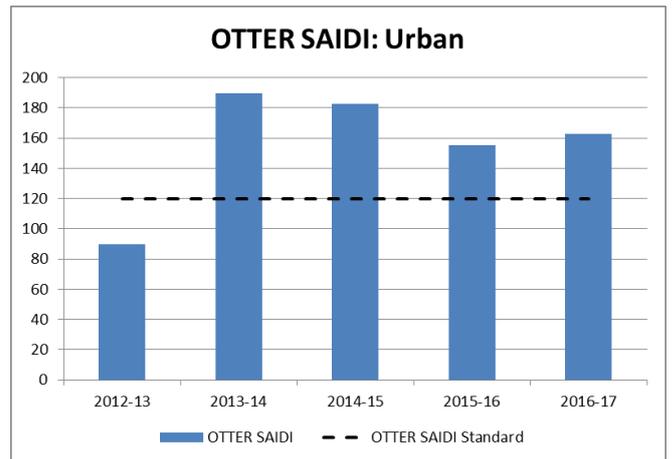


Performance Assessment: Average

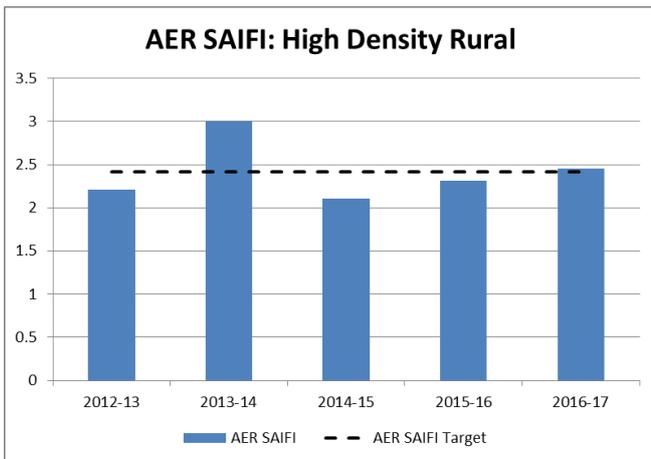
Performance Assessment: **Good**



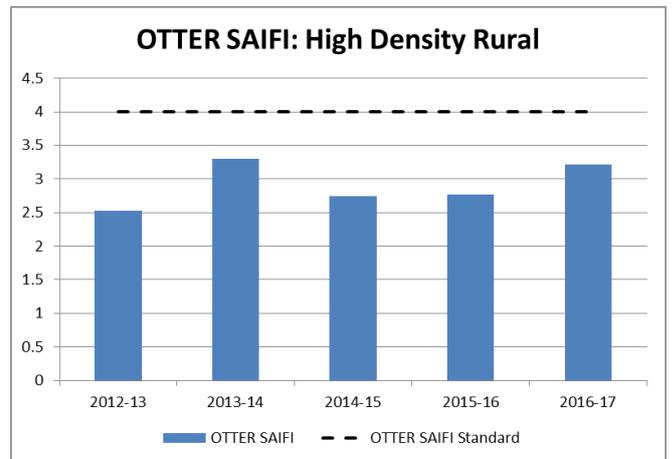
Performance Assessment: **Average**



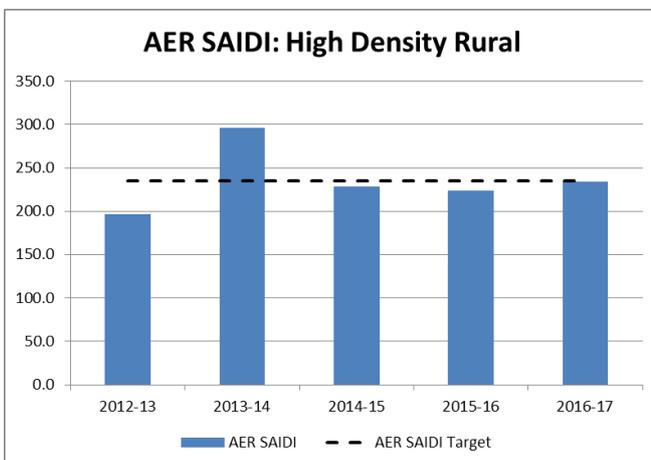
Performance Assessment: **Poor**



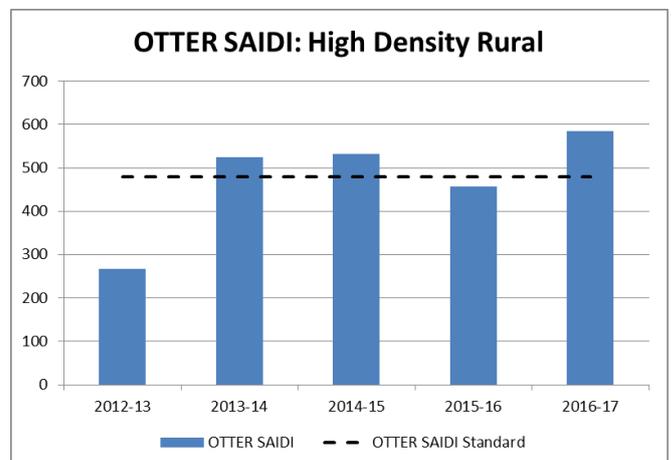
Performance Assessment: **Average**



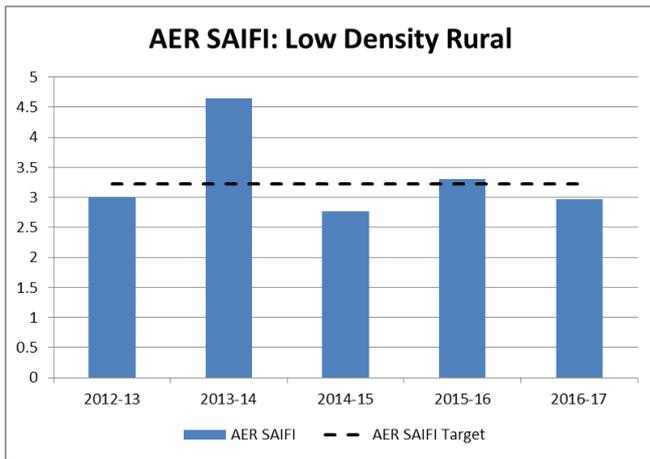
Performance Assessment: **Good**



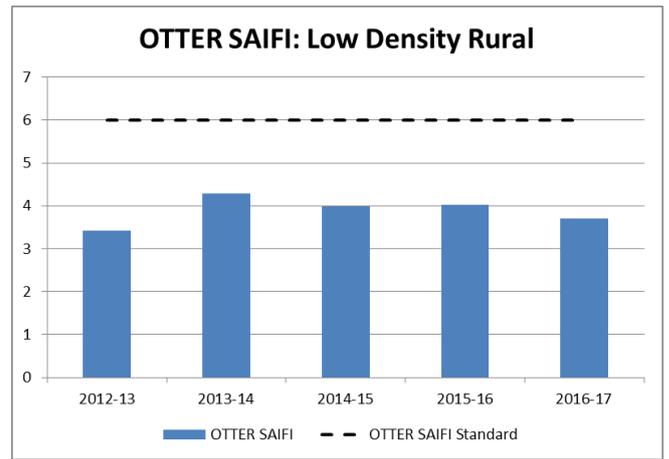
Performance Assessment: **Average**



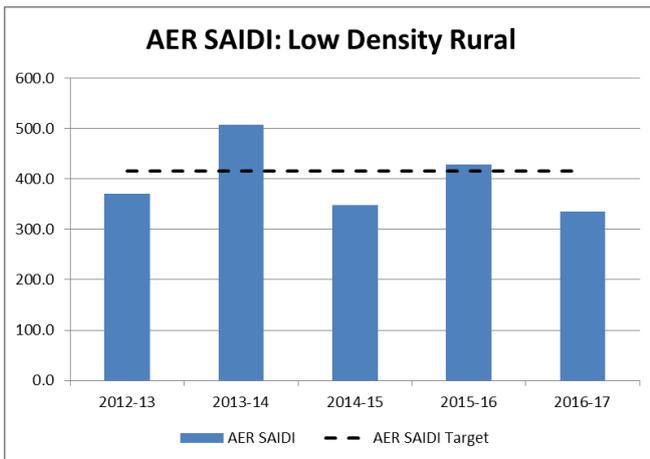
Performance Assessment: **Poor**



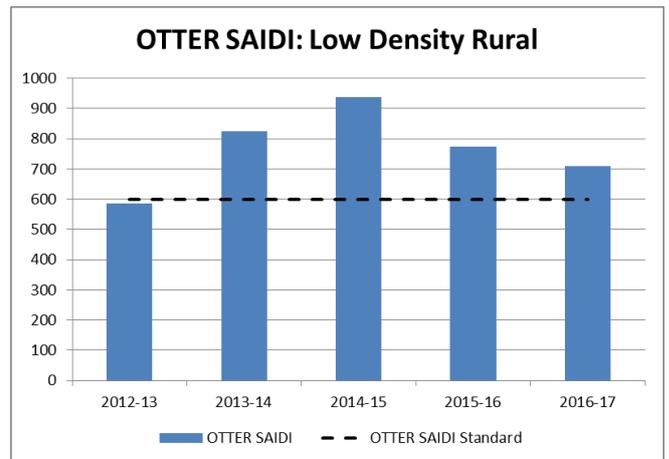
Performance Assessment: **Average**



Performance Assessment: **Good**



Performance Assessment: **Good**



Performance Assessment: **Poor**

6.2.4 Community performance

TasNetworks reports SAIDI and SAIFI of 101 reliability communities to the OTTER on a quarterly and annual basis. In these reports, TasNetworks assesses the compliance of communities with respect to standard levels defined by OTTER in the Tasmanian Electricity Code (TEC) (see Table 9), and where relevant provides explanation of factors that have resulted in non-compliance.

Table 9: OTTER community SAIDI and SAIFI standards

Performance Measure	Target (OTTER)	
Supply reliability – outage frequency	Critical infrastructure	≤ 0.2 events
	High density commercial	≤ 2 events
	Urban and regional centres	≤ 4 events
	High density rural	≤ 6 events
	Low density rural	≤ 8 events
Supply reliability – outage duration	Critical infrastructure	≤ 30 mins
	High density commercial	≤ 120 mins
	Urban and regional centres	≤ 240 mins
	High density rural	≤ 600 mins
	Low density rural	≤ 720 mins

While OTTER defines community compliance for SAIDI or SAIFI as having performance below standard levels with MEDs included, TasNetworks considers that this does not provide a complete view of the factors that contribute to poor performance.

As outlined in section 3, TasNetworks has defined two new reliability measures in its Corporate Plan that are:

- the count of non-compliant SAIFI communities with the effects of MEDs excluded; and
- the count of non-compliant SAIDI communities with the effects of MEDs excluded.

Historical and target performance for each of SAIFI and SAIDI, with and without MEDs are presented in Figure 5 and Figure 6.

The future target levels reflect modest improvements on performance from historic levels. This reflects the corporate objective of improving the service performance of poorly performing reliability communities.

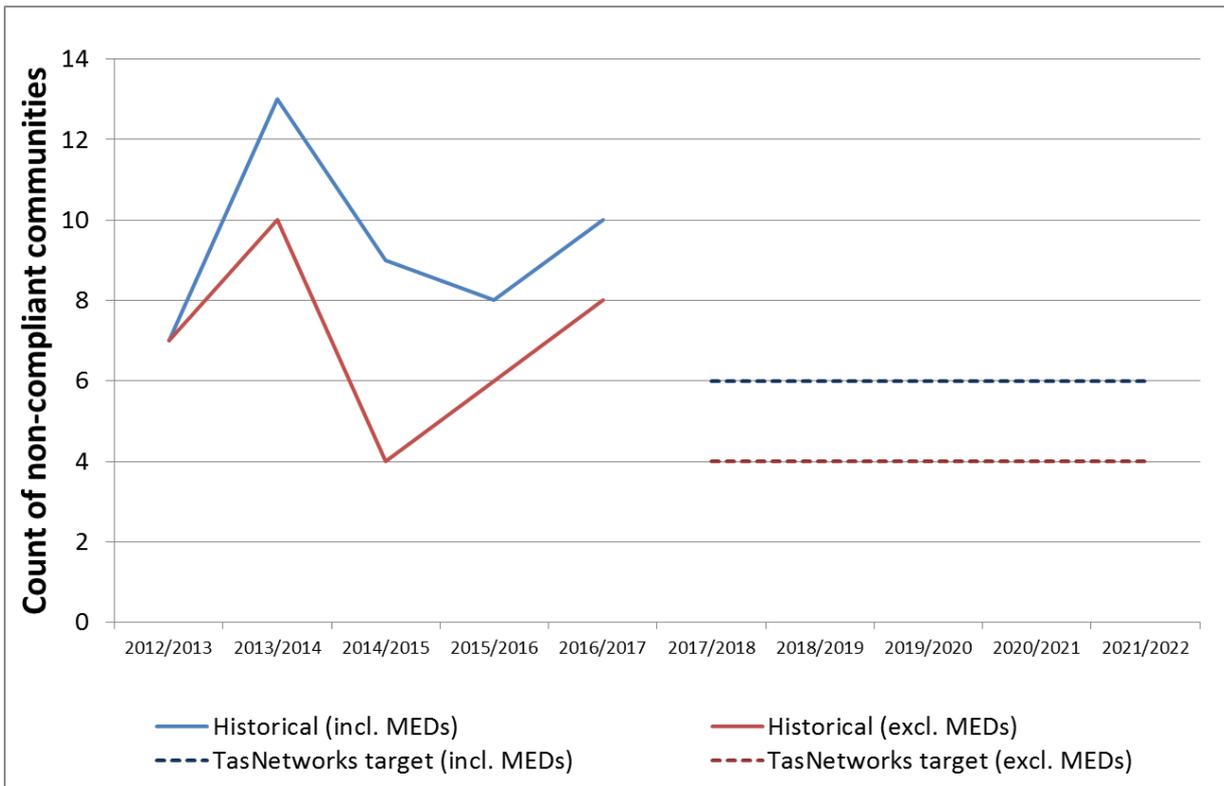


Figure 5: Historical and target community performance (SAIFI).

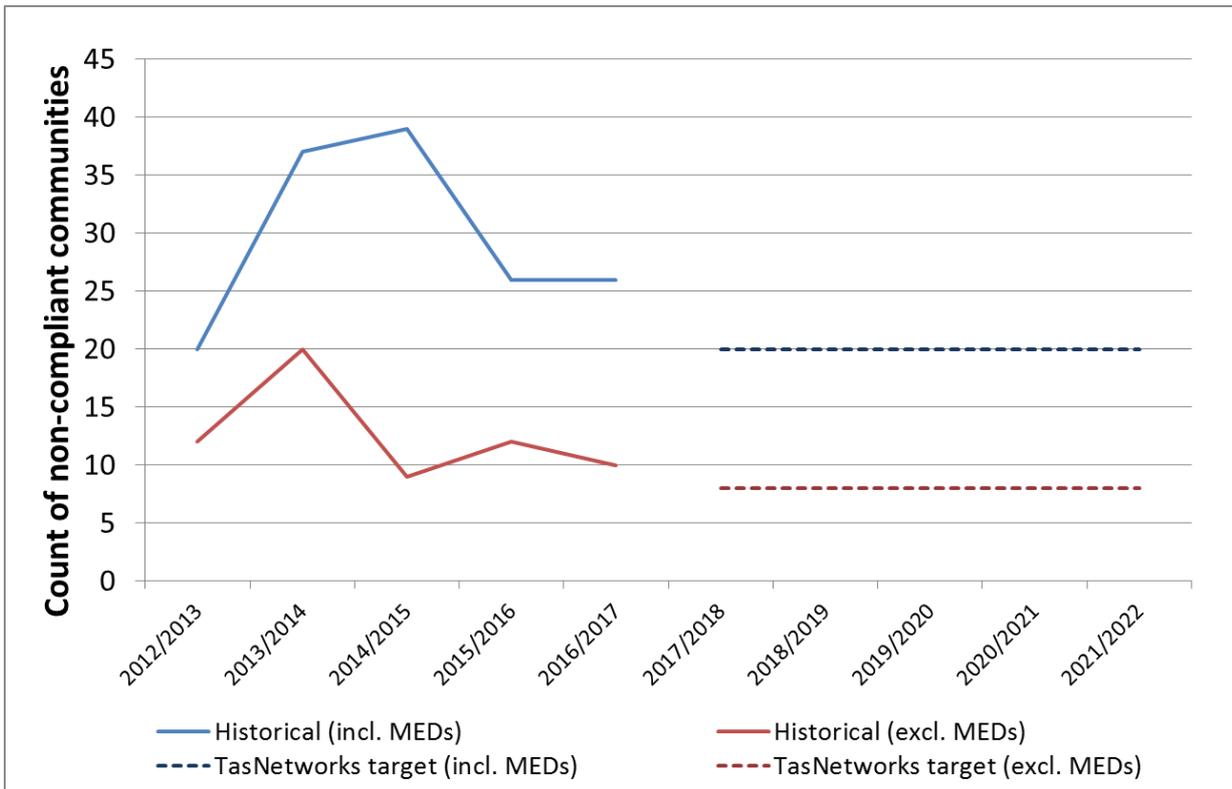


Figure 6: Historical and target community performance (SAIDI).

6.2.5 Feeder performance

While the classification level performance evaluation provides a summary of the performance of each of the classifications with respect to target levels, the specific network areas that are contributing to performance are not visible.

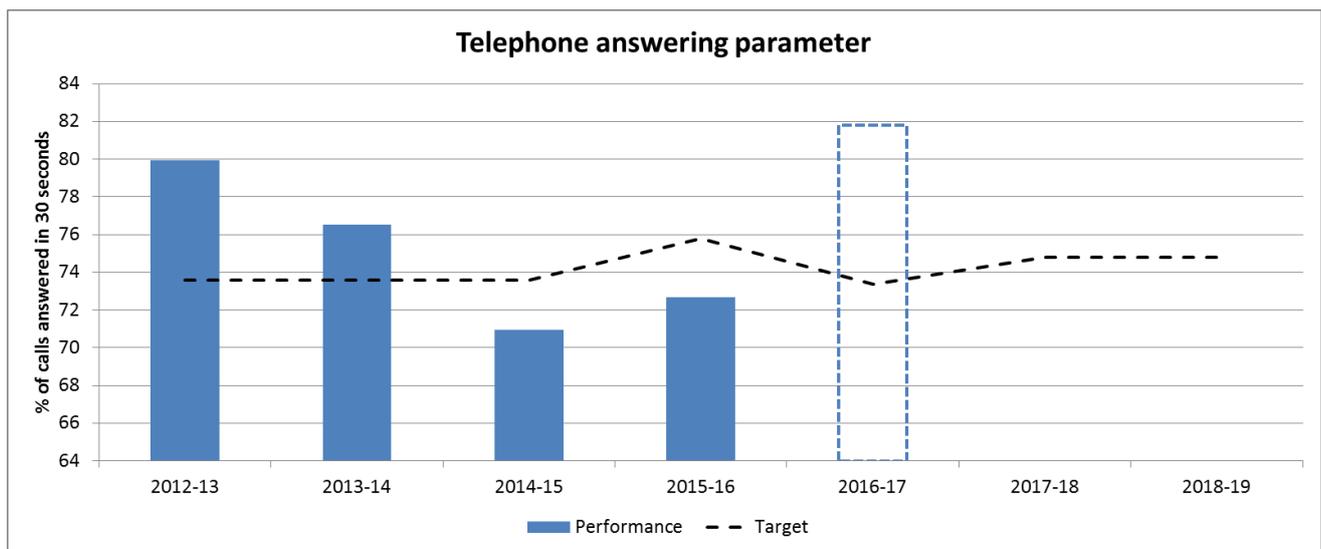
As with reliability communities, segmentation by feeder provides an approach for network segmentation that allows particular poorly performing areas to be identified. The benefits of feeders over communities are that they are supplied by a single source and are commonly understood and used across the business already.

TasNetworks assesses performance by feeders, in alignment with the strategic measure of obtaining a distribution STPIS outcome of 20% of maximum bonus.

6.2.6 STPIS customer service

Performance Measure		Years	Target
Customer Service	Telephone Answering Parameter	2017-18 to 2018-19	74.78%

The telephone answering parameter is defined as the percentage of calls to the fault centre that enter the queue for an operator and are answered within 30 seconds. The telephone answering parameter is one part of TasNetworks' STPIS, and has direct implications on future revenue allowances. The telephone answering parameter excludes any calls received on MEDs.



Performance Assessment: **Good**

6.2.7 Guaranteed service levels

Performance Measure	Target
Guaranteed service levels (GSL)	-

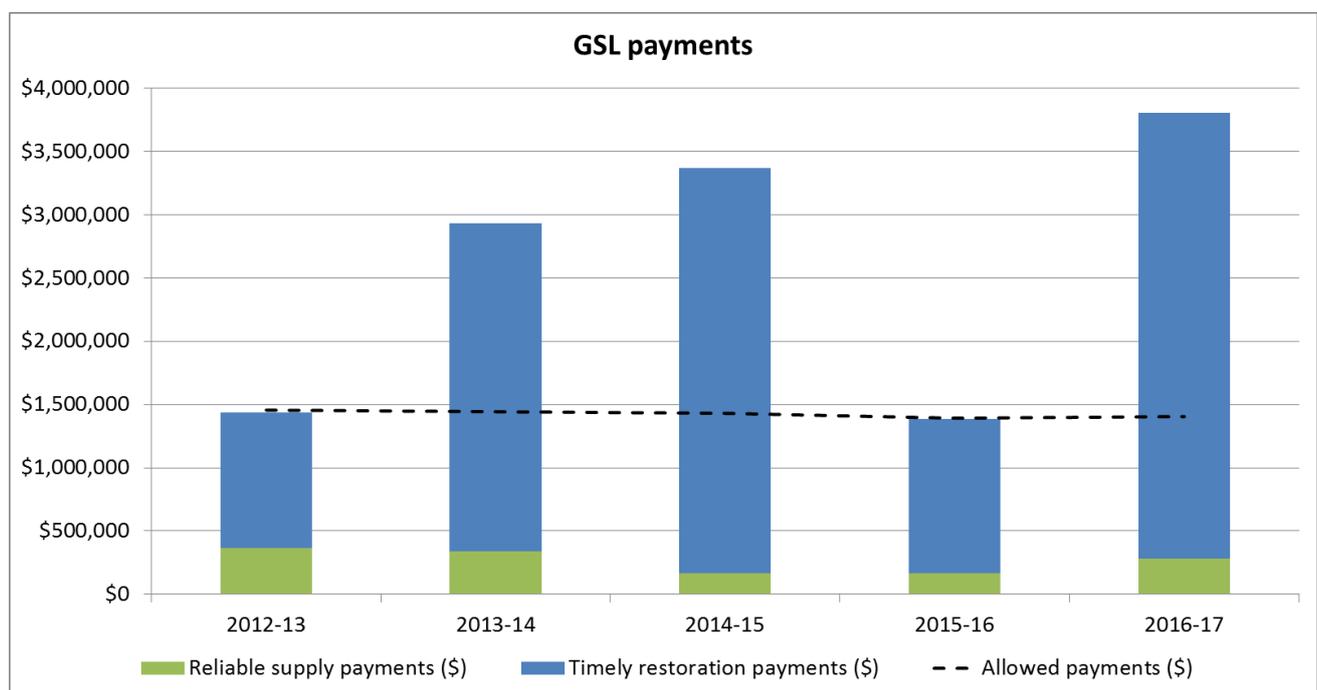
TasNetworks makes one-off payments to customers to acknowledge service performance outside of guaranteed service levels. Payments to distribution customers are made to compensate for:

- supply interruption frequency and duration;
- less than 4 business days' notice of a planned interruption;

- not leaving a customer’s property in the condition that it was found when staff require access to a property; and
- taking greater than seven days to repair a street lighting outage reported by a customer.

TasNetworks’ GSL performance is largely defined by performance in the timely restoration component of the scheme (see below). Poor performance in 2013-14, 2014-15 and 2016-17 can be attributed to large numbers of customers having their supply interrupted for extended durations during extreme weather events (outages that occur on Major Event Days are not excludable from the GSL scheme). TasNetworks has not specified a target GSL performance level, but instead relies on the success of other service performance initiatives to have a resultant impact on the dollar value of GSL payments incurred.

It should be noted that the regulatory allowance for GSLs payments is determined by historic performance.



Performance Assessment: **Poor**

6.2.8 Asset performance

TasNetworks considers asset performance in terms of defects and failures.

6.2.8.1 Defects

An asset defect represents an asset condition where corrective action (including maintenance or replacement) is required prior to the asset experiencing functional failure.

TasNetworks current asset and works management system does not facilitate effective self-service reporting on asset defects. Bespoke reports have been developed in TasNetworks' works and asset management system as required for higher criticality asset defects. This allows performance to be reviewed in strategy development and optimisation.

6.2.8.2 Failures

A functional failure of an asset represents a condition where an asset is no longer provides its required function, resulting in a circuit outage. Asset failures are currently recorded and reported on through supplemental data in TasNetworks' outage management system. Self-service reports have been developed to allow asset owners to review the effectiveness of preventive and corrective strategies on an as needed basis. The performance of asset classes is reviewed monthly to ensure that the long term trends are consistent with expectations.

Following the implementation of business wide asset and outage management system projects in February 2018, asset defects and failures will be treated through the same process.

7 Service performance management

Service performance can be influenced in a variety of ways, at many points throughout TasNetworks' end-to-end works management process.

Section 7.1 describes how service performance is appropriately considered in strategic, tactical and operational decision making throughout TasNetworks end to end works management process.

Section **Error! Reference source not found.** describes the techniques and approaches TasNetworks employs to influence and manage service performance throughout the asset management lifecycle.

7.1 Service performance in the end-to-end works management process

The end-to-end works management (E2E) process refers to the staged whole-of-lifecycle process that is used by TasNetworks to execute network and non-network capital and operational works. This section describes how service performance is appropriately considered in the strategic, tactical and operational decision making throughout the E2E process.

7.1.1 Needs identification

Needs identification is identified as stage zero of the E2E process as it represents business as usual (BAU) strategic activities prior to the identification of a business need.

As a part of BAU activities, performance metrics are reviewed on a periodic basis. The timeliness of review is dependent on a number of factors including:

- the timing of measurement by regulatory bodies;

-
- the severity of events on performance outcomes;
 - the occurrence of events contributing to performance outcomes; and
 - the capability of TasNetworks to influence performance outcomes.

7.1.2 Needs assessment and options analysis

At needs assessment (stage one) and options analysis stage (stage two), the driver for works is identified and endorsed, and credible options are assessed to identify the preferred solution. The preferred solution also defines the functional requirements, high level estimates of costs, and the outputs of any regulatory investment tests (if required).

Through BAU analysis, the Asset Performance team monitor current service performance levels and investigate instances of deficient or deteriorating performance. At this point, service performance may be identified as the primary driver for works to be undertaken.

Where service performance is the primary driver for works, cost and other risk factors are taken into consideration in the development of the preferred solution in alignment with TasNetworks' asset management priorities. Where service performance is not the primary driver, service performance outcomes are appropriately considered in the development of the preferred option.

Solutions to these performance issues are investigated by a person or working group that has an understanding of:

- factors contributing to the current performance levels;
- broader operating context of that network area, asset or service; and
- possible solutions that may be implemented to address deficient performance.

Depending on the type of performance issue identified, this analysis may be undertaken by a single individual (e.g. simple asset specific issues). Other more complex activities may require a cross-functional working group (e.g. poor performance in a distribution network reliability community).

7.1.3 Works development

During the works development stage (stage three), detailed requirements and a delivery strategy are developed based on the preferred option and culminate in expenditure approval of the works. The works are then loaded into the rolling works program and are managed by the Programming and Planning team.

Prior to development of works, the investment need is referred to the Strategic Asset Management (SAM) group for re-approval, to ensure that the preferred option remains valid, considering the current business environment.

From a service performance perspective, this largely relates to any changes in performance (or any other external factors) from the time at which the investment need was identified to the time at which works development is scheduled to begin.

It is at this stage that it is appropriate for priority of works to be adjusted based on recent changes to performance experienced. This largely relates to business as usual activities that may benefit from some degree of prioritisation or targeting of activity.

7.1.4 Implementation and finalisation

The implementation and finalisation stage (stage four) takes works approved by the business through to execution and close out. Implementation includes identification and delivery of reactive work, including corrective maintenance and fault response.

It is at this stage that the Field Operations group has the largest degree of influence over service performance outcomes. With an understanding and awareness of the impact that the field can have on performance, decisions can be made with appropriate consideration for service performance outcomes.

7.1.5 Works review and close

The works review stage (stage five) consists of a review of the work against its objectives and management strategies. As a part of the works review, the performance metrics of interest are monitored over a period of time to assess the impact of the works undertaken. Depending on the metrics being observed, this performance improvement may take a number of years to be realised.

A post works review of the performance is undertaken to understand and document the effectiveness of the works undertaken with respect to the intended outcomes. Particular solutions can be flagged for future use in similar applicable scenarios.

The works close out stage (stage six) is an administrative stage to close out financial allocations and capitalise assets.

7.2 Service performance levers

TasNetworks has a number of mechanisms to influence service performance at a strategic, operational and tactical level. Key activities that influence service performance are:

- network planning and design;
- asset management strategies;
- operational management of planned and unplanned outages; and
- performance monitoring and evaluation.

7.2.1 Network planning and design

Network planning is the process of identifying potential changes to the electricity network due to changing customer demands or changing risk profiles, and developing the network to meet existing and future customer requirements. The key objectives of network planning are to ensure adequate:

- network capacity and design – the rating, selection and configuration of equipment in the network,
- security of supply – the interconnectivity and redundancy of the network; and
- quality of supply – how suitable the supply is with respect to factors such as steady state voltage, voltage sag and swell, harmonics, flicker, distortion, unbalance and power factor.

It is in the design and planning phase that TasNetworks has its greatest capacity to influence service performance, by preventing outages from occurring in the first place, or by building diversity and resilience into the network. More detail on TasNetworks' approach to the planning

and design of the network is available in TasNetworks' Network Development Management Plan ([R373313](#)).

7.2.2 Asset management strategies

TasNetworks has a variety of assets installed in its network that provide different functions and are managed in different ways. Service performance impacts are considered as one input in to the management strategy for each asset class in alignment with business priorities and objectives.

After an asset has been placed into service there are numerous avenues by which service performance can continue to be influenced in a strategic manner. A number of key processes are summarised below, with further detail captured within individual asset management plans.

7.2.2.1 Maintenance regimes

TasNetworks undertakes inspection and maintenance activities on network assets to assess condition and apply preventative maintenance. Appropriate inspection and maintenance programs lead to lower numbers of in service failures, resulting in a reduction in outage rates.

Through ongoing monitoring of information captured through inspection processes, emerging trends in the network can be identified and the effectiveness of inspection and monitoring programs can be assessed.

7.2.2.2 Asset condition monitoring

An asset's condition varies throughout its life as a function of age, utilisation and environmental factors. Condition monitoring methods are employed to minimise the risk of service failure and to ensure that assets are renewed, repaired or maintained within appropriate timeframes, with consideration always given to prudent deferral of capital investment.

To maximise asset life while minimising whole of lifecycle cost, TasNetworks is committed to continuous improvement of its asset condition monitoring activities.

7.2.2.3 Asset replacement

The replacement of assets that are approaching end of life is an essential part of TasNetworks' approach to maintaining service performance. In alignment with industry best practices TasNetworks considers asset condition as the best indicator of failure and defines replacement activities in alignment with the business risk appetite.

7.2.2.4 Defect management

An asset defect is defined as an asset condition where one or more actions are required to rectify or otherwise prevent functional failure. Ineffective management of defects can result in assets further degrading to the point of failure which may result in negative service performance outcomes.

TasNetworks has a number of routine and non-routine inspection and maintenance programs in place through which defects are proactively identified and recorded. The nature and extent of these activities relate to the risk of defect(s) identifiable by each activity.

Analysis of defects can lead to a better understanding of failure mechanisms and facilitates the identification of emerging trends in the network to be targeted for operations and maintenance, as well as replacement.

7.2.2.5 Incident investigations

TasNetworks undertakes investigations of all safety, environment, and asset incidents that occur on property or assets owned, managed or under the responsibility of TasNetworks. This process is currently documented in TasNetworks' Incident Management Procedure ([R94015](#)).

The completion of remedial actions arising from incident investigations can result in:

- increased workplace safety;
- improved environmental management practices;
- increased performance of the Tasmanian electricity network;
- improved compliance with Regulatory requirements;
- cost benefits resulting from improvements to asset management strategies;
- process enhancements;
- improved equipment design standards; and/or
- opportunities for closer contractor relations.

Analysis of incidents can lead to a better understanding of failure mechanisms and facilitates the identification of emerging trends in the network to be targeted for operations and maintenance, as well as replacement.

7.2.2.6 Asset management and outage information

Asset management and outage information is the foundation on which TasNetworks' network management strategies and plans are developed. This includes information pertaining to:

- Asset data (including condition);
- Operational and capital expenditure;
- Asset risk;
- Asset performance;
- External benchmarking data for comparative purposes.

Volumes and quality of these data sets are variable and improving as part of TasNetworks asset management improvement program. Analysis of these combined data set can be used to inform strategies and plans, as well as validate the success of existing strategies.

7.2.3 Operational management of planned and unplanned outages

7.2.3.1 Planned outage management

Preventative maintenance and asset renewal activities are carefully planned and scheduled to minimise the impact on customers and their service performance levels. Utilisation of live line techniques and deployment of mobile generators are considered where practical.

7.2.3.2 Unplanned outage management

While a resilient network will reduce the likelihood of unplanned outages, the reality is that assets deteriorate and ultimately fail in service. Effective operational practices, both in and between the network control room and the field, provide a final opportunity for service performance to be influenced.

Therefore, it is critical that operational staff have an understanding of the way in which their activities can provide positive service performance outcomes, and that they have the necessary information, skills and systems available to them to make informed decisions in real time.

7.2.4 Performance monitoring and evaluation

Performance monitoring and evaluation are critical to understanding the effectiveness of TasNetworks asset and network management plans and activities at delivering required business outcomes and managing risks.

The timeliness of monitoring and evaluation is dependent on a number of factors including:

- the timing of measurement by regulatory bodies;
- the severity of events on performance outcomes;
- the occurrence of events contributing to performance outcomes; and
- the capability of TasNetworks to influence performance outcomes.

To support this activity, TasNetworks has two service performance reporting procedures, for transmission ([R736687](#)) and distribution ([R752999](#)), which describe the processes and systems used for reporting.

7.3 Specific initiatives

7.3.1 Distribution service performance

TasNetworks considers the desired performance on strategic measures in terms of the individual metrics that contribute to them. By achieving specified outcomes in lower level metrics, the target performance at the higher level objectives will be met.

TasNetworks does not address performance at the system level or category levels explicitly, but uses these measures as an indicator for the effectiveness of TasNetworks overall performance management approach, including investment levels.

7.3.1.1 Community performance

TasNetworks measures and manages performance at the community level, to deliver on the targets set for the strategic measures of the count of non-compliant:

- SAIFI communities, including MEDs (OTTER);
- SAIDI communities, including MEDs (OTTER);
- SAIFI communities, excluding MEDs; and
- SAIDI communities, excluding MEDs.

The graphs presented in section 6.2.4, demonstrate the impact that MEDs have on the compliance of reliability communities. The most effective means of improving community compliance are network development strategies that result in improvement of performance on MEDs, and effective identification of faults and deployment of field resources during MEDs to restore supply.

There remain a number of communities whose performance is non-compliant with respect to OTTER standards, even with the effects of MEDs removed. These communities represent areas of the network that experience consistently poor performance and are potential candidates for performance improvement activities.

To identify and manage these consistently poorly performing communities, a performance assessment methodology has been developed that takes a holistic view of community performance. This methodology considers long term performance, recent performance and performance trends to identify communities that experience consistently poor and/or deteriorating performance.

This performance methodology will facilitate the strategic identification and prioritisation of projects and programs to directly and indirectly deliver service performance outcomes for reliability communities. The methodology has been implemented as a business intelligence report in TasNetworks' reporting zone and is openly accessible⁵. The next key activities are to embed this methodology into strategic asset and network management decisions and monitor, and evaluate the service performance outcomes of those decisions.

Table 10 summarises the work programs that directly deliver service performance outcomes. More detail on these work programs can be found in the Network Development Management Plan ([R373313](#)).

Table 10: Summary of distribution reliability work programs

Work Program	Work Category	Description
Reliability & Quality Maintained	PRHOS	Install HV Switchgear OH
	PRLVR	Install Reclosers
	PRTXI	Rectification work multi visit transformers
	PRSPT	Install bird diverters & pole tops reconfigs
	PRHVR	Upgrade HV Fdrs (Reliability)
	PRREH	Relocate / Alter HV Fdrs OH
	STPIS	STPIS Mitigation

7.3.1.2 Feeder performance

TasNetworks measures and assesses the performance of feeders, providing a mechanism for TasNetworks to deliver on its strategic objective of obtaining a 20% STPIS bonus. As with reliability communities, segmentation by feeder allows specific poorly performing network areas to be identified below the classification level.

A performance assessment methodology has been developed that segments the network by feeders and defines STPIS targets for each feeder, based on the number and classification of customers supplied. Feeder performance is assessed on a routine basis against these targets, considering long term historic performance, recent performance, and performance trends. The methodology identifies network areas whose performance impacts consistently result in the largest negative impact on TasNetworks' STPIS outcome.

This performance methodology facilitates the tactical prioritisation and coordination of TasNetworks network related activities to directly and indirectly deliver service performance

⁵[http://reportzone.tnad.tasnetworks.com.au/bi/_layouts/15/ReportServer/RSViewerPage.aspx?rv:RelativeReportUrl=/bi/ASP/Performance%20Report%20-%20Internal/Service%20Performance%20by%20Community%20\(Customer\).rdl](http://reportzone.tnad.tasnetworks.com.au/bi/_layouts/15/ReportServer/RSViewerPage.aspx?rv:RelativeReportUrl=/bi/ASP/Performance%20Report%20-%20Internal/Service%20Performance%20by%20Community%20(Customer).rdl)

outcomes that will lead to improved STPIS outcomes. This methodology has been implemented as a business intelligence report in TasNetworks' reporting zone and is openly accessible⁶. The next key activities are to embed this methodology into tactical and operational asset and network management decisions, and monitor and evaluate the service performance outcomes of those decisions.

7.3.1.3 Call service performance

To manage the performance of the telephone answering parameter, TasNetworks has processes in place that reduce the number of calls being received by each operator per minute. TasNetworks has approximately 25 additional staff outside the Customer Service Centre team trained to assist and able to provide support in answering fault and emergency calls during bad weather.

TasNetworks' phone system has a 'call back' feature that is turned on for our general enquiries number as required that allows the customer to request a call back rather than wait on hold. At times of high call volumes, this reduces the burden on TasNetworks' general enquiry phone numbers which allows for a greater allocation of resources to fault and emergency calls.

7.3.1.4 Outage and asset management systems

TasNetworks is currently undertaking significant changes to the way that assets and outages are managed. TasNetworks' Ajilis project will see asset management functions being migrated from a variety of disparate systems to a single enterprise resource planning system (SAP). This will provide a number of benefits including:

- single point of truth for all values;
- improved reporting capabilities;
- increased accessibility to users for reading and writing data;
- integrated supply chain, asset management, works, resourcing and finance activities; and
- improved programming and planning systems.

TasNetworks' Outage and Restoration Management System (ORM) project will see the function of outage management being migrated from the previous works and asset management system and enhanced. This will provide a number of benefits including:

- near real time outage calculation (improved calculation accuracy);
- simplification of job closure screen (reducing data input error);
- removal of outage calculation system that is subject to map migration errors;
- integration and alignment with Ajilis project; and
- reduced burden on manual outage calculation process (providing more opportunity for validation, improving end output accuracy).

⁶[http://reportzone.tnad.tasnetworks.com.au/bi/_layouts/15/ReportServer/RSViewerPage.aspx?rv:RelativeReportUrl=/bi/ASP/Performance%20Report%20-%20Internal/Service%20Performance%20by%20Feeder%20\(Customer\).rdl](http://reportzone.tnad.tasnetworks.com.au/bi/_layouts/15/ReportServer/RSViewerPage.aspx?rv:RelativeReportUrl=/bi/ASP/Performance%20Report%20-%20Internal/Service%20Performance%20by%20Feeder%20(Customer).rdl)

7.3.2 Transmission service performance

7.3.2.1 MIC

The transmission network service performance over the past five years has seen substantial improvements and is performing well against service performance targets with the exception of the MIC. The MIC is a bonus-only scheme in the current regulatory period. This will change at the start of the 2019-24 Regulatory period to a symmetrical scheme that provides an incentive of +/- 1 per cent of maximum allowed revenue each year.

An initiative to review the effectiveness of TasNetworks' current MIC strategy and identify and implement improvements will be undertaken during the 2018 calendar year in preparation for the next regulatory period.

7.3.3 Education and awareness

As described within 'ISO 55000:2014 - Asset management - Overview, principles and terminology', effective asset management requires a balance between cost, risk and performance outcomes in the achievement of corporate objectives.

To manage service performance it is critical that TasNetworks staff understand what constitutes good, average or poor service performance, and how they are able to influence service performance through their daily activities.

An education and awareness program is in development by the Asset Performance team to ensure that consideration is given to service performance outcomes and priority is given to areas and items of poor performance. The education and awareness program is targeted at:

- General business – ensuring all staff members have a broad understanding of service performance, how they can influence it in their activities and who to approach if they have further questions; and
- Frontline teams – covers all teams that can influence service performance directly at a strategic, tactical and operational level. The program will ensure that these teams are aware of current service performance levels, where to find information and tools to inform service performance decisions and how to use the information and tools.

Roll out of this education and awareness plan will be progressive over 2017-18 and 2018-19.

8 Related standards and documentation

1. TasNetwork Asset Management Policy
2. TasNetworks Corporate Plan
3. Strategic Asset Management plan
4. Tasmanian Electricity Code
5. National Electricity Rules
6. Transmission STPIS version 5
7. Distribution STPIS November 2009
8. End-to-end works management process ([R356224](#))
9. Network Development Management Plan ([R373313](#))
10. Incident Management Procedure ([R94015](#))
11. Transmission service performance reporting procedure ([R736687](#))
12. Distribution service performance reporting procedure ([R752999](#))