

Hydro Tasmania

GBE Scrutiny 2023

Basslink
Onerous contracts
Buy local and consultant spend
Board and associated spend
Energy in Tasmania
Energy availability in Tasmania
North West Transmission Development (NWTD)
Gas generation in Tasmania
Tamar Valley Power Station
Hydrogen
Tasmanian electricity pricing
Major industrial customers
Renewable Energy Guarantee of Origin (REGOs)
Storages and generations
Maugean Skate
Great Lake Adventure Trail

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Financial

Basslink

Possible issues: What will regulation mean for Basslink? Was termination of the Basslink Service Agreement (BSA) by Hydro Tasmania an appropriate decision? Did Hydro Tasmania recover all monies owed by Basslink Pty Ltd (BPL) from the sale to APA? Did termination of the BSA contribute to subsequent trading losses by Hydro Tasmania?

Key messages

1. The decision to terminate the Basslink Services Agreement (BSA) was made by the Board of Hydro Tasmania following careful consideration of Hydro Tasmania's legal rights and commercial standing.
1. Hydro Tasmania's basis for terminating the BSA was that Basslink Pty Ltd (BPL) had breached, and remained in breach of, several aspects of the BSA.
2. In addition, BPL had not satisfactorily progressed mitigating actions declared by the Arbitrator, to improve the operational performance of Basslink.
3. The decision to terminate the BSA was subsequently disputed by the receivers of BPL and those disputes were settled in October 2022 as part of the transaction that saw APA purchase/recapitalize BPL.
4. Overall, the termination of the BSA in February 2022 was an improvement in net assets of \$174m.
5. The impact of termination of the BSA has been accounted and reported in Hydro Tasmania's accounts for FYE 30 June 2022, with final monies related to the arbitration accounted for in Hydro Tasmania's accounts for FYE 30 June 2023.

Background

What will Regulation mean for Basslink? Will Tasmanian customers have to pay for Basslink? How long will that take?

- APA applied to the Australian Energy Regulator (AER) in May 2023 for Basslink to be classified as a prescribed transmission service, i.e. to be regulated.
- In September 2023 APA submitted the regulatory proposal including its proposed regulatory asset base and cost allocation.
- I am advised the AER is expected to issue a draft decision in March 2024, with a final decision due in December 2024.
- I am not in a position to express a view on the likely outcomes.
- However, I would make the point that Basslink is currently the only interconnector in the NEM that is not regulated.

If pushed – what will the impact be for Hydro Tasmania?

- Currently Hydro Tasmania is party to the Network Services Agreement (NSA) with Basslink Pty Ltd.
- The NSA would terminate upon Basslink being regulated.
- Under the NSA:
 - BPL is obliged to make Basslink available to the market at its safe continuous capacity at a price of \$0 / MWh, unless otherwise instructed by Hydro Tasmania;
 - Hydro Tasmania pays a fee to BPL subject to Basslink being made fully available to AEMO for dispatch; and
 - Hydro Tasmania is entitled to receive the inter regional revenues in respect of the safe continuous capacity. (The inter regional revenues are the revenues which BPL receives from AEMO for delivering energy across the Bass Strait.)
- If Basslink is regulated, the inter-regional revenues will be auctioned through a process run by AEMO, consistent with how this occurs for other regulated interconnectors. Proceeds from the auction process would be used to reduce the cost of the Basslink interconnector to end-use consumers.
- Under APA's proposal submitted to the AER, the costs are proposed to be allocated on an equitable basis across all consumers in Tasmania and Victoria. This leads to costs being borne 90% to Victorian and 10% to Tasmanian customers, reflecting the population base of each jurisdiction.

If pushed:

- APA has chosen to progress regulatory conversion and not for HT to provide commentary.

Basslink Imports/Exports FY2023

Date	Basslink Export @ Loy Yang (GWh)	Basslink Import @ Tas RRN (GWh)	Net Flow (sum) (GWh)	Comments
Jul-22	62	-78.7	-16.7	<p>Yield: Very low yield – Tasmania recorded around half its average rainfall in July</p> <p>Generation: Slightly below budget generation</p> <p>Storage: Finished the month with storages at PSL</p> <p>Price: Extremely high prices (VIC flat was \$207 above budget) – highest VIC flat price all financial year and the highest priced month in VIC since the start of the NEM</p> <p>Other: The month started off well with high prices and exports, however due to extremely low yield the pressure to conserve storages became greater as the month went on, forcing hydro to change from export to import despite high prices.</p> <p>No Basslink agreement in place</p>
Aug-22	24.4	-60.6	-36.2	<p>Yield: Very high yield - Highest yield in the entire financial year</p> <p>Generation: Very low generation for the month (building after low yield in July)</p> <p>Storage: 6.8% storage build this month</p> <p>Price: High VIC flat prices, highest - recorded average prices for August</p> <p>Other: No Basslink agreement in place</p>
Sep-22	31.1	-78.2	-47.1	<p>Yield: Below budget yield - Third lowest September yield in the last 10 years</p> <p>Generation: Below budget hydro generation</p> <p>Storage: Finished the month 2.5% under budget and 0.5% above PSL</p> <p>Price: average VIC flat prices (on budget)</p> <p>Other: No Basslink agreement in place</p>
Oct-22	39.1	-163.3	-124.1	<p>Yield: Very high compared to budget (over 400 GWh more)</p> <p>Generation: Below budget</p> <p>Storage: Large storage build for the month (ending above budget)</p> <p>Price: Prices were higher than budget</p> <p>Other: Interim Basslink agreement in place</p> <p>Transmission line outage due to floods separated the north and south of the state – resulted in lower Basslink export capacity (350 MW), reduced Poatina capacity due to flood damage and inability to export Southern generation</p>
Nov-22	62.2	-98.3	-36.1	<p>Yield: Above budget</p> <p>Generation: Above budget</p> <p>Storage: Storages continued to grow and finished the month above budget</p> <p>Price: Slightly below budget prices - lowest volatility in prices seen YTD</p> <p>Other: New Basslink agreement now in place - North/South still separated due to transmission line lost in landslide</p>
Dec-22	28.4	-228.5	-200.1	<p>Yield: Below budget</p> <p>Generation: Below budget</p> <p>Storage: We drew on storages, however still finished above budget</p>

				<p>Price: Below budget average VIC prices and not much volatility in the market (no prices over \$300 this month)</p> <p>Lowest average Vic electricity price since 2021</p>
Jan-23	13.4	-256.4	-243	<p>Yield: Below budget yield</p> <p>Generation: Practically on budget Gen (8 GWh below budget)</p> <p>Storage: Overall draw on storages again, and storages remain above budget</p> <p>Price: Below budget average VIC prices and not much volatility in the market (no prices over \$300 this month), hence being the largest net import month for the year</p>
Feb-23	12.1	-227.4	-215.3	<p>Yield: Below budget</p> <p>Generation: Below budget</p> <p>Storage: Drew down on storages</p> <p>Price: Very low VIC average prices for majority of the month</p> <p>Other: Feb 16th there were two large price spikes (10k and 2k respectively) that lasted only 5 minutes each – Hydro remained on full export during both of these periods</p>
Mar-23	55.8	-165.8	-110.1	<p>Yield: Above budget</p> <p>Generation: Above budget</p> <p>Storage: Built storages</p> <p>Price: Slightly below budget prices, not much volatility</p>
Apr-23	107.7	-124.3	-16.6	<p>Yield: Above budget</p> <p>Generation: Above budget</p> <p>Storage: Drew on storages slightly, however they remain above budget</p> <p>Price: Above budget VIC average price</p> <p>Other: Very good price spread across Basslink, around \$120 spread (high link arbitrage)</p>
May-23	148.1	-80.7	67.4	<p>Yield: Very low yield for most of the month, however caught up to budget in the end of May with high rainfall</p> <p>Generation: On budget generation</p> <p>Storage: Storages finally start to build a little (only by 12 GWh), finishing above budget</p> <p>Price: Above budget VIC average prices</p> <p>Other: Very good price spread across Basslink, around a \$120 spread (high link arbitrage)</p> <p>Australia experienced the lowest mean temperature month since 2011 and second-driest conditions on record</p>
Jun-23	143.9	-65.9	77.9	<p>Yield: Extremely high yield (1.6 TWh in one month)</p> <p>Generation: Slightly below budget generation</p> <p>Storage: Finishing at 6.5% above budget – highest compared to budget all year</p> <p>Price: Below budget VIC average prices due to unseasonably warm temperatures, record wind generation and low gas prices in Vic</p> <p>Other: Gordon storage position increased by 3% (2.6m rise); Great Lake storage position increased by 2.8% (almost a 1.0m rise)</p>
FY Total	728.2	-1628.1	-900	

*Positive numbers indicate net export, negative numbers indicate net import.

Termination of Basslink Services Agreement

- The termination of the Basslink Services Agreement (BSA) occurred on 10 February 2022.
- The decision to terminate the BSA was made by the Board of Hydro Tasmania following careful consideration of Hydro Tasmania's legal rights and commercial standing.
- Hydro Tasmania's basis for terminating the BSA was that BPL had breached, and remained in breach of, the BSA in several respects, including:
 - a) That the HVDC (High Voltage Direct Current) cable did not and could not meet the Minimum Technical Specifications required under the BSA;
 - b) BPL had not paid Hydro Tasmania the costs awarded by the Arbitrator (\$25.25m);
 - c) BPL had not paid Hydro Tasmania other amounts due under the BSA as a consequence of the reduced capacity of Basslink since delivery of the Arbitration Award (~\$45m); and
 - d) the insolvency of BPL.
- In addition, BPL had not satisfactorily progressed mitigating actions declared by the Arbitrator, which were required to be implemented by BPL to improve the operational performance of Basslink.
- The decision to terminate the BSA was subsequently disputed by the receivers of BPL and those disputes were settled in October 2022 as part of the transaction that saw APA purchase/recapitalize BPL.

What was the financial consequence of terminating the BSA?

- Overall the termination of the BSA was an improvement in net assets of \$174m for Hydro Tasmania.
- The impact of termination of the BSA has been accounted and reported in Hydro Tasmania's accounts for FYE 30 June 2022.

Changes in assets and liabilities

Item	2020-21	2021-22	Change	Explanation
Financial Asset (Includes the inter-regional revenues)	\$409m	0	(\$409m)	This represents the present value of the inter-regional revenues associated with the BSA until April 2031. These no longer accrue to HT given the termination of the BSA.
Financial Liability (Includes the Facility Fee adjusted for the Commercial Risk Sharing Mechanism, Availability Adjustment, insurance and Floating Interest rate delta components)	(\$583m)	0	\$583m	This represents the present value of the cost associated with the BSA until April 2031, including the facility fee (offset by the mark to market of the Floating interest rate delta) adjusted for any Availability Adjustments and the Commercial Risk Sharing Mechanism, and the ongoing insurance commitments. All these elements were terminated in February. For the purpose of annual valuations, the availability was assumed to be 100% (conservative assumption).
Net Position	(\$494m)	0	\$174m	

Recovery of money owed and impacts in 2022

- Upon the completion of the transaction which saw APA assume ownership of Basslink, Hydro Tasmania recovered \$109 million of the \$135m Hydro Tasmania claimed was owed by BPL.
- The \$135 million comprised:
 - Amounts owed following termination of the BSA, including a \$50m security deposit and approximately \$11m of inter-regional revenues that had accumulated prior to termination, as well as some accrued interest.
 - \$25.25m for the costs awarded to Hydro Tasmania from the 2020 Arbitrations.
 - Approximately \$45m of payments under the BSA for constrained operation of Basslink from the date of the Arbitration Awards to termination of the BSA on 10 February 2022. These payments were contested by BPL and BPL's receivers in the Federal Court litigation commenced by KPMG (as the original receivers of BPL) in February 2022.
- Hydro Tasmania considered it appropriate to discount the quantum of the full claim in light of these disputes, the litigation risk associated with recovery, the insolvency of BPL and the overall benefits to it of finally resolving all of the matters.

- The wholesale trading impact on Hydro Tasmania of not having an inter-regional hedge with Basslink over the 7½ month period was approximately neutral, with the reduction in costs from not paying a facility fee equivalent to a reduction in revenues derived from wholesale trading activities.

In the Annual Report 2022-23, it says “signing the new Basslink Network Services Agreement during the year had a positive impact on commercial operations” (p11). Can you explain this please?

- The Network Services Agreement (NSA) provided for a complete reset of commercial arrangements between Hydro Tasmania and Basslink Pty Ltd under APA ownership.
- Whilst some of the features of the terminated Basslink Services Agreement were carried forward, the NSA negotiation provided both parties an opportunity to achieve improved commercial alignment, agree the safe operating capacity of Basslink, and provide for clear risk allocation.
- An outcome already achieved from the NSA is the improved working relationship between the parties.

Was Hydro Tasmania responsible for BPL going into administration and receivership?

- No.
- Whilst the arbitrations and subsequent disputes impacted BPL financially, in particular because of the arbitrator’s findings being largely in Hydro Tasmania and the State’s favour, BPL’s financial position and inability to refinance was not caused by Hydro Tasmania.
- The Basslink contracts contained provisions intended to govern the respective rights of the State, Hydro Tasmania and BPL’s financiers through any receivership process and it would have been inappropriate for Hydro Tasmania to fail to take action as a consequence of BPL’s breach simply to avoid the risk of BPL entering into administration.
- Hydro Tasmania’s main objective throughout was to ensure the safe and reliable operation of the cable.

Did the termination of the BSA contribute to subsequent trading losses by Hydro Tasmania? / Did Hydro Tasmania make a loss due to having no BSA in place for part of the year?

- No.
- The wholesale trading impact on Hydro Tasmania of not having an inter-regional hedge with Basslink over the 7½ month period from termination of the BSA to commencement of the new network services agreements was approximately neutral, with the reduction in costs from not paying a facility fee equivalent to a reduction in revenues derived from wholesale trading activities.

In Hydro's view, did you have to terminate the BSA in order to get the settlement?

- Yes, we did.
- This was because, despite the arbitrators finding in favour of the state and Hydro Tasmania, BPL remained in breach of the agreements and the parties were unsuccessful in reaching agreement through commercial discussions under a standstill agreement.
- Hydro and the State were very motivated to ensure that Basslink was safely and reliably operated into the future, given the importance of the asset.

How much were Hydro Tasmania's legal costs?

2020 Arbitrations

- Unfortunately, it is rare for an Arbitrator to order the unsuccessful party to pay all of the successful party's costs following a dispute.
- The overall cost of the 2020 Arbitrations to Hydro Tasmania was approximately \$32.5m, and the Arbitrator ordered that BPL was liable to reimburse \$25.25m to Hydro Tasmania.
- The \$32.5m costs were for all matters directly related to the Arbitrations, including an allocation for Hydro Tasmania's internal labour on the matter.

Disputes related to the termination of the BSA – FY2022 and 2023

- Legal costs and costs for external advisors related to the disputes associated with the termination of the BSA and related contracts during FY2022 and FY2023 were a total of ~\$9.1m (– FY2022 ~\$5.5m and FY2023 ~\$3.6m).
- Hydro Tasmania retained advisors to support the business in relation to the disputes which led to the termination of the BSA and related contracts, its defence of the associated claims in the Federal Court; its negotiations with BPL and its owners KIT

(prior to receivership) and receivers (from November 2021 onwards); and its engagement in the receivership process itself as a secured creditor owed ~\$135m.

In September 2022, Labor asserted in Parliament that Hydro Tasmania had lost \$100 million from July to August 2022. Was that correct?

- This was an incorrect statement.

If more information is required:

- The July to August 2022 period was characterised by below average rainfall in a period of high prices across the National Electricity Market with high levels of market uncertainty.
- Hydrological risk is unavoidable for Hydro Tasmania and the impact of low rainfall was exacerbated by high price levels in this period.
- As a result, Hydro Tasmania's income was below budget over this period, as a result of low hydro generation to conserve storage levels. This negative impact to earnings has been more than recovered over the remainder of the financial year.

Key features of the new network services agreement

- APA acquired BPL on 20 October 2022.
- As part of the sale transaction, Hydro Tasmania and BPL entered into a Network Services Agreement (NSA) which commenced on 21 October 2022.
- Under the NSA:
 - BPL is obliged to make Basslink available to the market at its safe continuous capacity at a price of \$0 / MWh, unless otherwise instructed by Hydro Tasmania¹;
 - Hydro Tasmania pays a fee to BPL subject to Basslink being made fully available to AEMO for dispatch; and
 - Hydro Tasmania is entitled to receive the inter regional revenues in respect of the safe continuous capacity. (The inter regional revenues are the revenues which BPL receives from AEMO for delivering energy across the Bass Strait.)

¹ Absent such an agreement BPL can choose to submit bids which include prices for its transmission when it bids Basslink available to the market. It did this during the period when there was no contract in place with Hydro Tasmania. Such prices are taken into account by AEMO's dispatch algorithms and mean that flows only occur when the price differential between regions is higher than BPL's bid.

- The NSA entered in October 2022 was commercially priced. It is expected to deliver improved value for Hydro Tasmania relative to the BSA as a result the lower overall costs associated with the link compared to if the BSA had not been terminated.

If asked: When can Hydro Tasmania issue instructions?

- Under the Network Services Agreement (NSA) Hydro Tasmania may only instruct BPL to bid at a price other than zero in very limited circumstances when certain network constraints bind which are set out in an agreed Transport Bidding Protocol that is published on Hydro Tasmania's website.
- Hydro Tasmania expects those circumstances will arise very rarely.
- Hydro Tasmania will again publish a notice on its website if it issues any non-zero bidding instructions in future.

If needed:

- The last time non zero bidding instructions were issued by Hydro Tasmania to BPL in response to a constraint (under the since-terminated Basslink Services Agreement) was on 21 June 2013. It related to a market event caused by a fire at Yallourn Power Station control room and the full circumstances are detailed in a notice published on the Hydro website.

What is the safe continuous rating of Basslink? Why isn't it 500MW anymore?

- 500MW is the equivalent of 478MW at the receiving end of Basslink (due to losses in the cable).
- The Network Services Agreement entered into in October 2022 requires BPL to bid the asset available at:
 - 462 MW between August and December (inclusive); and
 - 447 MW between January and July (inclusive).
- The safe continuous capacity of Basslink was determined using thermal modelling and inputs which are consistent with the findings in the Arbitration Awards.

Prepared by /LT review By/Date:

James Pirie/Naomi Allchin, Kate McKenzie/Tim Peters/Erin van Maanen, October 2023

Timeline

Chronology of key developments between BPL and Hydro Tasmania (HT) related to the BSA disputes up to BSA termination

- 20 December 2015 – The Basslink interconnector fails.
- April and June 2016 – Failure inspections were carried out on retrieved sections of cable occurs in Milan, Italy and Kent, UK. The inspections were attended by representatives and consultants from BPL and HT.
- May and June 2016 – BPL delivers two reports from Cable Consulting International (CCI) covering the failure examinations in Milan.
- 10 June 2016 – The Basslink interconnector returns to service.
- August 2016 – HT rejects BPL’s claim that the subsea outage was a force majeure event under the BSA.
- 5 December 2016 – BPL delivers a further report from CCI and issues a media statement that its experts (CCI) were not able to identify the cause of the cable fault and that this should provide HT and State sufficient evidence to demonstrate cable outage was a force majeure event.
- December 2016 until August 2017 – HT sets off amounts owed in respect of the outage against facility fee payments due under the BSA. HT agrees to make good faith payments to BPL in order to cover BPL's financing and operation costs, without prejudice to HT's rights.
- 20 December 2017 – HT delivers three expert reports prepared by international engineering consulting firm DNV. HT issues a media statement that DNV had identified that the probable cause of the cable failure was thermal overstressing caused by BPL’s operation of Basslink. DNV’s reports include a recommendation that the cable’s capacity be limited to 500MW and identified other actions to mitigate the risk of a future cable failure.
- 22 December 2017 – BPL limits Basslink capacity to 500MW, but expressly rejects the findings in the DNV reports.
- 22 March 2018 – The State delivers a notice of dispute to BPL under the Basslink Operations Agreement (BOA). BPL issues media statement rejecting the State's claims.
- 26 April 2018 – The BOA dispute is referred to arbitration.
- 14 September 2018 – BPL delivers a notice of dispute to HT under the BSA claiming repayment of approximately \$31 million.
- 8 October – BPL's dispute under the BSA is referred to arbitration.

- 19 October 2018 – HT delivers a notice of dispute to BPL under the BSA for breaches by BPL of the BSA including in relation to Basslink’s failure to meet the Minimum Technical Specifications and to follow Good Electricity Industry Practice.
- November 2018 – HT's dispute under the BSA is referred to arbitration. The parties agree the three arbitrations would be heard together.
- 30 November 2018 – BPL issues CCI report ER 990 to the State and HT, rejects the findings of the DNV reports, and issues a media statement that the outage was “cause unknown” and was therefore a force majeure event.
- January 2019 – HT engaged Fugro to undertake a survey of the subsea cable route in the Bass Strait. The survey was commissioned because BPL refused to undertake its own subsea survey despite the lack of available information about the environmental conditions surrounding the subsea cable.
- 18 October 2019 – Following advice from DNV that the Basslink cable may be at risk of exceeding its temperature design limits if operated without constraint, HT commences instructing BPL to price capacity above specified flow levels at the market price cap in order to reduce likelihood of Basslink being dispatched above those levels. HT issues a media release addressing this issue.
- September and October 2020 – The arbitration hearings take place.
- 2 December 2020 – The arbitration awards are delivered to BPL, State and HT.
- 23 December 2020 – HT, the State and BPL enter into a standstill agreement in respect of the Awards with expiry date 28 May 2021. The Standstill Agreement preserved the parties' respective rights arising from the arbitration awards and provided a platform for commercial negotiations.
- 26 May 2021 – The standstill agreement is extended by agreement to 27 October 2021.
- 8 June 2021 – The owner of BPL, Keppel Infrastructure Trust (KIT), advises HT and the State that it had received a conditional, unsolicited proposal from APA to purchase BPL and requested that HT and the State support the potential sale including by meeting with APA and making available certain information in relation to the BSA. The APA proposal ultimately does not proceed.
- 27 October 2021 – The standstill agreement expires. HT issues a media release noting that:
 - HT and BPL have been unsuccessful in reaching agreement on a resolution with respect to certain outstanding matters related to the arbitrations;
 - BPL has not satisfactorily progressed the actions required to improve the cable’s operational performance and BPL has failed to pay Hydro Tasmania the costs awarded by the Arbitrator; and
 - following expiry of the Standstill Agreement, Hydro Tasmania will now progress its legal rights.

- 29 October 2021 – HT issues BPL with a default notice in respect of persisting performance defaults.
- 11 November 2021 – HT issues BPL with default notices in respect of persisting financial defaults.
- 12 November 2021 – Voluntary administrators and Receivers appointed to BPL and related entities.
- 22 November 2021 – HT issues BPL with a default notice in respect of BPL's insolvency.
- 15 November and 22 November 2021 – HT issues BPL's financiers with enforcement notices in respect of the above events of default.
- **10 February 2022 – HT terminates the BSA and related contracts.**
- 21 February 2022 – APA completes purchase of 100% of Basslink bank debt
- June 2022 – Finance Trustee (APA directed) replaces BPL receiver. KPMG retired and replaced by FTI Consulting (FTI).
- June 2022 – FTI commences sale process for BPL with an initial EOI and parties lodging non-binding indicative offers.
- July 2022 – FTI shortlists parties to proceed to binding offer/tender for purchase of BPL. Engagement of these parties with State and Hydro Tasmania commences
- September – FTI announces that it had selected APA as its preferred purchaser of BPL.
- October 2022 - (18 October) 2nd creditors meeting votes in favour of APA proposal to purchase and recapitalise BPL.
- October 2022 – APA Group (Australia) purchased Basslink Pty Ltd (BPL), the owner and operator of the Basslink electricity interconnector, along with its subsidiary Basslink Telecoms Pty Ltd.
- December 2022 – Engineering fix: fault-ride-through change implemented on Basslink control system.
- 19 May 2023 – Basslink Pty Ltd (BPL), as owner and operator of Basslink, formally commenced an application to the AER for regulatory conversion.
- Mid-July 2023 - BPL made its full application to the AER.

Onerous contracts

Possible issues: Was the government aware of the terms of the contracts? What makes up the onerous contracts? Will Hydro Tasmania be directed to have PPAs with any of the proposed new windfarms?

Key messages

1. Onerous contracts in FY2023 include gas contracts and contracts for Large Scale Generation Certificates (LGCs).
2. The onerous contracts that relate to the wind LGCs are for the full windfarm output, so the quantities will fluctuate due to wind variability. All other volumes are specific to each individual contract.
3. Length, terms and conditions involving third parties are commercial-in-confidence.
4. Average remaining term for the LGC offtakes is 4.5 years (four contracts), of which two contracts are currently onerous (the last contract expires in 2030).
5. The earliest LGC offtake contract is from 2012, the latest is 2017 (the earliest onerous contract started in 2012).

Background

- Unless acting in accordance with a Ministerial Direction to perform a Community Service Obligation, the Hydro Tasmania Board is required to act commercially in the best interests of the corporation.

Was the Government aware of the terms of the contracts when they were entered into?

- The offtake arrangements entered were based on sound commercial decisions and initially not onerous, but as time has passed the forecast value for LGCs has fallen, causing a degree of onerousness.
- Gas contracts were required as long term insurance for energy security/droughts
- The Granville Harbour PPA was a Community Service Obligation and is not currently onerous.

Will Hydro Tasmania be directed to have PPAs with any of the proposed new windfarms?

- I won't be speculating on hypothetical scenarios.

Prepared by/HLT review/Date

Elton Judd, Tim Peters, September 2023

Buy local and consultant spend

Possible issues: How much did Hydro Tasmania spend in Tasmania, why was so much spent on consultants?

Key messages

1. The Hydro Tasmania Group spent a total of \$230 million on suppliers in FY2023 (\$213 million in FY2022).
2. Of the \$230 million total spend, \$216 million was spent by Hydro Tasmania and \$14 million by Momentum Energy.
3. Buy Local continues to be a key consideration for Hydro Tasmania procurement, with the majority (64%) of Hydro Tasmania spend going to Tasmanian suppliers in FY2023.
4. Hydro Tasmania's spend on local suppliers for FY2023 was \$137.5 million, up from \$116.2 million FY 2022.
5. Consultancy spend was across a number of areas including discrete and specialist legal advice, financial, IT, engineering and environmental services, with the largest spend of \$5.7 million being for the provision of engineering and geotechnical services (mostly pertaining to Battery of the Nation including Tarraleah and Lake King William).

Background

Proportion of spend on local suppliers

- 64% of Hydro Tasmania spending was paid to Tasmanian suppliers. This is up from 62% in FY2022.
- 25% of total spend went to suppliers based on mainland Australia, relating to national suppliers and consultancy services (e.g., specialist legal advisors, IT services).
- 12% went to overseas suppliers, mostly relating to the supply of specialised generating equipment.

- We continue to engage with key local suppliers for capital projects with a focus on upgrading generating assets and technology infrastructure.
- Momentum Energy (our mainland retailer) spent 97% of its spend on mainland Australia suppliers (the remainder were overseas or Tasmanian based).

Total payments to consultants for FY2023

- A total of \$18.7 million (ex GST) was spent on consultants, with the largest spending in the areas of:
 - Engineering (~\$3.7 million) - engineering consultancies, largely around modernising and maintaining our assets so they can generate clean, reliable power for decades to come (2022: ~\$1.5 million).
 - Legal Advisors (~\$3.5 million) - for the provision of specialist legal advice on a number of matters across the Hydro Tasmania group, the majority of which related to the finalisation of the Basslink arbitration and set up of the new Network Services Agreement (2022: ~\$3 million)
 - Financial and expert advisors (~\$1.8 million) – the majority of this spend was for professional assistance with Information Technology and Internal Audit requirements. The remainder was related to general financial services (2022: ~\$1.4 million).
 - The remainder was spent on compliance and risk, environmental, geotechnical, heritage, human resources, management, safety, survey and strategic advisory consultants.

Consultants engaged for \$50,000 or less (\$1.5 million total)

- Consultants receiving less than \$50,000 were comprised of a variety of disciplines including:
 - Engineering
 - Marketing
 - Financial
 - Strategic
 - Environmental
 - Legal
 - Information Technology.

Applying the Buy Local Guidelines

- Hydro Tasmania endeavours to engage local experts where appropriate, ensuring we adhere with the Government's Buy Local Guidelines for GBEs.
- Hydro Tasmania's investment in its hydro generation portfolio provides substantial opportunities for engagement of local contractors and professional service providers.
- National or international specialists are engaged where Hydro Tasmania needs specialised legal, commercial, industrial or engineering advice and this is not able to be adequately sourced locally.

Prepared by/LT review by/Date: Yvonne Marschke/Klimt Donohoe, Tim Peters, August 2023

People

Board and associated spend

Possible issues: Travel expenses, where Board members live.

Key messages

1. Hydro Tasmania's Board comprises Directors with a diverse range of skills, experience, qualifications, expertise and vision to enable them to carry out their responsibilities of oversight and management of the organisation.
2. Hydro Tasmania is conscious of the economic and environmental impact of travel and actively encourages the minimisation of travel and use teleconference where practical.
3. Hydro Tasmania's new Chairman Richard Bolt commenced on 1 July 2023 after the retirement of Grant Every-Burns on 30 June 2023. Mr Every-Burns was a director at Hydro Tasmania for 11 years, nine of which he served as Board Chair.

Background

Appointment of interstate members

- Hydro Tasmania endeavours to ensure that the Board includes directors who are Tasmanian or have connections with the State.
- In considering applications during a Director selection process, consideration is given to experience in the electricity industry, the key governance and technical skills required by the Board at the time of the recruitment process as well as connections to the state generally.
- *(If asked)* Interstate Directors are entitled to receive a travel allowance of \$250 when travelling interstate to attend meetings.
 - This allowance was authorised by the Minister back in December 1997.

Regions in which Board members currently reside (as at 23 August 2023)

Name	Position	Expiration of current term	Region
Richard Bolt	Chairman	July 2026	Victoria
Grant Every-Burns*	Former Chairman	June 2023	New South Wales
Kenneth Hodgson*	Former Director	September 2022	Victoria
David Middleton	Director	September 2025	Victoria
Carlo Botto	Director	August 2024	New South Wales
Selina Lightfoot	Director	August 2024	Victoria (raised in Tasmania)
Helen Galloway	Director	August 2024	South (Tasmania)
Ian Brooksbank**	Chief Executive Officer	July 2025	South (Tasmania)

*previous board member – included as relevant to FY2022/2023

**not a member of the board but included as the CEO of Hydro Tasmania

Travel expenses for Directors (airfares and accommodation)

Description	Cost (\$)
Flights ¹	\$26,426.64
Accommodation ²	\$21,728.87
Booking fees	\$617.10

Notes:

1. Flight costs incurred for out of state directors to attend Board meetings and other engagements requiring director attendance.
2. Accommodation costs relating to travel undertaken by out of state Board members, excluding meals.
3. Ms Galloway is currently the only Board Member who resides in Tasmania.

Prepared by/HLT review/Date

Anita Menzie, Kate McKenzie, August 2023

Energy in Tasmania

Energy availability in Tasmania

Possible issues: Tasmania's energy availability and Hydro Tasmania's Role. Should Hydro Tas be expected to develop all new supply generation?

Key messages

1. Tasmania maintains a robust renewable energy portfolio, ensuring energy security for its residents and industries.
2. Hydro Tasmania's approach to energy generation is strategic, prioritising sustainable developments and long-term reliability. This will come in the form of long-duration storage, as lower cost renewable sources like wind and solar increasingly develop in the market.
3. While trading plays a key part in Hydro Tasmania's operations, our core business remains as being a custodian of the State's water resource and a sustainable energy generator.
4. We manage varying rainfall levels over time with a focus on asset flexibility that supports a diverse range of renewable energy sources and ensure Tasmania remains at the forefront of sustainable energy practices.
5. There are many developers progressing renewable energy projects across Tasmania. Hydro Tasmania is investing in the flexibility of our hydro assets to complement these projects.
6. By focusing on the State's water resource being used for energy insurance and capacity services, we facilitate the opportunity for new renewables development

Background

Is Tasmania running out of energy?

- Tasmania as a state is not out of energy. Tasmania's energy landscape is dynamic, driven by both renewable sources and imports. While demand has increased due to various factors such as residential and business electrification, the state has consistently managed its energy needs efficiently, with total demand being roughly equal to Tasmanian renewable supply (in an average inflow year).

- Balanced supply and demand is the most desirable state for market efficiency.
- Just as there are prospective developments for new demand (such as new industrial consumers), there are developments for new generation supply options.

If needed:

- As part of Hydro Tasmania's commitment to fostering a sustainable and renewable energy future, our strategic focus is on growing hydro capacity, not just energy, to complement the expansion of low-cost renewables like wind and solar.
- Our approach is to utilise the State's hydro resources in a manner akin to batteries, using its inherent flexibility and storage potential rather than just generation.
- This achieves the more value for the State's water resource, as well as creates space for lower cost energy to run.
- Hydro Tasmania is actively involved in negotiations with major industrials to facilitate the emergence of new renewables in Tasmania, the specifics of these discussions remain confidential.
- Our ongoing work in developing firming contracts, completely new to the Australian energy market, is one example of how Hydro Tasmania is playing a critical role in helping renewables be developed.

Why hasn't Hydro built more generation if we knew we were running out?

- Hydro Tasmania's strategy prioritises sustainable and efficient energy generation.
- Tasmania as a state is not out of energy. Tasmanian energy production is roughly aligned with its demand. As demand grows in the future, more energy will be needed and can be met by a combination of new generation projects and imports where needed.
- We are investing in increasing the capacity and flexibility of our existing assets and progressing the Battery of the Nation projects. The investments will support demand growth in Tasmania and together with new wind and interconnection will allow Tasmanians to benefit from the lowest cost combination of energy generation (compared to alternatives).
- We are progressing these investments prudently balancing the level of investment with the risk and level of certainty in the market need.
- Hydro Tasmania is amongst many other generators looking to invest in Tasmania's renewables development opportunity.
- Building new generation infrastructure is a significant commitment that requires careful planning, significant new transmission infrastructure, environmental

considerations, and financial feasibility assessments and there are a number of wind farms already proposed for Tasmania.

- As variable renewable energy, such as wind and solar, increases, Hydro will play an important role to support the State's growth by filling the gaps to meet the profile of energy demand.
- New generators can take the opportunity to enter the market, creating development opportunities and competition that benefits the market.
- Our firming services have been designed to facilitate new wind and solar developments, with the intention of providing a fully delivered electricity option for new demand.

Is Hydro more a trader than an energy generator?

- Hydro Tasmania actively participates in energy markets to optimise resources and revenues.
- Trading allows us to manage risks and capitalise on market opportunities. This not only benefits Tasmanians on a daily basis, but also attracts and sustains industries in our State, reinforcing our commitment to supporting the energy needs of the state and economic growth.
- However, our primary role remains energy generation and ensuring Tasmania's energy security.

Government Business Enterprises Act 1995, Ministerial Charter, November 2012, Hydro Tasmania:

2. PURPOSE AND STRATEGIC EXPECTATIONS

2.1 Principal Purpose

- The principal purpose of Hydro Tasmania is to efficiently generate, trade and sell electricity in the National Electricity Market (NEM).

2.2 Principal Objective

- Pursuant to legislative requirements, the Portfolio Minister and the Treasurer expect Hydro Tasmania to :
 - be a successful business by operating in accordance with sound commercial practice and as efficiently as possible; and
 - achieve a sustainable commercial rate of return in accordance with its corporate plan, having regard to the social and economic objectives of the State, as agreed in writing with the Portfolio Minister and the Treasurer.

Energy Prioritisation Framework

Possible issues: Is Tasmania is running out of energy? And can't meet demand of current and future MIs?

Key messages:

1. Australia manages the transition away from fossil fuels, Tasmania has an enviable head start as a state 100 per cent self-sufficient in renewable energy.
2. Tasmanian industry has been powered by renewable energy for almost a century and it will continue to underpin industrial growth.
3. Currently, energy demand and supply in Tasmania is in balance.
4. To help meet the growing demand, the Tasmanian Government has a bold vision to maximise the State's renewable energy capacity.
5. This includes major initiatives such as Marinus Link, Battery of the Nation, the Tasmanian Renewable Energy Target, and the North-West Transmission Developments.
6. Hydro Tasmania has an important role in supporting this growth, including through working with the state government to develop a framework for how Hydro Tasmania will manage requests for contracts, including firming, sustainably and in the best interests of the State.
7. Hydro Tasmania continues to work with ReCFIT to develop the Framework as a priority.
8. Once finalised, it is intended the Framework will be authorised under section 51(1) or section 88 of the *Competition and Consumer Act 2010* (Cth) (Authorisation).

9. To ensure that Hydro Tasmania does not pre-empt the final outcome of the Framework or the terms of Authorisation, Hydro Tasmania has published contracting guidelines which can be found on its website.

Background

- Note that this matter is about the allocation of financial contracts (energy contracts or firming) made available by Hydro Tasmania, not physical supply.
- It is not indicative of any energy shortage or energy security concerns in Tasmania.
- Hydro Tasmania recognises that major industrial customers are integral to the state's energy landscape.
- The energy prioritisation framework aims to provide continuity and predictability of how future developments will be managed, enabling these customers to plan confidently.
- For emerging developments such as hydrogen facilities, the framework presents an opportunity to participate in Tasmania's energy system in a manner that is both methodical and sustainable.

Contracting Guidelines published on Hydro Tasmania's website

- Hydro Tasmania is working with ReCFIT to develop an Energy Prioritisation Framework (Framework) to guide future energy contracting.
- While this work is underway and until Authorisation protection is in place, Hydro Tasmania has published its Electricity Contracting Guidelines on its website.
- The aim of this is to publicly declare a clear position statement so every interested party knows where it stands, and what Hydro will and won't do during this transition period.

Hydro Tasmania's Electricity Contracting Guidelines

A. Hydro Tasmania has a finite capability to contract with Tasmanian energy retailers and large industrial loads, and to provide firming prior to Marinus Link being operational.

B. Hydro Tasmania is working with the Tasmanian Government to finalise a framework for prioritising and allocating this resource in a way that is sustainable for Hydro Tasmania and in the best interests of the State (the Framework).

C. Once finalised, it is intended the Framework will be authorised under section 51(1) or section 88 of the *Competition and Consumer Act 2010* (Cth) (Authorisation).

D. To ensure that Hydro Tasmania does not pre-empt the final outcome of the Framework or the terms of Authorisation, Hydro Tasmania is applying the following principles to guide discussions with existing and potential customers:

1. Hydro Tasmania will continue to deal with Tasmanian energy retailers on the basis it has been dealing with them to date.
2. Hydro Tasmania will negotiate potential new contracts with existing large industrial energy customers whose current contracts expire on or before 31 December 2025 on the basis that:
 - a. any potential transaction will be subject to, and negotiated terms will depend on the detail of, the Framework and the terms of Authorisation; and
 - b. negotiations do not signal any representation, and will be conducted on the basis that neither party is relying on any expectation or assumption, that any potential transaction will be executable under the Framework and the terms of Authorisation.
3. Hydro Tasmania will negotiate potential firming with either loads or generators where that firming:
 - a. facilitates an existing load contracting with new Tasmanian variable renewable generation; and
 - b. where this does not reduce Hydro Tasmania's capability to contract or provide firming.
4. Hydro Tasmania will negotiate potential firming with either loads or generators (new or existing) not covered by paragraphs 2 and 3 on the basis that:
 - a. any potential transaction will be subject to, and negotiated terms will depend on the detail of, the Framework and the terms of Authorisation; and
 - b. negotiations do not signal any representation, and will be conducted on the basis that neither party is relying on any expectation or assumption, that any potential transaction will be executable under the Framework and the terms of Authorisation.
5. Other than as provided for in paragraphs 1 and 3, any transaction outside the terms of the Framework and the terms of Authorisation will be subject to individual authorisation.
6. All transactions provided for in paragraphs 2 to 5 are also subject to Hydro Tasmania Board approval.

Prepared by/LT review By/Date: Nick Sallmann, Vedran Kovac, November 2023

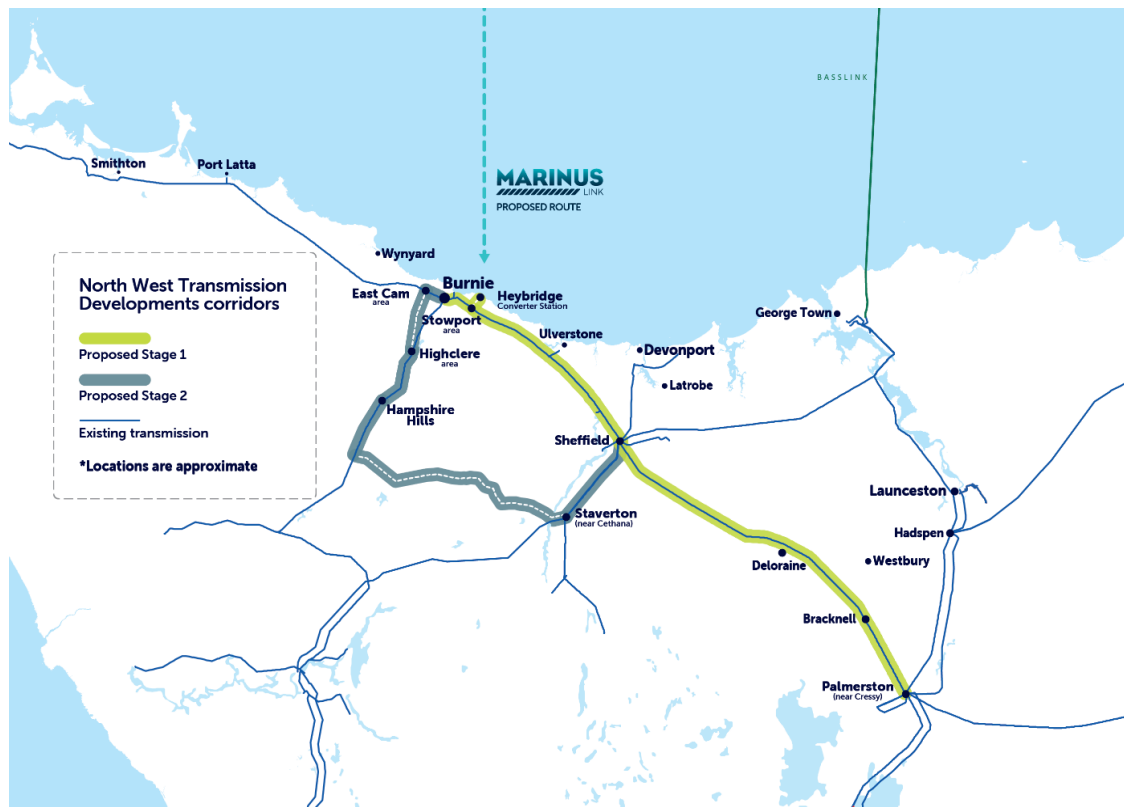
North West Transmission Development (NWTD)

Key messages

1. The North West Transmission Development has been rescoped in line with the rescoping of the Marinus Link project.
2. The rescoping of the NWTD will not impact the Tarraleah Redevelopment.
3. Cethana pumped hydro project is currently planned to align with further interconnection beyond the first Marinus Link cable, with its transmission connection to the Staverton substation.
4. This currently falls within stage 2 of the NWTD project.

Background

Figure 1: Revised NWTD delivery



Gas generation in Tasmania

Possible issues: Do we use gas for profit in Tasmania? How can we claim to be 100% renewable if we use gas? Is gas an option for growing demand from major industrials (MIs)?

Key messages

1. Historically, energy generated from gas provided baseload power for Tasmania from the Bell Bay Power Station and Tamar Valley Power Station. But since then, Tasmania's energy mix has changed.
2. Most significantly, wind farms have been added to the State's energy mix, and Tasmania's energy demand is now met by hydro and wind generation.
3. On average, Tasmania is self-sufficient in renewable electricity.
4. Energy generated through the only remaining Hydro Tasmania gas-fired power station, Tamar Valley Power Station, makes up less than one per cent of Tasmania's energy.
5. As a resource, gas will become increasingly scarce.
6. Tasmania's history is as a pioneer in renewable energy, and it is our vision for the future.
7. Gas generated energy from Tamar Valley Power Station will be maintained for specific scenarios, such as a contingency for extreme events, such as droughts, for power system security; and on occasion when financially feasible in managing Hydro Tasmania's broader portfolio.

Background

Does Hydro Tasmania use gas to create energy for profit in Tasmania?

- Tamar Valley Power Station (TVPS) will remain part of Hydro Tasmania's portfolio for specific scenarios, such as a contingency for extreme events; for power system security; and to be run occasionally when financially feasible in managing our broader portfolio.

- In situations where careful management of water storages aligns with viable economic opportunities, TVPS could be activated for electricity generation.
- However, due to high gas costs influenced by international commodity markets, these occasions will become less frequent.

How can Tasmania claim to be 100% renewable if we use gas?

- Tasmania's energy demand of ~10.5TWh is now on average met by hydro and wind energy. We have the capability to meet Tasmania's energy demands through renewable energy.
- Energy generated by gas generation through TVPS makes up one per cent or less of the total energy generation.
- Since the commissioning of new wind generation in 2020, Tasmania's Energy Security Risk Response Framework now assumes only a small amount of gas generation (7MW on average for a Tasmanian power system which averages over 1,200MW of demand).

Is gas an option to support the growing demand of MIs?

- For major industrial customers, renewable energy offers a more consistent (when firmed by hydro), cost-effective, and environmentally friendly energy source than gas.
- Given the current energy market dynamics gas generation is becoming less favourable for a range of reasons, including:
 - Cost-effectiveness:
 - Variable renewable energy, when firmed by hydro, is a more economical choice than gas; and
 - The cost of gas has risen considerably on the international commodity market which drives the domestic cost of gas up.
 - Supply consistency:
 - Major industrials require a consistent and reliable power source. Into the future, gas will become an increasingly scarce resource. In contrast, the combination of wind, firmed by hydro, offers a more consistent output.
 - Environmental considerations:
 - Major industrials, like many sectors today, are reducing their carbon footprint.
 - Asset sustainability:

- Major industrial businesses typically require long-term energy supply certainty. While the Tamar Valley Power Station will remain part of Hydro Tasmania's asset portfolio in the near term, the assets would reach end of life in the long term.

Refer to [paper 29. Tamar Valley Power Station](#) for specific information on the asset.

Prepared by/HLT review/Date

Nick Sallman, Vedran Kovac, September 2023

Tamar Valley Power Station

Possible issues: CCGT status changing from a three month to a 10-day return to service, use of TVPS for profit

Key messages

1. Hydro Tasmania continues to review the cost model of the Tamar Valley Power Station with a view to reducing cost where practicable, while maintaining the required level of service.
2. As a result of market factors including highly variable electricity prices, increased wind energy, negative prices during the day due to solar energy and increased gas prices, there has been no operation of the 208 MW combined-cycle gas turbine since May 2019.
3. The 178MW capacity open cycle gas turbine units have been running for power system security and on occasion, when financially feasible, in managing Hydro Tasmania's broader portfolio.
4. Based on current gas and electricity market price variability, Hydro Tasmania has engaged works to reduce the Tamar Valley Power Station combined cycle gas turbine recall time to 10 days (previously 3 months) so it is a readily available source of energy supply.
5. This approach is intended as a risk mitigation at this stage, and to enable commercial running opportunities should they emerge.
6. With Battery of the Nation, Tasmania may one day have an abundance of hydro, wind and solar energy (as well as storage methods) well beyond its own security needs. At this stage, TVPS remains a contingency for extreme events, like droughts.
7. Hydro Tasmania and Tasmanian Gas Pipeline have an agreement for gas transportation for the Tamar Valley Power Station from 1 January 2022 for five years.
8. Electricity generated through the Tamar Valley Power Station makes up less than one per cent of Tasmania's energy.

Background

Combined-cycle gas turbine operation

- The Combined Cycle Gas Turbine (CCGT) plant provides base load generation capability, with the more complex combined cycle configuration generating electricity at higher efficiency (lower running costs) and lower carbon intensity. As a consequence of the additional complexity, the plant is less flexible.
- The CCGT unit has not run since 2019.
- During this period, the combined cycle unit has been kept in dry storage, capable of running only with several weeks' notice.
- In September 2022, work commenced to reduce the CCGT's return to service to 10-days. This is due to the unprecedented NEM-wide spot market volatility throughout June to August 2022 heightening Hydro Tasmania's risk awareness, requiring a strategic balance between economic benefits and energy security risk.

Status of Tamar Valley Power Station open-cycle gas turbine units

- The Open Cycle Gas Turbines (OCGT) plant provides flexible power generation, in response to system strength needs and specific scenarios where it is financially feasible.
- OCGT peaking plant running is not an indication of energy shortage.
- This flexibility comes at the expense of lower efficiency (higher running costs).

Selling the Combined-cycle gas turbine (CCGT)

- There was extensive comment on steps taken by Hydro Tasmania in 2015 to explore the possible sale of the TVPS combined-cycle unit.
- Hydro Tasmania did not receive Ministerial approval to dispose of the combined cycle unit, and Hydro Tasmania's Board did not consider a specific proposal for its disposal.
- Following the energy supply challenge in 2015, the Public Account Committee and the Energy Security Taskforce have undertaken extensive inquiries into the role of the TVPS.
- TVPS is just one component of Tasmania's energy security (including both the CCGT, and 4 OCGT units), hydropower, wind and the Basslink interconnector.
- Hydro Tasmania may run the CCGT, as required, based on market factors and energy security needs.

Gas Contracts

- Hydro Tasmania has contract arrangements for gas commodity if required.
- This gas commodity could be bought via contract and/or spot markets. It should be noted that as at 2023 high gas costs, influenced by international commodity markets, make occasions of using gas for energy rare, and are rather reserved for extreme drought periods in Tasmania.

Annual cost of maintenance (OPEX)

	Operational Expenditure for Maintenance (Actual)	Operational Expenditure for Maintenance (Budget)
FY2023	\$6.5 million	\$6.4 million
FY2024	n/a	\$6.5 million

Employees

- 25 full-time employees currently work at TVPS (direct and contract).
- No redundancies occurred in FY2022.

If asked if it is still needed under Battery of the Nation/still needed in general

- Tamar Valley Power Station currently forms part of Tasmania's energy generation mix. The units are seldomly run, and its role in Tasmania's energy system continues to be assessed as the market changes.
- The Monitor and Assessor (Tasmanian Economic Regulator) conducted a review of the Energy Security Risk Response Framework in September 2021 and showed that increased energy supply in Tasmania via the completion of two new large scale wind farms - the Granville Harbour Wind Farm and the Cattle Hill Wind Farm, resulted in changes to the framework.
- The Monitor and Assessor also determined that gas capacity and the level of gas generation should be updated based on recent trends.
- This resulted in a reduction in the gas generation assumption from 1752 GWh to 67 GWh.
- It is unlikely TVPS will be required to run to support current load in the foreseeable future. In the unlikely event where storages are below the High Reliability Level (HRL) or/and there is a risk to energy security it could be called upon at short notice to supplement storages. There are several other options available to increase thermal

generation capacity in the state within the 2-4 month window, such as the diesel back-up units used temporarily in 2016.

- The Framework appropriately addresses the energy security needs of Tasmania. The current hydro generation portfolio of the state (not inclusive of any thermal generation), in combination with future developments in transmission assets and the ability to bring up thermal generation on short notice, provides sufficient confidence in managing an HRL recovery plan in the rare circumstances one may be required.
- By maintaining Total Energy in Storage (TEIS) above the HRL profile, Tasmania has available at least 6 months of uninhibited energy supply (this includes a 6-month Basslink outage).
- For other information on gas/profit and gas/renewables – see [paper 28, Gas generation in Tasmania](#)

Prepared by/HLT review/Date

Scott Geappen, Jesse Clark, September 2023

Hydrogen

Possible issues: Why can't Hydro provide the baseload energy supply?
Why only firming?

Key messages

1. With our status as Australia's premier producer of renewable energy, Hydro Tasmania is strategically positioned to facilitate emerging Tasmanian industries in harnessing the advantages of clean energy.
 2. Currently, Hydro Tasmania boasts an average generation of 9 TWh annually. Combined with evolving wind generation capabilities, this ensures that Tasmania remains self-reliant in renewable energy.
 3. In an average year Tasmania has balanced supply/demand.
 4. Significant increases in demand from major industrials will require either new supply or interconnector imports.
 5. Prospective sectors, notably hydrogen and other energy-intensive domains, will pivot towards new renewable energy sources.
 6. Hydro Tasmania's core role into the future will be to use our dispatchable energy to firm variable renewable energy – to fill the gaps for wind and solar.
 7. This is the invaluable role of hydropower – ensuring stability through firming capabilities.
- Questions on the Tasmanian Government's Hydrogen Policy – refer to the Minister

Background

Why can't Hydro provide the baseload energy supply to hydrogen proponents?

- Hydro Tasmania's total annual generation is based on managing annual rainfall, which is contracted to existing Tasmanian demand.
- Individual hydrogen facilities can be up to 25% of total Tasmanian demand alone and will need to facilitate additional supply into the market as rainfall is limited.

How is Hydro Tasmania helping the hydrogen industry in Tasmania?

- The unique advantage of hydropower, besides its renewable nature, is its dispatchable characteristic. This ensures it can activate or deactivate as per demand, filling the void during wind downtimes and guaranteeing that upcoming industries benefit from a consistent, clean energy supply. This pivotal service is termed 'firming.'
- By offering firming, Hydro Tasmania accelerates the growth of Tasmania's hydrogen industry and the novel wind energy propelling it.
- Advancements in interconnection, particularly through the Marinus Link, will provide greater access to variable renewable energy, to which Hydro Tasmania can provide a firming role, empowered by the modernisation of Tarraleah and the innovation in pumped hydro.

Is Hydro Tasmania working with any hydrogen proponents at the moment?

- Hydro Tasmania is engaging with proponents keen on advancing hydrogen projects in Tasmania.
- These proponents span diverse energy needs and target markets.
- An increasing number are contemplating alliances with other sustainable energy providers.
- Our focus is on providing a firming role to renewable energy.
- While we are exploring several promising partnerships, the specifics remain commercially sensitive and confidential.

Prepared by/HLT review By/Date: Nick Sallmann, Vedran Kovac, August 2023

Tasmanian electricity pricing

Possible issues: “Delinking/exiting from the NEM”. Wholesale price increases.

Key messages

1. The Tasmanian Economic Regulator approved on average, a 9.51% increase in Aurora Energy’s standing offer electricity prices under regulated tariffs for residential and small business customers.
 2. This applies from 1 July 2023 to 30 June 2024.
 3. This was substantially less than the Victorian price increase approved through the Victorian Default Offer (VDO) of 25.2%.
 4. The wholesale electricity price component used as an input to the calculation of standing offer prices is reflective of market prices and is calculated in accordance with the Tasmanian Economic Regulator’s Guideline, independently of Hydro Tasmania.
 5. The wholesale electricity price component used as an input by the Regulator for calculating standing offer prices for FY2024 is \$101.15/MWh. In FY2023 the wholesale price was \$81.82/MWh.
- Also refer to Hydro Tasmania’s submission to the Leg Co Inquiry on Energy Prices in Tasmania.
 - Questions regarding “Delinking/exiting the NEM” are to be answered by the Minister.
 - Questions regarding energy bill relief or price caps are to be answered by the Minister.
 - Questions regarding prices for residential customers is a matter for Aurora.

Background

How are electricity prices calculated?

- The Tasmanian Economic Regulator calculates the Wholesale Electricity Price (WEP) in accordance with section 40AB of the *Electricity Supply Industry Act 1995* and the method set out in the relevant Standing Offer Price Guideline.
- The method uses the weekly load following swap prices calculated in accordance with the Wholesale Contract Regulatory Instrument (WCRI).
- However, the Government previously determined wholesale prices through a Wholesale Electricity Price Order. The Treasurer determined the WEP by a Wholesale Electricity Price Order for 2017-18, 2018-19 and 2019-20. The legislation that gave this power has since expired.
- Standing Offer prices increased, on average, by 9.51% for FY2024. The key driver for the increase was higher wholesale energy costs, which are 24.9% higher than in FY2022-23 and account for 8.18% of the overall 9.51% average price increase.
- For FY2024, the wholesale electricity cost makes up ~40% of total customer bills.

How will Battery of the Nation projects impact consumer power prices?

- Tasmania's low-cost energy future will be the combination of wind and solar (the cheapest new generation sources) firmed by hydropower. That's more cost-competitive than wind and solar backed by batteries, gas, or new hydro developments anywhere else.
- Additional interconnection will support lower wholesale energy prices in Tasmania. This is backed up by independent analysis showing wholesale electricity prices in Tasmania are likely to be lower than otherwise with additional interconnection.
- Wholesale energy generation is one of three main costs that make up consumer power bills – the others being costs for networks and retail services.
- Marinus Link will also allow Tasmania to benefit from low import prices in periods of high wind and solar output on the mainland.
- Cheaper production means lower wholesale energy costs and that puts less pressure on power bills in future.
- It's recognised by Australia's energy market operator that Marinus Link will improve access to Tasmania's clean energy generation in the future (like wind farms) and it will be cheaper to produce than anywhere else in the country.

If additional interconnection means lower wholesale energy prices, what will that mean for Hydro's profits?

- Additional interconnection would change the market.
- Additional interconnection will unlock the opportunity for Hydro to maximise the latent capacity that we currently have in the existing hydro assets.
- Further interconnection will improve our ability to access cheap variable renewable energy from the mainland. By importing that cheap energy when its plentiful, we can store our water for later.
- Then when prices are high, we can generate using our hydro assets.
- This new market will enable us to maximise the value of our capacity, both in our current assets, and future assets, like Tarraleah and Cethana, while also lowering average prices.

How do Tasmanian prices compare to the mainland?

- On the 25 October 2023, the independent Tasmanian Economic Regulator released its [*Comparison of Electricity and Gas Prices Available to Small Customers in Australia*](#).
- This report confirms that Tasmania has the lowest, or among the lowest, regulated electricity prices in Australia.
 - Tasmania's regulated residential tariffs result in lower bills than under regulated tariffs in any other state or territory at typical Tasmanian consumption levels. As does the regulated time-of-use tariff available to Tasmanian small businesses.
 - Tasmania's regulated general usage tariff for businesses also results in lower bills than in other states or territories at average Australian consumption levels.

(Note: The Report compares electricity and gas prices available to small customers in Tasmania and the rest of Australia based on tariffs at 1 September 2023).

Energy Price Relief Plan

- The Australian and State and Territory Governments agreed to implement the Energy Price Relief Plan in December 2022.
- The Plan included:
 - \$3 billion in energy rebates to eligible households and small businesses (co-funded on a \$1 for \$1 basis by the Australian and State/Territory Governments)

- A temporary \$12/GJ gas cap to apply to uncontracted gas and the introduction of a mandatory gas code of conduct.
- A temporary \$125/tonne coal cap to apply to contracted and uncontracted coal (for electricity generation in NSW and QLD).
- The energy rebates available under the Energy Bill Relief Fund vary across states and territories.
 - In Tasmania the total bill relief will be:
 - \$500 per eligible household (\$250 per year over two years).
 - \$650 per eligible small business (\$325 per year over two years).
 - Momentum Energy is working with the Tasmanian Government to administer the energy rebates to eligible households and small businesses on the Bass Strait Islands.

Please see more information at [paper 20. Renewable Energy Dividend](#)

Prepared by/HLT review/Date

Helen Gilmore, Erin van Maanen, August 2023

Major industrial customers

Possible issues: Rio Tinto/Liberty Bell Bay contract extension. Norske Skog request for additional contract volume. Supply/demand balance. Hydro Tasmania saying it has no energy available.

Key messages

1. In an average year Tasmania has balanced supply/demand.
2. Significant increases in demand from major industrials will require either new supply or firming imports from Marinus Link. Hydro Tasmania is working with the industrial consumers for mutually beneficial outcomes, as contracts will be ensured for retailers of the residential and business consumers under the contract prioritisation framework.
3. Major Industrial contracts are commercial in confidence. They are priced so they are commercial to Hydro Tasmania and take into account the customer's size, load shape and any system security services provided.

Background

- Hydro Tasmania has a direct relationship with the large users of electricity in Tasmania (the major industrial users).
- Collectively, these businesses consume approximately 55% of Tasmania's electricity.
- Because of their large electricity usage, Hydro Tasmania has negotiated individual contracts with the major industrial users.
- The contracts vary between different customers depending on the nature of the major industrial's operations.

Contract dates for MIs

Major Industrial	Operation	Contract End Date
Norske Skog	Paper mill – News Print and Light Weight Coated (catalogue)	31-Dec-30
Nyrstar	Mineral processing – Zinc metals	Not Public
Rio Tinto	Mineral processing – Aluminium	31-Dec-25
Liberty Bell Bay	Mineral processing – Ferro/Silica manganese	31-Dec-24

Rio Tinto

- Rio Tinto’s current contract ends in 31 December 2025.
- Negotiations on Rio’s contract extension started in mid-2019 before pausing in early 2021 for commercial reasons.
- In February 2022 Rio Tinto and Department of State Growth signed an MoU intending to explore the future role of Rio Tinto in Tasmania.
- The MOU documents Rio Tinto and the Tasmanian Government’s desire to undertake investigations and discussions about certain matters including Rio Tinto’s potential to expand operations in Tasmania.
- Hydro Tasmania is not a party to the MOU.

ONLY IF ASKED – will Rio Tinto’s contract be extended?

- The MOU does contemplate Rio Tinto and the Government’s desire to discuss or investigate a potential contract extension to 2030, including noting that the Government may facilitate discussions with Hydro Tasmania.

If pushed on contract detail:

- The specifics of the existing contract and any discussions Hydro Tasmania and Rio Tinto might be having are confidential.
- The MOU does not oblige anyone to enter into any contract, agreement, commitment of other arrangement in relation to its subject matter.

Liberty Bell Bay (formally TEMCO)

- Liberty Bell Bay's current contract ends 31 December 2024.
- Negotiations on potential contract extensions to Liberty Bell Bay's contract have commenced.
- The specifics of the existing contract and any discussions Hydro Tasmania and Liberty Bell Bay might be having are confidential

Norske Skog

- Norske Skog has approached Hydro Tasmania for additional volume to enable a conversion from coal boilers to electric boilers.
- Hydro Tasmania is working with Norske Skog to look at options available to Norske Skog to enable this conversion noting the current state of energy supply/demand balance.
- The increase in energy requirements is an increase of approximately 50%.

Refer to [paper 30. Hydrogen](#), if needed.

Refer to paper [21. Energy Availability in Tasmania](#) and [22. Energy Prioritisation Framework](#).

Prepared by/HLT review/Date

Chris Boon, Vedran Kovac, September 2023

Renewable Energy Guarantee of Origin (REGOs)

Possible issues: Will the final scheme recognise below baseline energy for Tasmania?

Key messages

1. The Renewable Energy Guarantee of Origin (REGO) scheme is a part of the broader Guarantee of Origin (GO) scheme being designed by the Australian Government. A Guarantee of Origin scheme verifies the 'origin' of product including its inputs.
2. A REGO represents one MWh of renewable electricity and will be a tradable certificate allowing businesses to prove and verify their use of renewable energy for domestic and global markets.
3. The current consultation by the Federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) on the national REGO scheme proposes the creation of REGOs for all renewable energy generation (this includes hydropower generation).
4. However, it is considering imposing restrictions on the usage of below-baseline REGOs (i.e. existing hydropower built before 1997) via development of federal regulations.
5. Consultation on the scheme closed on 24 October. Legislation and regulations are expected to be drafted in 2024, with the REGO scheme planned to be implemented by 1 January 2025.

Background

- The proposed national REGO framework will enable electricity users (including hydrogen producers and major industrial customers) to certify and make robust claims regarding renewable electricity usage, including as inputs into their products.
- The current consultation by DCCEEW on the national REGO scheme proposes the creation of REGOs for all Hydro Tasmania renewable energy generation.
- However, it is also considering restrictions on the usage of below-baseline REGOs.

- Below-baseline REGOs would be issued in respect of existing hydropower, which includes a significant amount of Hydro Tasmania's energy generation.
- Existing hydropower is not eligible under the current system of Large-scale Generation Certificates (LGCs) under the national Renewable Energy Target (RET).
- If implemented, these restrictions would significantly limit Tasmanian electricity customers' ability to claim the use of renewable electricity, and Hydro Tasmania's commercial flexibility in the trade of REGO certificates.
- Examples of potential restrictions noted in the consultation paper include:
 - Restricting use of below-baseline REGO certificates to only EITE customers and Product GO creation (i.e. hydrogen) initially.
 - The legislation may also specify considerations the federal Minister must consider when seeking to amend the regulations to remove surrender restrictions.
- Restrictions are being considered due to some industry concerns that without some limitation on below-baseline REGOs, Large-scale Generation Certificate (LGC) prices might be depressed, and by extension could compromise the business case for new renewable energy investment (critical for reaching Australia's 82% renewables target).

Hydro Tasmania's position on potential restrictions on below-baseline REGOs

- Hydro Tasmania is opposed to any regulatory restrictions on below-baseline REGOs within the proposed legislative framework.
- Hydro Tasmania disagrees with proposed restrictions on below-baseline REGOs on the basis that:
 - Even without any restrictions, we do not expect a material negative impact on LGC prices as REGOs will attract demand from voluntary purchasers, many of which would not purchase LGCs for the same purpose.
 - If restrictions were to be contemplated, Tasmanian businesses (other than hydrogen proponents and major industrial customers) would not be able to purchase REGOs from Hydro Tasmania to match their electricity usage to support renewable claims, despite consuming electricity in a state that has achieved 100% net renewables.
 - A core objective for establishing REGOs is for certification, traceability and reporting. New renewables are now cost-competitive and the investment barriers to the achievement of the 82% renewables target lie beyond certification (i.e. supply chain, transmission, workforce and stakeholder acceptance issues).
- Placing restrictions on who can claim the attributes of below-baseline renewable hydropower would distort the Guarantee of Origin scheme to address a perceived

renewable energy investment gap, which should be addressed by other policy measures.

Renewable Energy Target (RET) and Large-scale Generation Certificates (LGCs)

- The Large-scale Renewable Energy Target (RET) is an Australian Government scheme allowing renewable energy generators to create a Large-scale Generation Certificate (LGC) for each megawatt hour (MWh) of renewable energy produced.
- At the time the RET was created, existing hydropower had a ‘baseline’ applied to its generation. This was because the scheme focused on supporting ‘additional’ rather than existing renewables. This has meant that most of Hydro Tasmania’s hydropower does not create LGCs (termed ‘below-baseline’ generation).
- LGCs are purchased by electricity retailers and surrendered to the Clean Energy Regulator to meet their legal obligations under the RET. This creates a demand-side mechanism for the scheme.
- Voluntary demand for LGCs has also come from businesses and governments wishing to make claims about their renewable energy usage.
- This certificate market has created a financial incentive to invest and build new renewable energy generation in Australia. The RET will sunset in 2030.
- The Australian Government is currently considering policy measures more broadly to support additional renewables investment to reach Australia’s 82% renewables by 2030 target.

Guarantee of Origin scheme

- The REGO scheme is a part of the broader Guarantee of Origin (GO) scheme being designed by the Australian Government. A Guarantee of Origin scheme verifies the ‘origin’ of product.
- The initial focus of the Guarantee of Origin scheme is hydrogen, hydrogen energy carriers and renewable electricity (i.e. REGOs).
- A REGO (representing one MWh of renewable electricity) will be a tradable, verifiable certificate allowing businesses to prove their renewable energy usage in domestic and global markets.
- REGOs could be used as an input into a product’s Guarantee of Origin (initially hydrogen and hydrogen energy carriers).
- REGOs would be created in a similar manner to LGCs created under the Renewable Energy Target (RET).
- REGOs are about certification whereas the Renewable Energy Target is about additional investment in renewable energy capacity.

Future stages of development

- Submissions to the REGO consultation closed on 24 October 2023. ReCFIT and Hydro Tasmania provided a submission to the consultation.
- Legislation and regulations are expected to be drafted in 2024. Legislation would need to pass through the federal parliament.
- The REGO scheme is expected to be implemented by 1 January 2025.
- Refer to Hydro Tasmania's submission to DCCEEW consultation if needed.

Prepared by/HLT review/Date

Georgia Prenter, James Pirie, October 2023

Storages and generations

Possible issues: El Nino (declared by Bureau of Meteorology in September 2023) and positive Indian Ocean Dipole for summer 2023-24, with outlook for warm and dry conditions.

Key messages

1. As at 20 November 2023, total energy in storage was 46.6%. This is a very secure position for this time of year.
2. Hydro Tasmania's storages are operated to deliver reliable and cost competitive electricity to its customers while managing the water storages and hydro generation infrastructure in a safe and sustainable manner.
3. FY2023 saw slightly above average inflows, with some very dry months (July, September, January and February) and some very wet months (October, November and June).
4. Total Energy in Storage remains above the High Reliability Level [as at 20 November 2023].
5. Total Energy in Storage remained above the Prudent Storage Level since October 2022.

Background

Storages at 30 June 2023

- Storages at 30 June 2023 were:
 - Total Energy In Storage = 40.4%
 - Prudent Storage Level = 29.7% (TEIS 10.7% higher than PSL)
 - High Reliability Level = 21.7% (TEIS 18.7% higher than HRL)
- The level of energy in storage remained well above the High Reliability Level required by the Tasmanian Energy Security Risk Response Framework.

Storages over the year to end of October 2023

Did storages go below the High Reliability Level?

- Storages did not approach or cross the High Reliability Level (HRL) at any time in the year.

Did storages go below the Prudent Storage Level?

- Over the last 12 months storages remained above the Prudent Storage Level (PSL) at all times, having last fallen below the PSL from 5 to 13 October 2022.
- It can be expected that storages drop below the PSL during drier than usual seasonal conditions.

What were storages like generally this year?

- Storages cycled between 32.7% in mid-May 2023 and 48.2% in late October 2023.
- The wettest month was June 2023, which saw a yield of 1,671 GWh.
- January 2023 was the lowest yielding month at -26 GWh, having a negative yield due to evaporative losses from lakes exceeding inflows, which happens occasionally in the warmer, dry months.
- At the start of spring, storages were conservatively positioned at 46.0%, 8.9% above the PSL and 13.4% above where they were at the same time in 2015 (the last El Nino year declared by the Bureau of Meteorology), providing a significant buffer against low inflows. On 1 November storages remain well positioned at 48.2%, 7.4% above the PSL and 19.6% higher than the same time in 2015 – storages are not expected to cross the PSL/HRL.
- Hydro Tasmania continues to engage with the Bureau of Meteorology on season ahead outlooks to assist with planning

What range are storage levels usually?

- Storage levels generally peak in the 40 per cent range during spring each year following the winter rains and bottom out in the high 20s in autumn before the start of winter rains.
- Both levels are normal and secure.
- They represent different points in the seasonal cycle.

How do storages compare to this time in previous years?

Key slow-moving storages, compared to previous years

	20 Nov 2023	28 Nov 2022	29 Nov 2021	30 Nov 2020	25 Nov 2019
Total System	46.6%	46.1%	52.2%	42.2%	47.6%
Great Lake	33.7%	45.3%	43.4%	38.8%	33.5%
Lake Gordon	45.0%	27.6%	47.5%	34.7%	48.4%
Lake Echo	79.1%	73.5%	77.0%	45.6%	57.5%
Arthurs Lake	75.1%	90.7%	89.5%	74.3%	73.6%

System storage % full as at 30 June

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
32.8	28.1	29.6	29.1	34.8	39.2	34.7	40.0	36.2	33.9	40.4

What is the HRL/PSL?

- The High Reliability Level is a level required to withstand a significant double contingency event, similar to those of 2015-16.
- With storages at the High Reliability Level, Tasmania could withstand six months of extreme drought without Basslink imports and minimal gas running without an interruption to power supply to homes and businesses.
- The Prudent Storage Level is a further three-month storage buffer above HRL.
- The Prudent Storage Level assumes low inflows, but that there is access to either Basslink or gas (only one, not both).
- The HRL and PSL levels were updated in September 2021 to reflect additional wind generation coming online in Tasmania.
- Under normal operations and below average inflows, storages can be expected to cross the PSL regularly.
- Dropping below the PSL is not cause for alarm. It is completely normal for storages to move above and below the PSL during drier periods.
- We respond by adjusting our operations accordingly to maintain water storages. That is exactly how the Energy Security Framework is intended to operate.

TEIS / PSL / HRL over the past 12 months

	1 Dec 2022	1 Jan 2023	1 Feb 2023	1 Mar 2023	1 Apr 2023	1 May 2023	1 Jun 2023	1 Jul 2023	1 Aug 2023	1 Sep 2023	1 Oct 2023	1 Nov 2023
TEIS	46.3	44.8	41.2	38.0	36.5	34.9	34.9	40.4	44.3	46.0	47.8	48.2
PSL	39.5	37.7	33.9	30.7	28.2	26.9	28.4	29.7	32.8	37.1	39.5	40.8
HRL	31.6	31.8	26.8	23.7	20.0	19.0	19.3	21.7	23.9	29.8	32.0	32.5

Basslink Imports/Exports FY2022-23

Month	Basslink Export @ Loy Yang (GWh)	Basslink Import @ George Town (GWh)	Net* (GWh)
Jul-22	62	-78.7	-16.7
Aug-22	24.4	-60.6	-36.2
Sep-22	31.1	-78.2	-47.1
Oct-22	39.1	-163.3	-124.1
Nov-22	62.2	-98.3	-36.1
Dec-22	28.4	-228.5	-200.1
Jan-23	13.4	-256.4	-243
Feb-23	12.1	-227.4	-215.3
Mar-23	55.8	-165.8	-110.1
Apr-23	107.7	-124.3	-16.6
May-23	148.1	-80.7	67.4
Jun-23	143.9	-65.9	77.9
Total	728.2	-1628.1	-900.0

- * Positive numbers indicate net export, negative numbers indicate net import.
- See Basslink Import/Export table on p18 for commentary on each month for FY2023

Basslink Imports/Exports FY23 to date

Month	Basslink Export @ Loy Yang (GWh)	Basslink Import @ George Town (GWh)	Net* (GWh)
Jul-23	212.2	-44.3	167.9
Aug-23	172.8	-60.3	112.6
Sep-23	129.0	-105.1	23.9
Oct-23	42.5	-153.5	-111.0
Total	556.5	-363.2	193.4

- * Positive numbers indicate net export, negative numbers indicate net import.

Prepared by/HLT review/Date

Robert Wilson, Vedran Kovac, September 2023

Assets, water and the environment

Maugean Skate

Possible issues: What impact are Hydro Tasmania’s operations having on the health of Macquarie Harbour? What is Hydro Tasmania doing to prevent extinction of the Maugean Skate? Is Hydro Tasmania subsidising the aquaculture industry in the Macquarie Harbour?

Key messages

1. Hydro Tasmania is committed to environmental sustainability and the conservation of threatened species.
2. The State and Federal Governments are coordinating recovery efforts for the Maugean Skate. Hydro Tasmania is committed to working collaboratively with government and stakeholders as part of the Maugean Skate Recovery Team.
3. Dissolved oxygen dynamics in Macquarie Harbour are complex – river flows are only one factor that contributes to this. Other factors include weather conditions, climate change, aquaculture biomass, legacy mining runoff and wastewater input.
4. The Gordon and King rivers flow into the Macquarie Harbour. The operation of Gordon and John Butters Power Stations contribute to flows in these rivers. The impact of Hydro Tasmania’s operations to harbour dynamics is currently unclear.
5. Further modelling is required to provide clarity and enable appropriate management planning. Hydro Tasmania is working with stakeholders to renew CSIRO’s hydrodynamic model of the Macquarie Harbour to better understand this complex environment.

Background

Maugean skate status

- The Maugean skate is currently listed as endangered at both federal and state levels. It is on the 2023 priority list for reassessment under the EPBC Act.
- The remaining population is only found in Macquarie Harbour.
- Monitoring suggests that the extant population is unlikely to be viable long-term under the status quo.

- The Federal Government has stressed the urgency of recovery efforts and need for immediate action.

Dissolved oxygen dynamics in Macquarie Harbour

- Dissolved oxygen in bottom waters of the Macquarie Harbour is currently understood to be the limiting factor for skate health and viability.
- River flows are one factor that can influence hydrodynamics and dissolved oxygen levels in the harbour, but the relationship is unclear due to the complexity of the system.
- Dissolved oxygen in the harbour is affected by river flows, weather conditions (wind, tides, atmospheric pressures, etc), climate change (increasing temperatures), aquaculture biomass, legacy mining runoff and wastewater inputs.
- Low inflows over summer/autumn may encourage improved dissolved oxygen levels, however the influence of reduced inflows during these times is dependent on a range of other weather conditions and harbour dynamics.

What is Hydro Tasmania doing to prevent extinction of the Maugean skate and improve the health of the Macquarie Harbour?

- Hydro Tasmania was initially contacted by the Threatened Species Unit at the Department of Natural Resources and Environment Tasmania about the Maugean skate in March 2022. We have participated in workshops as they have improved their understanding of the issues and identified management options.
- We are also a member of the ongoing Maugean Skate Recovery Team and participated in the Structured Decision-making Workshop held in July 2023.
- Hydro Tasmania is working with State and Federal Governments and stakeholders to re-establish CSIRO's hydrodynamic model of the Macquarie Harbour. Specifically, we are contributing to the development of catchment models as inputs to the CSIRO model. CSIRO's model is required to assist with the identification of management options, that may be available to improve skate habitat and dissolved oxygen levels in Macquarie Harbour.
- Hydro Tasmania acknowledges that flows are likely part of the recovery planning, at least in the short-term, but given the complexity of the environment, research and modelling is required to inform what this management option could look like.
- Further work is required to determine the magnitude, duration, timing and frequency of changes to power station operation that could be required to encourage improved dissolved oxygen conditions during the upcoming summer and beyond, particularly with respect to other climatic and environmental factors.

Is Hydro Tasmania subsidising the aquaculture industry in Macquarie Harbour?

- No. The State and Federal Governments are coordinating recovery efforts for the Maugean Skate. These efforts have included engagement with all stakeholders, including the aquaculture industry.
- Any impact to stakeholders, including changes to Hydro Tasmania’s power station operation or aquaculture operations in the Macquarie Harbour, to support recovery efforts will be determined by the State and Federal Governments via collaboration with the Maugean Skate Recovery Team.

What has Hydro contributed financially to support this effort?

- We are dedicating internal resources in understanding the science and the modelling.
- The science will inform the best operating regime for the stations.
- At that point in time, we anticipate that we may alter the operation of our systems, which could come at a significant financial cost and opportunity cost.
- So we need to thoroughly understand what is the right operation regime, to have the most positive impact possible.
- In the meantime, we are dedicating significant internal resources to better understand the science and the best course of action to support this species.

Hydro Tasmania’s work to support endangered species

- Hydro Tasmania has a proud track record of management to protect endangered species where clearly defined changes in Hydro’s operations can demonstrably improve outcomes for those species.
- For example, at *yingina* / Great Lake, Hydro Tasmania voluntarily introduced restrictions on how fast it draws down water levels to ensure the breeding success of the threatened native *Paragalaxias* – a freshwater fish that is endemic to the central highlands of Tasmania.
- We also supported recent work to rediscover and improve distribution data for the critically endangered short-tailed rain crayfish near Lake Burbury as well as the the Great Lake giant freshwater limpet and *Beddomeia* aquatic snails at *yingina* / Great Lake.
- We have also supported collaborative efforts to protect the Miena Cider Gum on the Central Plateau and the planting of Pencil Pines at Lake Mackenzie following the devastating bushfires in the area.

Prepared by/HLT review By/Date: Bec Sheldon/Jack Penny, Jesse Clark, October 2023

Stakeholders & community

Great Lake Adventure Trail

Possible issues: Community opposition to the proposed trail, the time taken by Hydro Tasmania to assess the proposal, and suggestion that Hydro can simply just approve the trail.

Key messages

1. Hydro Tasmania and the Parks and Wildlife Service have been working with the proponent and their representatives since March 2020 to understand the potential opportunities and issues associated with the proposed Great Lake Adventure Trail.
2. Advice has been provided to the proponent and their representatives on several conceptual trail alignments. This is to identify opportunities and constraints as to the trail alignment, including limitations on development within the Tasmanian Wilderness World Heritage Area and other land tenures.
3. Hydro Tasmania, as the landowner most affected by the proposed trail alignment, has agreed to undertake the assessment of the proposed trail on behalf of the Parks and Wildlife Service. This assessment will follow the Parks and Wildlife Reserve Activity Assessment process.
4. Hydro Tasmania and the Parks and Wildlife Service has provided the proponent with a request for additional information that must be satisfied prior to progressing the Reserve Activity Assessment.
5. Hydro Tasmania has provided the community the opportunity to provide informal feedback on the proposed project through a project-specific website. Community engagement has also been undertaken through attendance at a public meeting, and direct engagement with stakeholders as requested. Our focus in engagement has been to describe the process for assessment and why this needs to occur.
6. The proponent is yet to provide Hydro Tasmania with the necessary information to progress the Reserve Activity Assessment.

Background

Potentially affected land

- The proposed trail alignment broadly follows the shoreline of yingina/Great Lake and is approximately 105 kilometres in length.
- Approximately 80% of this trail alignment is located on land managed by Hydro Tasmania, with the remaining trail alignment largely located on land managed by the Parks and Wildlife Service.
- The proposed trail alignment includes a section of approximately 300 metres of existing tracks within the Tasmanian Wilderness World Heritage Area.

Reserve Activity Assessment process (Environmental Assessment)

- As a development that has the potential for significant impacts on natural or cultural values over a wide area, the proposed Great Lake Adventure Trail will be assessed as Level 3 Reserve Activity Assessment.
- This level of assessment will require concept endorsement, the preparation of an Environmental Impact Statement, and formal public consultation on draft documentation including the Environmental Impact Statement.

Information request

- Hydro Tasmania's request for additional information to the proponent include the following:
 - Further development of the feasibility assessment and business case
 - Detailed project description, plans and scope of work
 - Aboriginal heritage and engagement requirements
 - Stakeholder engagement and community
 - Asset operation and ownership

Further development of the feasibility assessment and business case

- The proponent is required to prepare a detailed feasibility study and business case that includes details as to the trail feasibility, detailed capital and operational cost, sources of funding, cost-benefit analysis, alternatives, and market segment analysis.

Detailed project description, plans and scope of work

- The proponent is required to provide detailed plans as to the proposed trail, alternative track alignments, staging, and details of likely ancillary and supporting infrastructure such as toilets, access tracks, campsites, and accommodation.

Aboriginal heritage and engagement

- The proponent is required to undertake an assessment of potential impacts of the project on Aboriginal heritage values in accordance with the processes endorsed by the Aboriginal Heritage Tasmania.
- In addition, consideration is also to be given to landscape values of yingina/Great Lake, and the surrounding environment.
- The proponent is required to implement a stakeholder engagement plan developed and led with members of the Tasmanian Aboriginal community.

Stakeholder engagement and community

- The proponent is required to undertake a comprehensive stakeholder consultation and social impact assessment to better understand the community concerns and issues associated with the project.

Asset operation and ownership

- The proponent is required to provide details of the proposed ownership, maintenance and operation responsibilities of the asset.

Potential impact on current recreational activities

- We do not currently have sufficient information to understand the potential impacts on current recreational activities or potential impact on public access to yingina/Great Lake.

Will the Highland Lakes and Poatina roads be improved to cope with the extra expected visitors per year?

- This is for consideration by the Department of State Growth.

Prepared by/HLT review/Date

Ian Jones, Jesse Clark, September 2023