

**TASMANIAN ECONOMIC REGULATOR**

**ANNUAL ENERGY SECURITY REVIEW**

NOVEMBER 2017

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## EXECUTIVE SUMMARY

This report is the first Annual Energy Security Review by the Tasmanian Economic Regulator (TER) published according to Terms of Reference issued by the Tasmanian Government on 24 October 2017.

Under the Government's new Energy Security Risk Response Framework, the TER has been given the role of energy security Monitor and Assessor. The Monitor and Assessor role is intended to provide an additional layer of public reporting on Tasmanian energy security levels in addition to current public reporting. This public reporting includes monthly reports (or "dashboards") and an annual review of the previous water year and assessment of the forthcoming water year.

As this is the first annual review under the Government's energy security framework this report presents a brief review of energy security in Tasmania. The scope and content of this report has been somewhat limited by time constraints. It is anticipated that the report will evolve over time.

The key finding of this report is that Tasmanian available energy supply will be sufficient to meet demand over the coming 12 months. Based on current inflow assumptions for Tasmanian Hydro storages, on island hydro and wind generation will be able to meet Tasmanian demand in the event of a temporary loss of TVPS generation or Basslink outage. Readers should note, however, that actual electricity generation sources throughout the year will be a commercial decision for Hydro Tasmania to make based on market factors.

## KEY STATISTICS<sup>1</sup>

2016-17 Water year (1 November 2016 to 31 October 2017)

Current energy in storage	6 766 GWh <sup>2</sup>
Total inflow to Hydro Tasmania storages	8 607 GWh
Tasmanian demand	10 666 GWh
<i>Hydro generation</i>	<i>8 220 GWh</i>
<i>Wind generation</i>	<i>1 059 GWh</i>
<i>Gas generation</i>	<i>915 GWh</i>
<i>Basslink import</i>	<i>1 432 GWh</i>
<i>Basslink export</i>	<i>961 GWh</i>
Total Tasmanian supply	11 627 GWh

<sup>1</sup> Data in this table sourced from Hydro Tasmania and NEM Review™

<sup>2</sup> Equal to 46.9 per cent of total storage

# 1 INTRODUCTION

## 1.1 Background

During 2015-16, Tasmania experienced two low probability events at the same time that impacted on energy security with the Basslink Interconnector out of service and record low rainfall during spring. These events resulted in Hydro Tasmania's water storages falling to historically low levels. The Tasmanian Government introduced an Energy Supply Plan, which included voluntary large user demand reduction and the installation of temporary diesel generation.

Energy in storage reached a record low of 12.5 per cent in late April 2016. However, energy in storage increased to above 36 per cent by the end of April 2017 through a combination of heavy winter rains in 2016; Basslink resuming service; and the operation of the Tamar Valley Power Station (TVPS) during summer. As of 6 November 2017, total energy in storage is around 47 per cent.

The Tasmanian Energy Security Taskforce was established in response to the 2015-16 energy supply security challenges to advise the Government on how it can better prepare for, and mitigate against, the risk of future energy security events.

The Taskforce's Final Report was released by the Government on 16 August 2017. The Taskforce Final Report recommended that the Tasmanian Economic Regulator (TER) assume the role of energy security Monitor and Assessor. The Monitor and Assessor is to provide independent oversight and transparent public reporting of energy security taking a holistic view of electricity and gas energy that would be informed primarily by data provided by relevant energy supply providers.

In order to carry out the role of Monitor and Assessor on a long term and ongoing basis, legislative changes to the *Electricity Industry Supply Act 1995* are considered preferable. However, in the meantime, the Government considered it essential that the Monitor and Assessor functions commence in line with the timeframe set out in the Taskforce's Final Report.

Accordingly, the Taskforce's recommendations relevant to the Monitor and Assessor's reporting role were incorporated into the documents, titled, *Terms of Reference - Reporting of the Monitor and Assessor* (Terms of Reference). The Treasurer has requested that special reports under section 9 of the *Electricity Supply Industry Act 1995* be prepared and published in accordance with the Terms of Reference (see Attachment).

## 1.2 Terms of Reference

The Terms of Reference (see Attachment) were provided by the Treasurer, Hon Peter Gutwein MP, on 24 October 2017 and include the following key deliverables and timeframes:

1. A report from the TER to the Treasurer, containing an annual energy security review, is due by mid-November each year. The TER is to publish that report on the TER's website within seven days of providing that report to the Treasurer.
2. The TER shall provide monthly energy in storage “dashboard” reports to the Treasurer on a standard set of energy security parameters. The first report is to be produced by mid-November 2017 and further reports are to be provided monthly thereafter. The TER is to publish each monthly report on the TER's website within seven days of providing that report to the Treasurer.
3. If the situation arises whereby supply/demand balance changes to the extent that a revision to the High Reliability Level (HRL) and Prudent Storage Level (PSL) profiles should be considered by the Minister for Energy, the TER shall provide a special report to the Treasurer detailing evidence that a change to those profiles should be considered. The TER shall also consider natural gas supply adequacy to the extent it affects thermal electricity generation at the Tamar Valley Power Station, and its availability to the broader Tasmanian gas market (as per the Functional Specifications for the Monitor and Assessor).
4. All reports to the Treasurer listed in these Terms of Reference are also to be provided to the Minister for Energy at the same time as they are provided to the Treasurer.

## 1.3 Purpose

The purpose of the Annual Energy Security Review is to provide a review of the previous water year and examine forecast storage levels and forecast demand over the coming water year<sup>3</sup>.

The water year is defined as the twelve months to the end of October each year.

The 2017 Annual Energy Security Review Report presents a brief overview of energy security in Tasmania. The scope and content of this report has been somewhat limited by time constraints. It is anticipated that the Report will evolve over time.

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<sup>3</sup> The Monitor and Assessor Functional Specification, developed by the Tasmanian Energy Security Taskforce, states that timing of the Monitor and Assessor's outputs would ideally be structured around a “water year” which typically commences at the end of the winter/wet period for Tasmania (i.e. beginning of November). This approach aligns with the end of the high point for inflows to Tasmanian water catchments and therefore would best inform forecasting for an upcoming 12 month period.

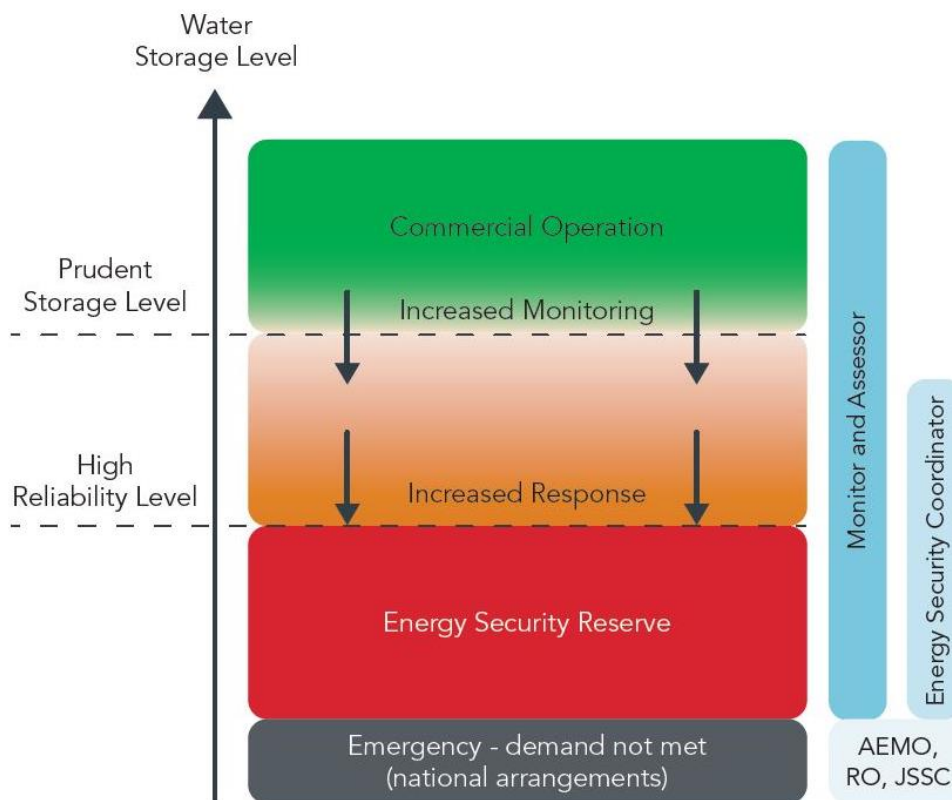
## 2 THE GOVERNMENT'S ENERGY SECURITY FRAMEWORK

### 2.1 Overview

The Tasmanian Government has adopted the Energy Security Risk Response Framework to ensure that a rigorous and more widely understood framework for the management of water storages is in place for Tasmania. Under the framework water storage levels are a function of energy security risk.

The Energy Security Risk Response Framework represents the Government's view of the interaction between energy security risk response thresholds and the proposed energy security oversight roles as shown in Figure 1.

Figure 1 - Energy Security Risk Response Framework<sup>4</sup>



Source: Tasmanian Energy Security Taskforce Final Report

<sup>4</sup> National market rules and procedures relating to energy emergencies are overseen by the Australian Energy Market Operator (AEMO) and are only initiated when demand is unable to be met. AEMO operates a NEM emergency management protocol and the Power System Emergency Management Plan (PSEMP) that dictate the level of response to be undertaken to ascending levels of emergency criticality. There are two key roles in Tasmania under this national framework. The Responsible Officer (RO) is a statutory role under National Law and has the key responsibility to enact load shedding directed by AEMO, or the jurisdiction, as part of an emergency response. The RO has historically been an officer in the transmission business in Tasmania (now TasNetworks). The JSSC is appointed by the Tasmanian Minister for Energy in accordance with Section 110 of the National Electricity Law (NEL). The Jurisdictional System Security Coordinator (JSSC) has the key responsibility to prepare load shedding priorities and sensitive loads for Tasmania and arrange their authorisation.



Under the Energy Security Risk Response Framework, energy in storage levels are regularly assessed against pre-determined communication and response thresholds. When these thresholds are passed, or are forecast to be passed, the Monitor and Assessor and/or the Energy Security Coordinator initiate escalating communication and response actions.

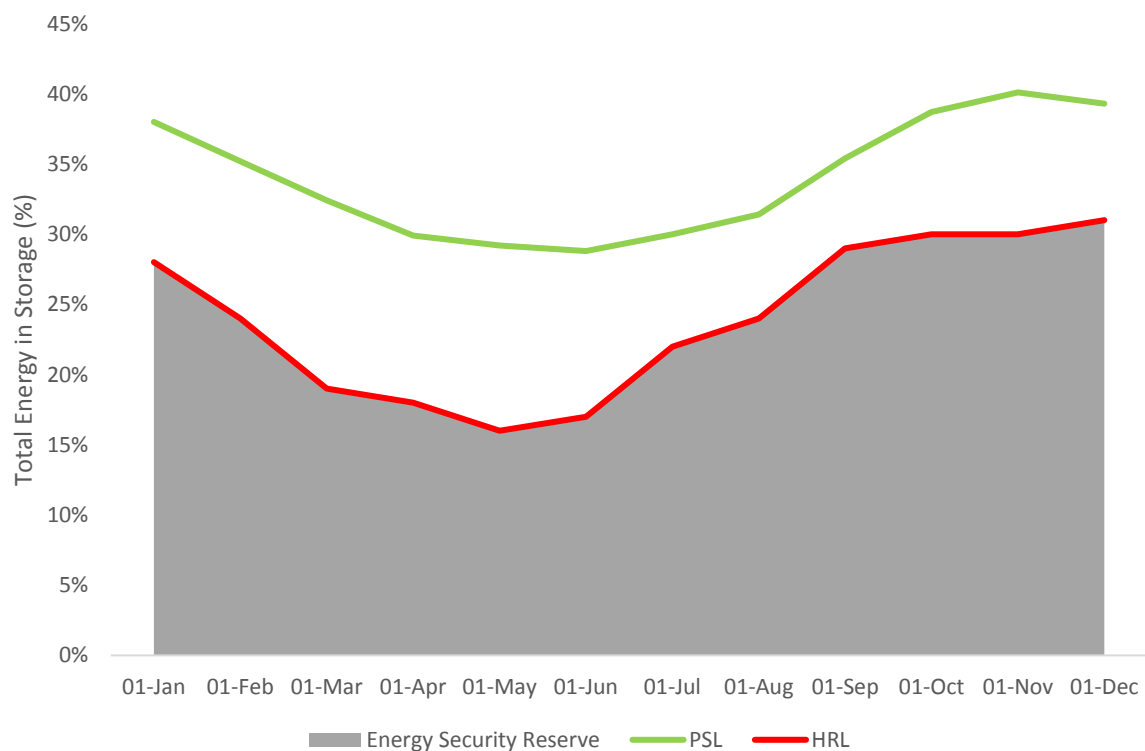
Whilst there is a high focus on electricity, the impact of gas on energy security is also monitored. Principally this is done through information provided on the operation of the TVPS and availability of gas to the broader Tasmanian gas market.

### 2.1.1 High Reliability Level and Prudent Storage Level

The framework identifies two key energy in storage profiles across a rolling 12 month period, as shown in Figure 2:

- High Reliability Level (HRL) – the threshold to which reserve water is held for energy security purposes where the reserve is sufficient to withstand a six month Basslink outage coinciding with a very low inflow sequence and avoid extreme environmental risk in *yingina*/Great Lake; and
- Prudent Storage Level (PSL) – set to create a “storage buffer” from the HRL that is sufficiently conservative that the likelihood of storages falling below the HRL is low under normal operational conditions.

Figure 2 - High Reliability Level and Prudent Storage Level



### 2.1.1.1 Calculating the High Reliability Level

The objective of the HRL is to communicate the level of total energy in storage where the NEM Reliability Standard of 0.002 per cent unserved energy (USE) can still be met and there is no incursion into the *yingina*/Great Lake Extreme Environmental Risk Zone (EERZ) with a six month Basslink outage and a very low inflow sequence, assuming 200 MW (876 GWh) of generation from the TVPS is utilised.

The Taskforce's Interim Report referred to the energy in storage below the HRL as the "energy security reserve", which should only be accessed in exceptional circumstances, such as: an extreme period of low inflows; an extended Basslink outage; or an extended unplanned outage to the full output of Gordon Power Station or Poatina Power Station (the largest hydro-electric power stations in the Tasmanian generation system). Under the Energy Security Risk Response Framework accessing the HRL is likely to require the involvement of the Energy Security Coordinator.

It should be noted that the HRL is a set of monthly storage levels required to meet the NEM reliability standard should a Basslink outage occur in a given month and lasts for six months and is not a storage trajectory.

The Taskforce tested Hydro Tasmania's calculation of the HRL for suitability and robustness by calculating the amount of energy needed to meet demand under the following conditions:

- Basslink unavailable for six months;
- Tasmanian demand equivalent to 10 600 GWh per annum (profiled monthly);
- lowest six monthly inflow sequences from Hydro Tasmania modelled inflow data;
- wind generation of 900 GWh per annum; and
- gas generation of 876 GWh, reflecting TVPS operation during the six month Basslink outage.

The output from this analysis was the amount of energy in storage required each month in the event of an extended Basslink outage. This calculated storage requirement was then added to the theoretical "floor" of the energy supply from Tasmania's hydro-electric system (referred to as the USE threshold) at which point Hydro Tasmania indicated that all demand may not be met. This was then be used to form an HRL profile based on readily available data independently of Hydro Tasmania's calculations. The results of this analysis are presented in Figure 3 below.

Figure 3 - Taskforce HRL and Hydro Tasmania's HRL

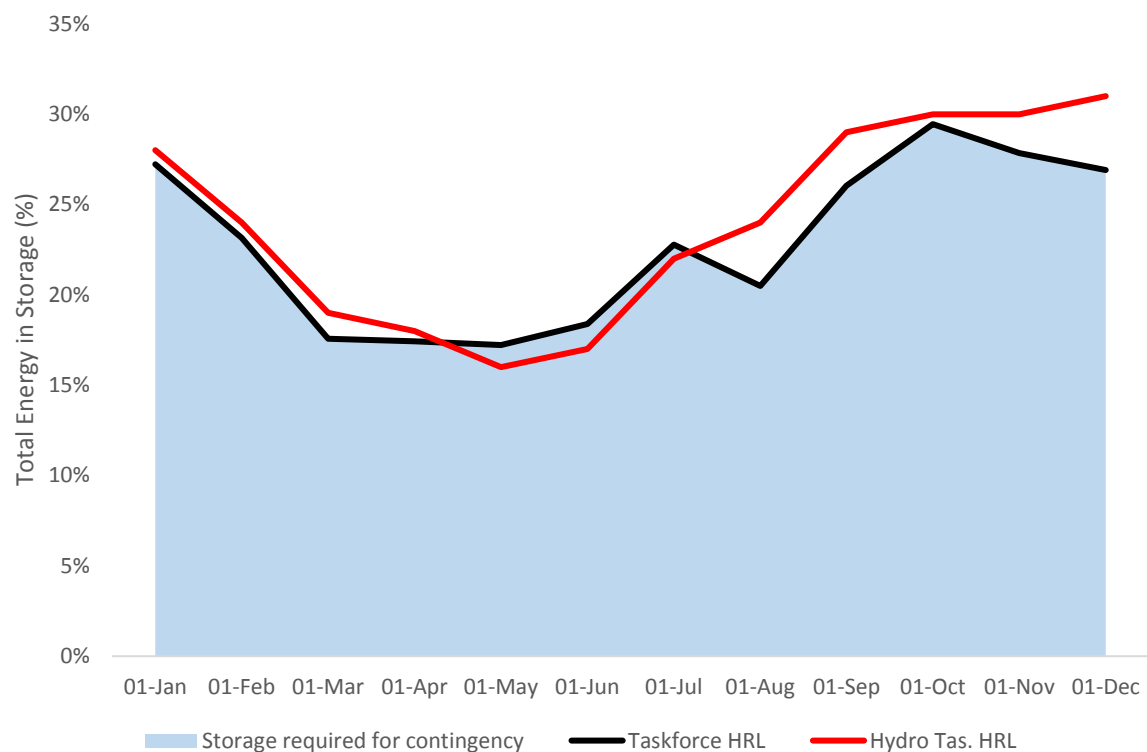


Figure 3 shows that the Taskforce's calculation of the HRL profile (and hence the minimum required amount of energy in storage each month) broadly supported Hydro Tasmania's calculation of the HRL profile. Overall, Hydro Tasmania's HRL profile was more conservative than that calculated by the Taskforce, including during the drier months of the year between November and April. For this reason, as well as for ease of implementation and future reference, the Taskforce recommended that the HRL profile should be initially set based on Hydro Tasmania's more conservative calculation.

Any future revision of the HRL profile would require Hydro Tasmania to submit its own calculation for review by the Monitor and Assessor who will undertake its own independent assessment as to its appropriateness using the calculation methodology provided to it by the Taskforce.

### 2.1.1.2 Calculating the Prudent Storage Level

The PSL profile is a set of monthly storage targets that provide an allowance for three months of low inflows above the HRL profile to ensure the low risk operation of the hydro-electric system in Tasmania.

The PSL methodology involves calculating an annual profile to represent the movement of energy in storage in a 12 month period under average inflow conditions. The annual profile of the PSL is generated from average monthly supply and demand conditions. This annual profile is then applied to ensure that the most vulnerable monthly position of the PSL remains above the HRL profile equivalent to an historic dry three month sequence with Basslink and TVPS support.

Firstly, a monthly minimum level was derived from the following conditions:

- Tasmanian demand (monthly profile of 10 600 GWh per annum);
- historically low monthly inflow sequences;

- wind generation of 225 GWh for any three month period (900 GWh per annum, evenly distributed across the year);
- gas generation of 219 GWh for any three month period (1.5 months of 200 MW flat generation); and
- Basslink import of 657 GWh for any three month period (equivalent to 300 MW flat import).

Secondly, an average profile was applied to single monthly minimum values such that the resulting profile is never below the monthly minimum values. This gives a monthly storage profile that is strong enough to withstand a historically low three month inflow sequence with Basslink and TVPS support.

Hydro Tasmania provided its own calculation of the PSL profile based on the Taskforce's methodology, which aligned with the Taskforce's calculated PSL profile.

Any future revision of the PSL profile would require Hydro Tasmania to submit its own calculation for review by the Monitor and Assessor, which would undertake its own independent assessment as to its appropriateness using the calculation methodology provided to it by the Taskforce.

Under the Government's framework, the Minister for Energy approves the HRL and PSL profiles and any future proposed variation of these by the Monitor and Assessor.

The Minister for Energy approved the Taskforce's recommended HRL and PSL on 15 November 2017 as set out in Figure 2.

### **2.1.2 Role of the Monitor and Assessor**

The Monitor and Assessor role is intended to provide an additional layer of public reporting on energy security levels in addition to current public reporting. This public reporting includes monthly reports (or "dashboards") and an annual review of the water year and the forthcoming year, which is the subject of this report.

Each month the Regulator will examine Hydro Tasmania's forecast energy in storage profiles relative to the PSL or HRL. Any preliminary forecast to access the energy security reserve will require Hydro Tasmania to demonstrate how storages will be managed to try to avoid going below the HRL and entering the energy security reserve.

In the event that energy in storage falls below the HRL, Hydro Tasmania is to provide the Monitor and Assessor with an HRL Recovery Plan that will be implemented, including how storages will be returned above the HRL once the energy security reserve is accessed. At this point, the Monitor and Assessor will notify the Energy Security Coordinator that an HRL Recovery Plan has been submitted, together with its advice on the suitability of the plan for returning storages above the HRL profile.

It is not intended that the Monitor and Assessor have the power to compel entities to take action to address supply shortfalls. It is predominantly an information gathering and sharing role with the capacity to advise the Energy Security Coordinator on the suitability of submitted HRL Recovery Plans.

The Monitor and Assessor is also required to monitor any changes to the Tasmanian energy supply/demand balance to ensure that the threshold levels (ie the HRL and PSL profiles) for the Energy Security Risk Response Framework remain set at the appropriate level to maintain security of energy supply. The Monitor and Assessor will only consider proposing changes to the HRL and PSL profiles when there are material changes to supply and/or demand, or if Hydro Tasmania requests a change to be made.

### 2.1.3 Role of the Energy Security Coordinator

The Director of Energy Planning has been given the role of Energy Security Coordinator and is supported by the Department of State Growth. The Energy Security Coordinator is expected to play an important role if energy in storage drops below the HRL and there is a need for a coordinated response by all market participants. While arrangements are yet to be finalised between the Monitor and Assessor and the Energy Security Coordinator, it is expected that under certain circumstances, the Monitor and Assessor will notify the Energy Security Coordinator and an HRL Recovery plan may be requested from Hydro Tasmania. The Energy Security Coordinator will review the HRL Recovery Plan to provide a point of independent oversight and also ensure it can assist with any coordination activities. The Energy Security Coordinator will be required to coordinate activities outside of Hydro Tasmania's control, including coordinating other generation sources and demand reduction activities (if required).

As the Energy Security Coordinator is intended to be the coordinator of "pre-emergency" responses to energy supply security events, it is essential that it considers the HRL Recovery Plan adequate and practical. It is understood that the Energy Security Coordinator will review the HRL Recovery Plan and confirm its adequacy. Seeking this approval at the forecasting stage should allow time for the Energy Security Coordinator to review advice from the Monitor and Assessor and to advise modifications to the proposed pre-emergency responses if deemed necessary. The key goal of this requirement is to ensure an adequate plan is in place at the start of an electricity supply shortfall event rather than to prevent Hydro Tasmania from accessing water storages.

## 2.2 Monitor and Assessor's approach to energy security monitoring

### 2.2.1 Approach to monthly monitoring

The intent of reporting every month on energy security levels is to provide a transparent, easily understood and consistent framework that is accessible to all Tasmanian energy sector stakeholders.

Each month the Regulator will examine Hydro Tasmania's forecast energy in storage profiles relative to the PSL or HRL. In the event of a forecast large drop below the PSL, increased monitoring by the Monitor and Assessor will involve the Monitor and Assessor providing commentary on the energy security implications of the forecasts provided by Hydro Tasmania. Such monitoring may involve a request for PSL Recovery Advice from Hydro Tasmania that demonstrates how storages will be returned above the PSL. However, it should be noted that Hydro Tasmania's forecasts may indicate plausible scenarios of a minor drop in energy storages below the PSL from time to time. For example, it is realistic to expect that, over an average inflow year, monthly inflows will occur both above and below historic monthly averages. In such situations storage levels may fall below the PSL for short periods on a fairly regular basis. This does not constitute an energy security threat nor require the submission of recovery advice to restore storages above the PSL.

In the event that Hydro Tasmania's forecasts indicate plausible scenarios of needing to access storages below the HRL, the subsequent actions undertaken will depend on the magnitude of the forecast fall below the HRL profile.

Monthly reporting may include reviews of any prior forecast or actual instances of energy in storage falling below the PSL or HRL and the relative success of the proposed Hydro Tasmanian HRL Recovery Plan. The Taskforce provided an indication of a dashboard approach that could be used by the Monitor and Assessor for monthly reporting. However, the Taskforce stated that the final content and design of the dashboard is to be decided by the Monitor and Assessor.

The Monitor and Assessor's monthly reporting will include:

- commentary and a graph of the current energy in storage relative to the PSL/HRL;
- discussion on the probability of staying above the HRL during the next three months;
- Tasmanian rainfall over the past month and forecast rainfall over the next three months;
- discussion on the Basslink Interconnector and Tamar Valley Power Station operational status and the latest import/generation figures; and
- the total generation mix over the past month.

The first monthly report has been released at the same time as the Annual Energy Security Review.

### **2.2.2 Energy Supply Capability Approach for annual reporting**

This annual report includes an energy security outlook that examines forecast storage levels and forecast demand over the coming 12 months. The energy supply capability approach compares the forecast available energy supply against the 12 month consumption forecast. The assumptions underlying this approach are set out in Table 1.

Table 1 - Energy Supply Capability Approach Assumptions

Parameter	Assumptions
Consumption	10 841 (pro rata AEMO ESOO FYE18 and FYE19 native demand) <sup>5</sup>
Energy in Storage above HRL	2 435 (47 per cent minus 30 per cent)
Wind	900 GWh (consistent with Taskforce Interim Report)
Low inflow	6 700 GWh (Mean minus two standard deviations for data 1997 onwards)
Average inflow	9 000 GWh
Basslink import	Low inflow 3 000 GWh (450 MW average import 85 per cent of time and 200 MW average export 5 per cent of time)  Median inflow 1 000 GWh (400 MW average import 60 per cent time and 200 MW average export 30 per cent of time)
Thermal generation	Six months at 200 MW average for low and median inflow case

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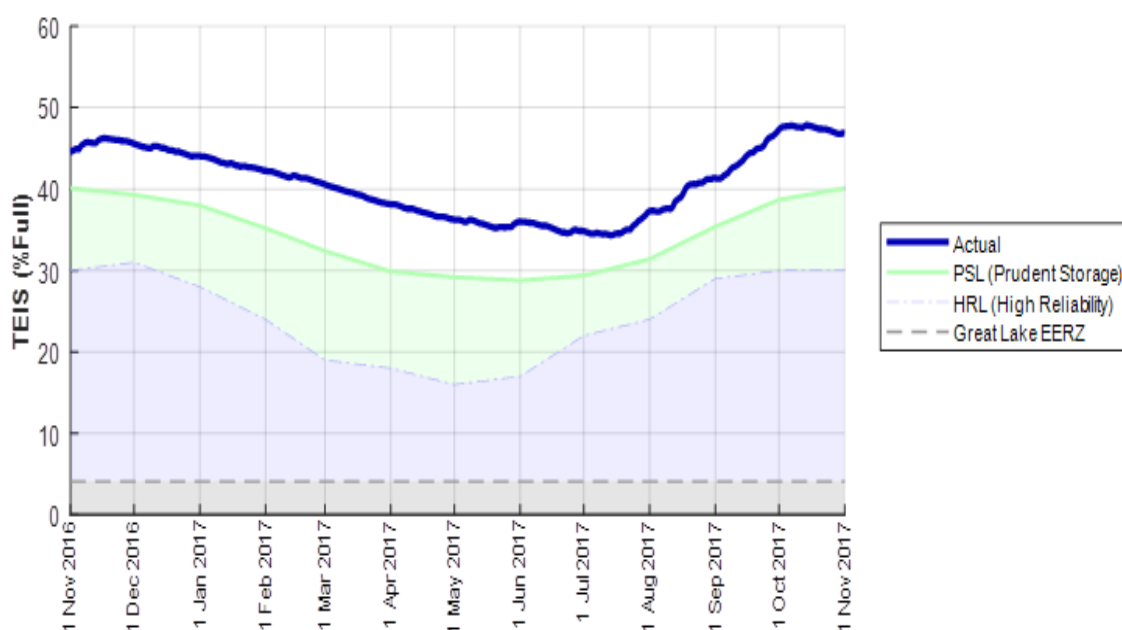
<sup>5</sup> AEMO Electricity Statement of Opportunities Neutral Scenario, effective 5 September 2017.

## 3 PREVIOUS WATER YEAR

### 3.1 Energy in Storage History

Figure 4 depicts the total energy in storage in Tasmania for the previous water year compared to the HRL and PSL.

Figure 4 - Energy in storage - 12 monthly trend



As shown in Figure 4, energy in storage remained above the PSL throughout the year.

#### 3.1.1 Inflows into Hydro Tasmania storages

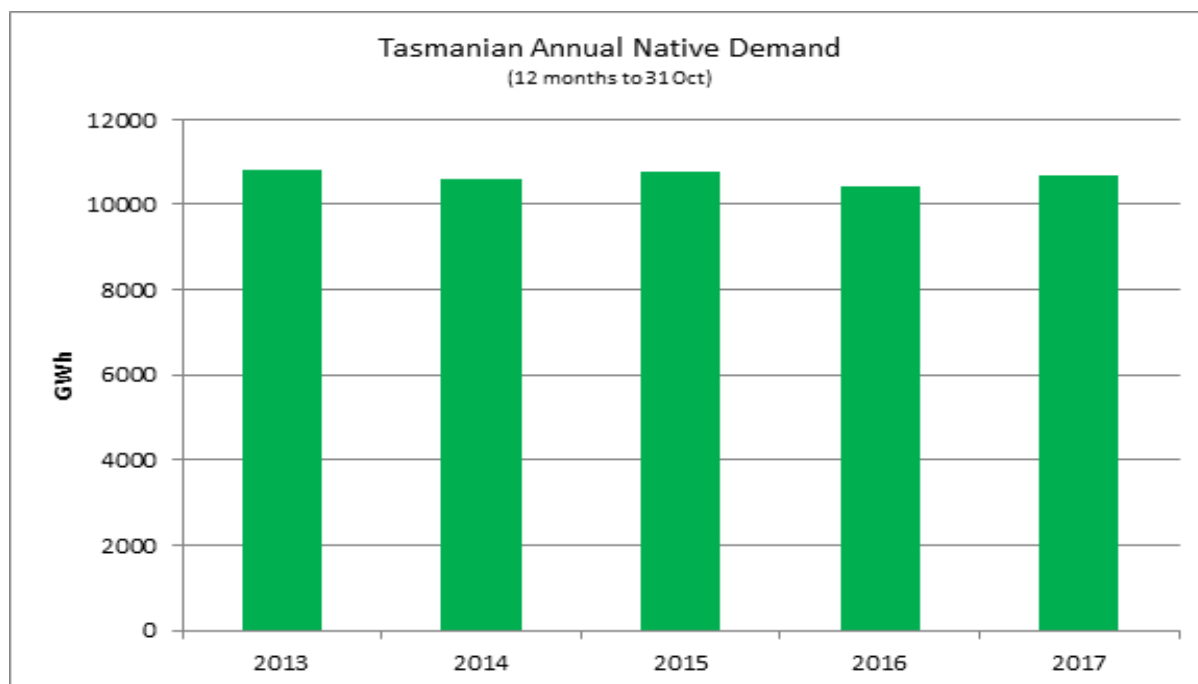
Inflow to Hydro Tasmania storages over the past 12 months was slightly below average with yield of 8 607 GWh. Inflows were above average in November 2016 and September 2017 and below average across March to June 2017. A high proportion of annual yield (76 per cent) occurred during the months of November 2016 and July to September 2017.

#### 3.1.2 Demand

Tasmanian demand (based on AEMO Scheduled Demand plus Non-scheduled Generation) for the past water year was 10 666 GWh. As shown in Figure 5, Tasmanian demand over the previous five years has been fairly stable, fluctuating only slightly around 10 600 GWh. The past water year shows a small increase in demand compared to the previous water year. Year to year demand variations are reflective of several factors, including the weather in Tasmania.



Figure 5 - Tasmanian demand history



### 3.1.3 Generation Mix

Table 2 below shows the total generation mix for Tasmania over the past water year.

Table 2 - Tasmanian generation mix

Generation mix	
Hydro Generation	8 220 GWh
Wind Generation	1 059 GWh
Gas Generation	915 GWh
Basslink Import	1 432 GWh

Tasmanian Hydro storage levels increased eight per cent over the year, from 39 per cent to 47 per cent, supported by CCGT gas generation over January to May and above average September inflows. This resulted in a situation where, at times during the past water year, hydro and wind generation alone were sufficient to meet the entire Tasmanian electricity demand.

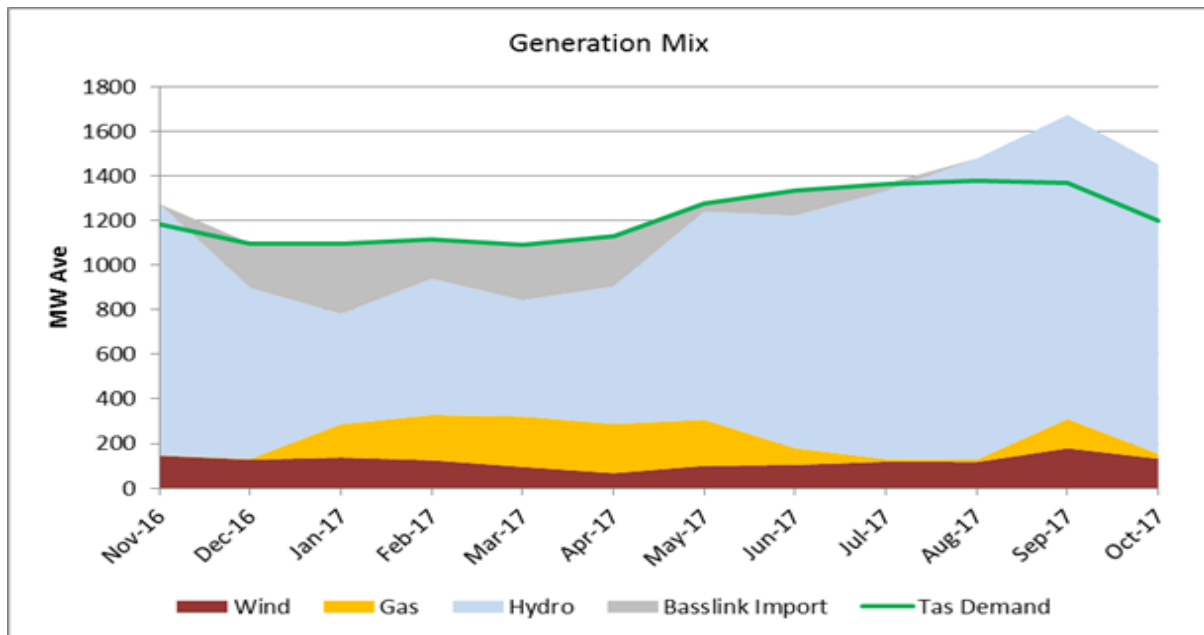
Figure 6 - Generation mix<sup>6</sup>

Figure 6 shows that over the past 12 months:

- wind provided 1 059 GWh (9 per cent of total generation)
- hydro provided 8 220 GWh (73 per cent of total generation)
- market conditions led to the use of TVPS and Basslink imports to supplement Tasmanian generation for a significant portion of the year, mostly between December and May; and
- high rainfall and Hydro Tasmania catchment management contributed to a period of significant Basslink export between August 2017 and October 2017.

<sup>6</sup> Hydro generation above Tasmanian demand indicates energy being exported to Victoria via Basslink.

## 4 ENERGY SECURITY OUTLOOK

### 4.1 Forecast Energy in Storage

Based on the current energy in storage, and assuming average inflows to Hydro storages, Tasmanian energy in storage should remain above the HRL level over the next 12 months.

#### 4.1.1 Forecast rainfall in Hydro Tasmania catchments

Figure 7 shows the median Tasmanian rainfall over the coming three-month period based on Bureau of Meteorology (BOM) observations from 1981 to 2010.

Figure 7 - Three month rainfall average

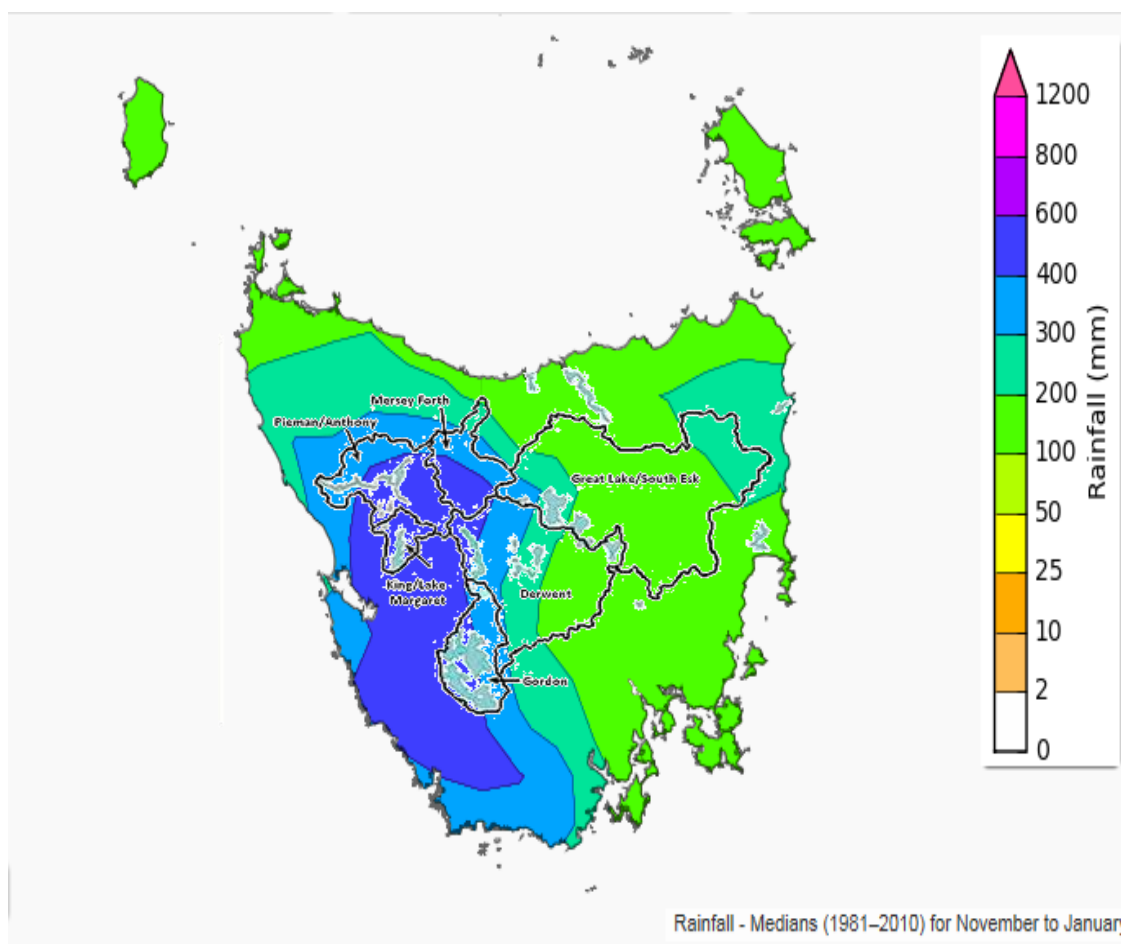
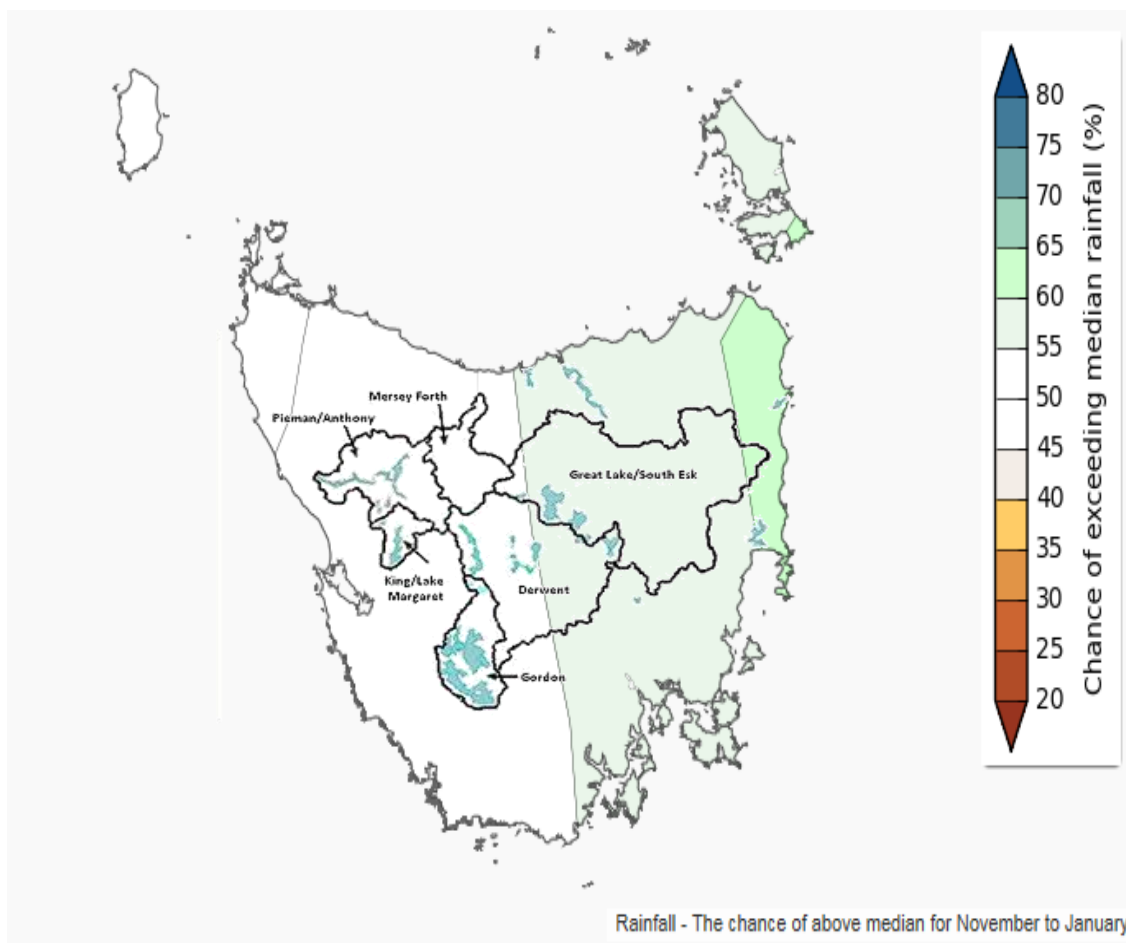


Figure 8 shows the BOM forecast of Tasmanian rainfall exceeding the median over the next three months. On this chart, areas above 50 per cent are likely to receive above average rainfall while those below 50 per cent are likely to receive below average rainfall. According to the BOM forecast, the *yingina*/Great Lake-South Esk storage area may see slightly above average rainfall over the next three months.

Figure 8 - Three month rainfall forecast



In its Climate Outlook for November to January issued on 26 October 2017, the BOM noted that the Pacific Ocean is likely to continue cooling towards La Niña levels over the coming months. However, the ocean warmth that typically appears to the north of Australia and in the eastern Indian Ocean in conjunction with La Niña events is unlikely to develop. This means that Tasmania is unlikely to receive the increased rainfall that is typical of La Niña events.

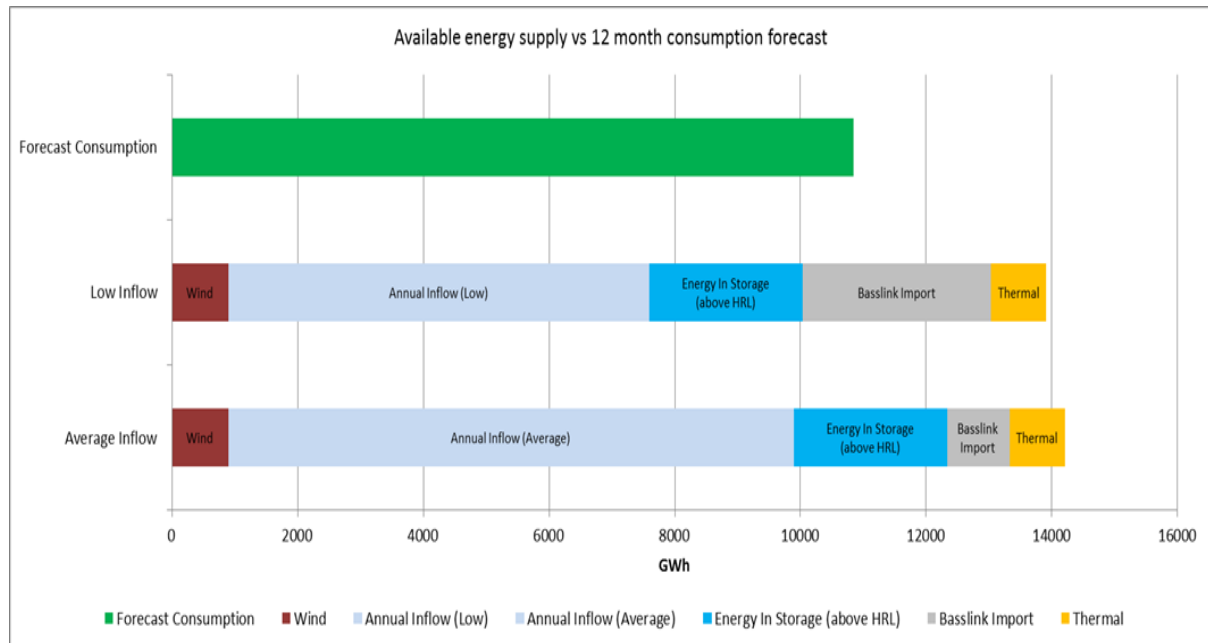
#### 4.1.2 Forecast Demand

AEMO's latest demand forecast prepared for the Electricity Statement of Opportunities, released on 5 September 2017, forecasts Tasmanian Native Demand of roughly 10 800 GWh for 2017-18 and 10 900 GWh for 2018-19. This would continue the gradual increase in Tasmanian demand observed between 2015-16 and 2016-17 (see Section 3.1.2).

#### 4.1.3 Energy Supply Capability

Hydro storages are currently 17 per cent above the HRL and, assuming average inflows, will likely remain above the HRL for the coming water year. Figure 9 below shows the Tasmanian supply capability.

Figure 9 - Energy supply capability



## 4.2 Conclusion

Tasmanian available energy supply will be sufficient to meet demand over the coming 12 months. Based on current inflow assumptions for Tasmanian Hydro storages, hydro and wind generation will be able to provide for Tasmanian demand in the event of a temporary loss of TVPS generation or Basslink outage. Actual electricity generation sources will be a commercial decision for Hydro Tasmania to make based on market factors.

The Economic Regulator does not propose any changes to the PSL and HRL as there have been no material changes in supply and demand.

# ATTACHMENT

## Terms of Reference

### Reporting of the Monitor and Assessor

Under section 9 of the *Electricity Supply Industry Act 1995*, the Treasurer requests that the Tasmanian Economic Regulator prepare, to be published until such time as there is an express provision in legislation:

- a report containing an annual energy security review that is to be published by mid-November each year;
- a monthly energy in storage 'dashboard' report on a standard set of energy security parameters; and
- a special report, if the situation should arise, whereby the supply/demand balance changes to the extent that a revision to the High Reliability Level (HRL) and Prudent Storage Level (PSL) profiles established under the Energy Security Risk Response Framework should be considered by the Minister for Energy.

### Background

A key learning from the 2015-16 energy security event was that there is a perceived lack of independent oversight and transparent public reporting of energy security, particularly in relation to Hydro Tasmania's water storages. In this context, the Tasmanian Energy Security Taskforce recommended the establishment of a Monitor and Assessor role to provide this function, including the publication of an assessment of Tasmania's energy security status at regular intervals together with a dynamic energy security forecast. The Government supported the Taskforce's recommendation that this role be undertaken by the Tasmanian Economic Regulator (TER).

### Scope

1. The TER is to undertake an annual energy security review to be completed in early November after the wet season that:
  - a. examines forecast energy in storage levels and forecast demand, providing commentary on whether energy in storage may drop below the PSL and/or HRL profiles; and
  - b. reviews changes to the Tasmanian energy supply/demand balance to ensure the threshold levels for the Energy Security Risk Response Framework (ie the PSL and HRL profiles) remain set at an appropriate level to maintain security of energy supply.
2. The TER is to undertake monthly energy in storage 'dashboard' reporting on a standard set of energy security parameters. The parameters to be reported on shall be determined by the TER.
3. If the situation arises whereby supply/demand balance changes to the extent that a revision to the HRL and PSL profiles established under the Energy Security Risk Response Framework should be considered by the Minister for Energy, the TER is to prepare a special report to the Treasurer providing evidence for the need for a change to those profiles to be considered.

The TER should be guided by the following documents when determining the scope of its reporting requirements:

- Tasmanian Energy Security Taskforce Interim Report (released December 2016).
- Tasmanian Energy Security Taskforce Final Report (released August 2017).
- Functional Specifications prepared by the Taskforce for the Monitor and Assessor / Energy Security Coordinator roles.

**Key deliverables and timeframes**

1. A report from the TER to the Treasurer, containing an annual energy security review, is due by mid-November each year. The TER is to publish that report on the TER's website within seven days of providing that report to the Treasurer.
2. The TER shall provide monthly energy in storage 'dashboard' reports to the Treasurer on a standard set of energy security parameters. The first report is to be produced by mid-November 2017 and further reports are to be provided monthly thereafter. The TER is to publish each monthly report on the TER's website within seven days of providing that report to the Treasurer.
3. If the situation arises whereby supply/demand balance changes to the extent that a revision to the HRL and PSL profiles should be considered by the Minister for Energy, the TER shall provide a special report to the Treasurer detailing evidence that a change to those profiles should be considered. The TER shall also consider natural gas supply adequacy to the extent it affects thermal electricity generation at the Tamar Valley Power Station, and its availability to the broader Tasmanian gas market (as per the Functional Specifications for the Monitor and Assessor).
4. All reports to the Treasurer listed in these Terms of Reference are also to be provided to the Minister for Energy at the same time as they are provided to the Treasurer.

