Review of Self Insurance Risk Premium – Access Undertaking UT6

Aurizon Network

June 2025

Strictly confidential

finity

12 June 2025

Jon Windle
Manager Regulation
Aurizon Network Pty Ltd
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Dear Jon

Review of Self Insurance Risk Premium – Access Undertaking UT6

We are pleased to present our report documenting our estimate of the self-insurance losses of the Central Queensland Coal Network for the five-year period 2027/28 to 2031/32.

This report is prepared in accordance with our engagement letter dated 27 March 2025.

Please do not hesitate to contact either of us should you have any queries in relation to the report.

Yours sincerely

Mark Hurst
Fellow of the Institute of Actuaries of Australia

Timothy Jeffrey
Fellow of the Institute of Actuaries of Australia

1 Executive Summary

1.1 Introduction and Scope

Finity Pty Limited (Finity) has been engaged by the Network division of Aurizon (Aurizon Network) to provide actuarial advice in relation to the self-insured risks of the Central Queensland Coal Network (CQCN). Our advice has been prepared pursuant to our engagement letter dated 27 March 2025. This is the fourth time we have advised Aurizon Network in relation to their self-insured losses.

1.2 Background

CQCN is a stand-alone network managed by Aurizon Network. The rail infrastructure (also known as "below rail" as opposed to "above rail" which is the train services) includes:

- track, including main lines, branches and sidings
- bridges and other infrastructure, such as tunnels, embankments and cuttings
- overhead wires
- signalling equipment
- train control communication equipment.

The CQCN primarily provides freight services to Queensland's coal mines. There are four coal systems that make up the network:

- Goonyella
- Blackwater
- Moura
- Newlands (including the Goonyella to Abbot Point Expansion (GAPE)).

Aurizon Network's activities are subject to regulation by the Queensland Competition Authority (QCA). Applications for access to the rail network by third parties are handled under a process set down in the Access Undertaking (AU). The AU defines the rules for open access to the CQCN rail infrastructure including setting reference tariffs for users of the network.

We understand that Access Undertaking UT5 is set to expire on 30 June 2027 and Aurizon Network is in the process of developing the next regulatory arrangements that will commence on 1 July 2027. Aurizon Network's proposal for the Post-UT5 Term will include Allowable Revenues for each coal system and for each year. The Operating Cost Allowance is a key component of those Allowable Revenues and provides for the recovery of Self-Insurance costs. The exact term of Access Undertaking the Post-UT5 Term (or UT6) is not yet finalised, but it is expected to cover a period of between five and ten years.

The main purpose of our advice is to estimate the annual losses arising from the self-insured risks as input for the next Access Undertaking, UT6.

1.3 Scope

The scope of our review includes advising on the estimated cost of CQCN self-insurance losses (or risk premium) for the five-year period 2027/28 to 2031/32 for:

- Derailment risks for a stand-alone network

- Dewirement related losses
- "Act of God" (weather) losses below the adopted pass-through[1] threshold ($1m)
- Other uninsured losses (i.e. below-deductible liability losses and third-party losses).

Note that our self-insurance estimates are based on Aurizon Network's expected insurance arrangements for the five-year regulatory period.

We have been advised by Aurizon Network that some estimated losses, referred to as uninsured losses in this report, are in fact subject to insurance policies. This is particularly the case for derailment losses which are covered under the umbrella Industrial Special Risk policy where the damage to rail infrastructure by rolling stock is an included risk. Given the integrated nature of this policy and the difficulty of disaggregating the premium amounts to the relevant risk components we are instructed by Aurizon Network that the self-insurance premium estimated in this report is intended to be a proxy for this premium allocation and estimation of losses below the deductible.

Note that the scope of this assessment is limited to the CQCN coal systems. The use of these coal systems is not limited to coal, although we understand that the amount of other goods transported is limited.

1.4 Approach

We received loss history data for the following significant exposures not covered by insurance (or where the insurance premiums are not included in Aurizon Network's AU):

- Derailment losses
- Dewirement losses
- Weather-related losses
- Third Party Repair losses, and
- Below-deductible liability losses.

Based on this historical data we have projected future self-insured losses for the forthcoming regulatory period (2027/28 to 2031/32). Further details on the approach are set out in Section 4 of this report.

1.5 Summary of Projected Costs

Table 1.1 summarises our estimate of the self-insured losses for CQCN by loss type. Please note that these results:

- Are based on a party-party assessment of liability for derailment losses (i.e. only including costs relating to below rail losses)
- Allow for future growth in CQCN's operations, as advised to us by Aurizon Network
- Are expressed in nominal dollars.

[1] Note that we use the terms "pass-through" and "review event" interchangeably throughout this report

Table 1.1 – Summary of Estimates for CCQN by Loss Type

Loss Type	2027/28	2028/29	2029/30	2030/31	2031/32	**Total**	Previous (adjusted)[1]
	$000	$000	$000	$000	$000	**$000**	$000
Derailment	3,951	4,075	4,204	4,336	4,473	**21,039**	24,721
Dewirement	685	707	729	752	776	**3,648**	1,981
Weather	533	550	568	585	604	**2,840**	3,322
TP Repairs	746	770	794	819	845	**3,975**	1,811
Liability[2]	1,265	1,350	1,436	1,515	1,572	**7,139**	5,705
Total	7,181	7,453	7,731	8,008	8,269	**38,641**	37,539

[1]Adjusted for actual exposure, but based on previous frequency and size assumptions

[2] Liability amounts are not directly comparable to previous due to deductible difference

Our estimate of the annual cost starts at $7.2m for the 2027/28 financial year and increases to $8.3m in 2031/32. Our estimate across all five years is $38.6m. The largest component of the estimate is clearly derailment costs as they are typically the most frequent self-insured losses, and the most costly. The yearly increase in our estimates over the five-year regulatory period reflects both inflation and the anticipated growth in CQCN's operations (which is minimal).

The estimates shown in the table above are central estimates (i.e. intended to be the mean or expected value of the liabilities). The estimates are not discounted for the time value of money. The above estimates do not contain margins for expenses, reinsurance or profits and hence are expected to be lower than the commercial costs of insurance.

Our estimate for UT6 is $1.1m higher than the result obtained by applying UT5 assumptions. The main drivers of this change are:

- Increases in the following loss types:
  - Dewirements: There has been a stepwise increase in the last 5 years in the average cost of dewirements, and we have increased the selected average size accordingly.
  - Third Party Repairs: Higher costs than expected, partly driven by emerging costs relating to protests, have caused us to increase our selected cost per track km.
  - Liability: Increases to the liability projection largely reflect the higher deductible being applied.
- Offset by reductions for the following loss types:
  - Derailments: At the previous review, claim frequencies for each severity category had reduced; however, we continued to give some credibility to the higher 2012/13 and prior experience. At the current review, we give full credibility to the more recent experience and have lowered the frequency selections.
  - Weather: Although there has been a weather event with a high gross cost to Aurizon Network since the previous review (Cyclone Debbie), the gross cost has still been lower than expected. Furthermore, pass through provisions have meant that the net cost has been significantly lower than expected. This has resulted in a lower expected cost going forward.

1.6 Notional Premium

To estimate the notional premium corresponding to the estimates shown in Table 1.1Table 10.1 we have allowed for benchmark premium loadings. The loadings assumed are:

- **Expenses:** 22% of premiums (applied to derailments only). This loading is based on commercial property insurance benchmarks, specifically Finity's state of the insurance industry report, Optima 2024.
- **Profit and the net cost of reinsurance:** 0% of premiums. We note that the QCA did not accept the 20% allowance for reinsurance and profit margin included in our UT5 notional premium, and we have therefore not included an allowance for the UT6 notional premium. If we were to include a loading for profit and the net cost of reinsurance for UT6 it would be 20% of premiums, based on industry benchmarks.

The margins sought by insurers can vary significantly depending on the types of risks being written, the level of uncertainty surrounding those risks and the stage of the insurance cycle. The benchmarks applied are thought to be typical of those that might apply for this type of large commercial business.

We also note that unlike an insurer, Aurizon only gets the opportunity to "re-price" for the new UT period (which historically has been up to 10 years) whereas an insurer has the opportunity to re-price annually thus providing greater certainty as they can re-adjust premiums to recoup losses.

Table 1.2 shows the addition of these loadings to the estimated losses.

Table 1.2 – Estimation of notional insurance premium

Loss Type	2027/28	2028/29	2029/30	2030/31	2031/32	Total
	$000	$000	$000	$000	$000	$000
Derailment	4,820	4,972	5,129	5,290	5,457	25,667
Dewirement	685	707	729	752	776	3,648
Weather	533	550	568	585	604	2,840
TP Repairs	746	770	794	819	845	3,975
Liability	1,265	1,350	1,436	1,515	1,572	7,139
Total	8,050	8,349	8,656	8,962	9,253	43,270

Using these loadings our estimate of the notional insurance premiums corresponding to our central estimate is $43.3 million for the UT6 period.

1.7 Reliances and Limitations

The full report sets out the detail and explanation behind our results and should be read in conjunction with this Executive Summary. The reader's attention is drawn to the reliances and limitations associated with our advice set out in Section 11. These should be considered in order to put our findings in their appropriate context.

2 Introduction and Scope

Finity Consulting Pty Limited (Finity) has been engaged by the Network division of Aurizon to provide actuarial advice in relation to the self-insured risks of the Central Queensland Coal Network (CQCN). Our advice has been prepared pursuant to our engagement letter dated 27 March 2025. This is the fourth time we have advised Aurizon Network in relation to their self-insured losses.

2.1 Scope

The scope of our review includes advising on the estimated cost of CQCN self-insurance losses (or risk premium) for the five-year period 2027/28 to 2031/32 for:

- Derailment risks for a stand-alone network
- Dewirement related losses
- "Act of God" (weather) losses below the adopted pass-through[2] threshold ($1m)
- Other uninsured losses (i.e. below-deductible liability losses and third-party losses).

Note that our self-insurance estimates are based on Aurizon Network's expected insurance arrangements for the five-year regulatory period.

We are advised by Aurizon Network that some estimated losses, referred to as uninsured losses in this report, are in fact subject to insurance policies. This is particularly the case for derailment losses which are covered under the umbrella Industrial Special Risk policy where the damage to rail infrastructure by rolling stock is an included risk. Given the integrated nature of this policy and the difficulty of disaggregating the premium amounts to the relevant risk components we are instructed by Aurizon Network that the self-insurance premium estimated in this report is intended to be a proxy for this premium allocation and estimation of losses below the deductible. This approach is unchanged from the approach adopted for UT5.

Note that the scope of this assessment is limited to the CQCN coal systems. The use of these coal systems is not limited to coal, although we understand that the amount of other goods transported is limited.

2.2 Exclusions

Note that our advice does not cover all types of losses or potential losses as follows:

- **excludes** losses associated with Aurizon Network rail infrastructure other than the four coal-freight railway systems that make up the CQCN
- **excludes** uninsured workers' compensation losses as these losses are covered under labour costs
- **excludes** losses arising from business risks not typically considered as insurable, for example, stranding. Stranding is the loss of future revenues if customers choose not to use CQCN's network. We understand that the consequences of such a loss of business can be significant for CQCN as assets may be constructed specifically for use by a small number of consumers, and the cost of the construction is intended to be recovered over a number of years. However, risks of this type are not typically regarded as being within the scope of insurance but are considered a business risk
- **excludes** losses for which there is no historical loss history, no data, or insufficient reliable data to enable a reasonable estimate to be calculated.

[2] Note that we use the terms "pass-through" and "review event" interchangeably throughout this report

- **excludes** weather related (or force majeure) losses in excess of $1m as they are expected to be recovered via the QCA's Review Event process.

2.3 Self-insured Losses

There are two types of "self-insured" losses that we have included in this assessment:

1. Losses relating to uninsured risks: specifically, the tracks and associated infrastructure such as electricity lines. These risks are subject to losses that the commercial insurance markets do not typically have the appetite to underwrite, or where sufficient capacity exists but cannot be relied upon on an ongoing commercial basis. This group also includes risks where self-insurance is considered more efficient than insurance, either because premiums are thought to be higher than the expected cost of self-insurance or because insurance terms are not suitable.
2. Below-deductible losses: relates to below-deductible losses on insured risks where CQCN holds material levels of risk in respect of the self-insured retention, either because of the frequency of such losses or the size of the retention. These losses primarily relate to property and public liability type losses.

2.4 Basis of Estimates

We have prepared our estimates of CQCN's annual self-insured losses on the basis that they:

- Are central estimates (i.e. intended to be the mean value of the range of possible outcomes)
- Include an allowance for the projected growth in the asset values and utilisation of CQCN. The projected asset values and utilisations were provided by Aurizon Network
- Include an allowance for inflation
- Are not discounted for investment income - in other words represent the estimated cost to be incurred in the relevant financial year and no attempt has been made to express the expected costs over the five years on a net present value (NPV) basis.

Our estimates do not contain any allowance for expenses, reinsurance or profits and hence are expected to be lower than the cost of commercial insurance (if such insurance were available). However, in Section 10 we have included notional estimates of the annual insurance premiums that correspond to our cost estimates.

For derailments, dewirements and third-party repairs, the number of incidents and paid amounts in the 2024/25 year have been grossed up from 31 March 2025 (data date) to 30 June 2025 so that a full year of experience can be considered. This is not relevant for Weather and Liability losses due to the low frequency nature of these losses.

2.5 Allocation of Costs

Through the QCA, Aurizon Network is able to include in its budgeted costs:

- Capital expenditure
- Operational expenditure, including
  - maintenance costs
  - insurance premiums
  - self-insurance losses.

Under the QCA regulatory environment there are "pass through" (or "review event") provisions which allow for unanticipated material costs to be passed through to customers after the revenue determination has been made. Aurizon Network may be eligible for pass-through funding if there are large events during the next regulatory period which exceed the agreed pass-through threshold.

Note that Aurizon Network, as a listed company, is not eligible for additional funding via Natural Disaster Relief and Recovery Arrangements (NDRRA).

It is important in any claim for self-insurance expenses that there is no double counting of costs. We have endeavoured to achieve this by ensuring that losses allocated to the self-insurance "bucket" only include losses that:

- Are not covered by an insurance policy (or if the losses are covered by an insurance policy the associated insurance premiums are not being claimed in the insurance premium component of the Access Undertaking), and
- Would not be expected to be included in maintenance budgets.

Naturally where costs have historically been included as maintenance (or in other budgets) Aurizon Network will need to ensure these costs are excluded in the future to take into account any costs that form part of the self-insured program. We understand from discussion with Aurizon Network that this is their intention.

2.6 Structure of Report

The remainder of this report is structured as follows:

- Section 3 includes some **background** information relevant to this assessment
- Section 4 outlines our **approach** to the assessment and our methodology for estimating CQCN's self-insured losses
- Section 5 details the **categories of losses** that we have considered
- Section 6 summarises the **exposure** measures used in this assessment
- Section 7 sets out our valuation of **uninsured losses in respect of derailments**
- Section 8 sets out our valuation of **uninsured losses in respect of other loss types**
- Section 9 sets out our valuation of **below-deductible losses**
- Section 10 summarises the **results** of our review
- Section 11 sets out the **reliances and limitations** associated with our advice.

The Appendices set out further details of our review.

3 Background

3.1 Aurizon Network

The CQCN incorporates the entire rail infrastructure (also known as "below rail" as opposed to "above rail" which is the train services) including:

- Track, including main lines, branches and sidings
- Bridges and other infrastructure, such as tunnels, embankments and cuttings
- Overhead wires
- Signalling equipment
- Train control communication equipment.

Aurizon Network is responsible for providing, maintaining and managing access to the rail network and associated rail infrastructure. The rail network totals over 2,800 kilometres. Every application for access to the rail network is managed under a detailed process approved by the competition regulator, the Queensland Competition Authority (QCA). The applications for access to the rail network are handled under a process set down in the Access Undertaking (AU). The AU defines the rules for open access to the CQCN rail infrastructure including setting reference tariffs for users of the network. Part of the tariff charged reflects the network's self-insurance costs.

We understand that Access Undertaking UT5 is set to expire on 30 June 2027 and Aurizon Network is in the process of developing the next regulatory arrangements that will commence on 1 July 2027. The exact term of the Access Undertaking for the Post-UT5 Term (or UT6) is not yet finalised, but it is expected to cover a period of between five and ten years. The timeline is summarised in Figure 3.1 below.

Figure 3.1 – UT Timeline

The purpose of our advice is to estimate the annual losses arising from the self-insured risks as input for the UT6 AU, specifically for 2027/28 to 2031/32.

3.2 Central Queensland Coal Network

The CQCN provides freight services to Queensland's coal mines. There are four coal systems that make up the network:

- Goonyella
- Blackwater
- Moura
- Newlands (including GAPE).

Our scope is limited to estimating the self-insured costs relating to these coal systems. The use of these coal systems is not limited to coal, although we understand that the amount of other goods transported is limited. Further information on these coal systems is provided in Appendix B.

3.3 CQCN Insurance Program 2024/25

We were provided with a summary of Aurizon Network's insurance programme for 2024/25. The program covers a number of risk areas, including:

- Property including Business Interruption
- Public and Products Liability
- Professional Indemnity
- Directors & Officers
- Motor
- Marine
- Contract Works
- Corporate Travel.

We are advised that little of the CQCN is covered by the Aurizon Network combined ISR policy and so this is excluded from the review. In addition, some covered ISR losses are included in our uninsured estimates (as discussed in Section 2.1). This is consistent with our previous review.

We are advised that other classes (Professional Indemnity, Directors & Officers, Motor, Marine, Contract Works, Corporate Travel) are not significant in respect of this review and as a result we have not been provided with details of associated losses. We assume for the purposes of CQCN's self-insured losses any below-deductible amounts for these classes is not significant and have not discussed these other classes of insurance further. This is consistent with our previous review.

4 Approach

In this section we describe the approach we have adopted for the various components of our review.

4.1 Summary of Approach

We received loss history data for the following significant exposures not covered by insurance (or where the insurance premiums are not included in Aurizon Network's AU):

- Derailment losses
- Dewirement losses
- Weather-related losses
- Third Party Repair losses, and
- Below-deductible liability losses.

Based on this historical data we have projected future self-insured losses for the forthcoming regulatory period (2027/28 to 2031/32) using the approach summarised in the following diagram.

Table 4.1– Summary of Approach

Segment	Approach
Derailments	• Analyse loss history by derailment severity (low/medium/high) • Select derailment frequency based on historical frequency of derailments > per Gross Tonne Kilometres (GTK) • Select average derailment loss size based on historical losses • Projected losses = selected frequency x projected GTK x selected average loss
Dewirements	• Calculate historical claim frequency per electrified Gross Tonne Kilometres (eGTK) and average loss from dewirement events • Projected losses = selected per eGTK x projected eGTK x selected average loss
Weather	• Exclude, in total, pass through events • Calculate historical annual losses from weather events per track km • Projected losses = selected annual weather losses per track km x projected track km
Third Party Repairs	• Calculate historical annual losses from third-party events per track km • Projected losses = selected annual third-party losses per track km x projected track km
Liability	• Calculate historical annual losses from liability events per $m turnover • Cap losses at the applicable deductible (assumed to be $4m) • Apply selected annual losses per $m turnover to projected $m turnover

We have assumed that the following events will generally be subject to pass through:

- Major weather events where below-rail losses to the network exceed $1m

- Catastrophic damage to the network from perils such as earthquakes and other natural disasters where the cost exceeds $1m
- Liability losses which exceed $8m.

If Aurizon Network (or the QCA) were to adopt different pass through thresholds this may change our results.

We understand that damage to the network caused by war or terrorism cannot be passed through. Losses caused by such events are standard insurance policy exclusions.

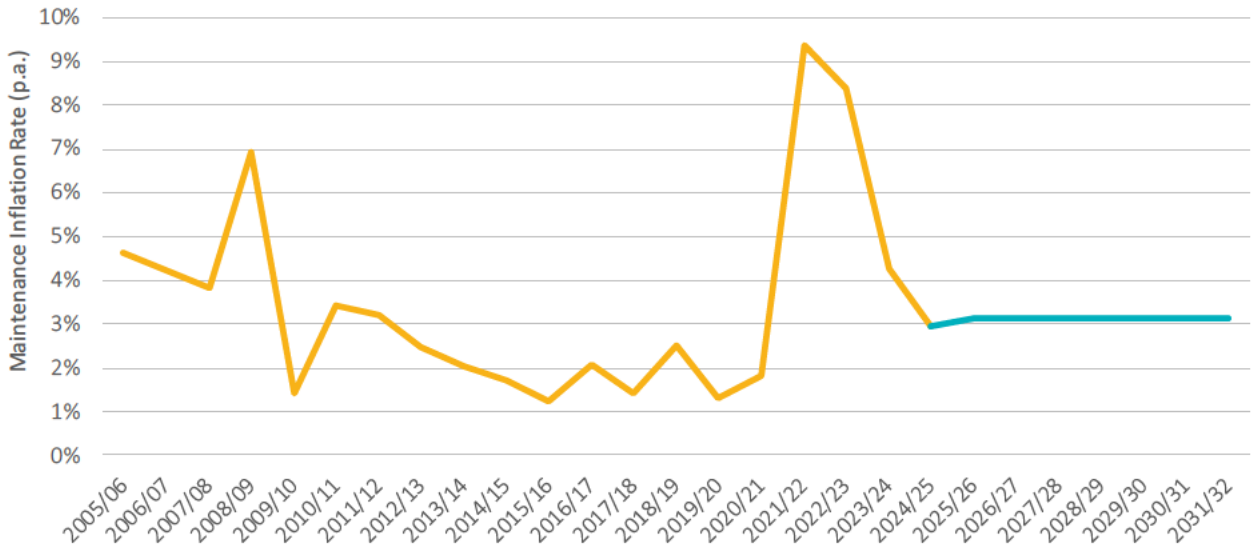
4.2 Our Approach to Assessing Derailment Losses for CQCN

We understand that the derailment losses provided for this review have been valued on a party-party assessment basis. This means that derailment costs for below-rail (Aurizon Network) and above rail are assessed separately on a no-fault basis with each party bearing their own costs. This is the same approach as adopted for UT5.

4.3 Inflation

Aurizon Network have provided us with historical and future inflation rates. We understand the rates provided are consistent with other components of Aurizon Network's regulatory submission. The historical average loss sizes have been inflated to June 2025 dollars with the index provided in order to select a future average claim size assumption. In addition, our projected self-insurance losses are expressed in nominal dollars of the year of payment using Aurizon Network's future inflation rates. We understand that the forecast rate of inflation is based on a Maintenance Cost Index, which has been weighted based on Aurizon Network's FY24 maintenance expenditure for labour, consumables, accommodation and fuel cost categories. The historical and projected adopted inflation rates as provided by Aurizon Network are shown in the figure below.

Figure 4.1 – Aurizon Network's Maintenance Historical and Future Inflation Rates



5 Categories of Losses

In this section we describe the different loss categories.

5.1 Uninsured risks

The most significant category of uninsured risk relates to CQCN's uninsured property risk, i.e. the property risk for the uninsured track and associated infrastructure.

The CQCN is subject to property losses from a range of perils, including:

- Derailment
- Dewirement
- Weather:
  - Storm (including wind and cyclone generally)
  - Flood (including washouts and landslips)
  - Extreme heat
- Earthquake
- Fire and bush fire
- Third party repairs
- Accidental and malicious damage.

We have been provided with detailed data for derailment, dewirement, weather and third-party repair losses. We have modelled the historical losses from these perils to estimate future losses for the next regulatory period.

In relation to other perils, such as fire and accidental and malicious damage, where there is no information on the nature and extent of any historical losses, we have not provided any estimates. There are also other perils such as earthquake, war, invasion and terrorism, that exist but there are, we understand, no historical losses. These risks have a very low probability of occurrence, but a very high cost if they do occur. We have not estimated a cost for these losses even though in practice the expected losses are greater than zero. We note that these types of events (with the exception of war, invasion and terrorism) are likely candidates for pass through.

We understand there are no other significant classes of uninsured risks and the data we have received contains no information on other types of uninsured losses.

5.2 Below-deductible losses for CQCN

The following below-deductible losses have been considered:

Property losses

In practice, little of the CQCN is covered by the Aurizon Network combined property insurance policy. Coverage is limited to CQCN property within Aurizon Network premises but does not, in general, include tracks and related wires, signalling and communication equipment.

Following discussions with Aurizon Network, we understand that the value of CQCN below-deductible losses relating to the Aurizon Network combined property policy are likely to be small and hence we have not provided an estimate for this category of self-insured loss.

Public and product liability losses

For UT5 we were advised that the anticipated level of deductible for a stand-alone policy for Aurizon Network was $500k and we provided estimates on that basis. For UT6 we have been advised that the anticipated level of deductible for a stand-alone policy for Aurizon Network is $4m and therefore have provided estimates on this basis in this report.

We were provided with summary information showing the number of Aurizon Network's liability claims over the last 9 years relating to the CQCN. We note that:

- At our previous review we received liability losses above the Aurizon group policy deductible (different to the stand-alone policy deductible for Aurizon Network) as well as losses below the Aurizon group policy deductible (which predominantly related to damage to livestock).
- For the current review we have only received liability losses above the Aurizon group policy deductible. Based on our previous review we do not expect losses below the Aurizon group policy deductible to be material.

Using this information we have estimated future CQCN liability losses as shown in Section 9.1.

A potential liability risk to Aurizon Network is claims from third-party operators. Our estimate is based on the historical loss / claim data so implicitly projects third-party claims at historical levels which may understate, or overstate, the true cost.

Other classes of losses

We have not been provided with any information in relation to other classes of below-deductible losses and hence we are unable to provide any comment on the nature or extent of potential other losses.

5.3 Pass through events

Under the QCA regulatory environment, there are pass through provisions which allow for unanticipated material costs to be passed through to customers after the revenue determination has been made.

Pass through is used when the insurance for an event is considered to provide poor value for money or is simply unavailable. Pass through is also used where historical data is not sufficient to allow a self-insurance estimate to be prepared.

We understand that damage to the network caused by war or terrorism cannot be passed through. Losses caused by such events are standard insurance policy exclusions.

We believe that the pass through option is an efficient way of dealing with extreme events which occur very infrequently and are extremely difficult to model. The alternative of receiving an annual allowance to be placed in a reserve is problematic as the reserve may need to be maintained, theoretically, for a significant period of time. There is also the possibility that an extreme event may occur well before the reserve has reached the expected size for the event.

We understand that Aurizon Network would like to adopt the following pass through thresholds:

- $1 million for damage to the network from events such as earthquakes, floods and cyclones, and
- $8 million for liability losses.

By definition Aurizon Network will need to ensure, and be able to demonstrate to the QCA, that any costs stated as subject to pass through are not included elsewhere in the CQCN's cost base (either in the self-insurance, insurance maintenance or capital expenditure budgets).

For the purpose of estimating self-insured costs we have assumed that any event that generates self-insured losses, not otherwise covered by insurance, in excess of the assumed thresholds stated above will be subject to pass through. Note that the full ground-up cost of these pass through events is excluded from our self-insured cost estimates.

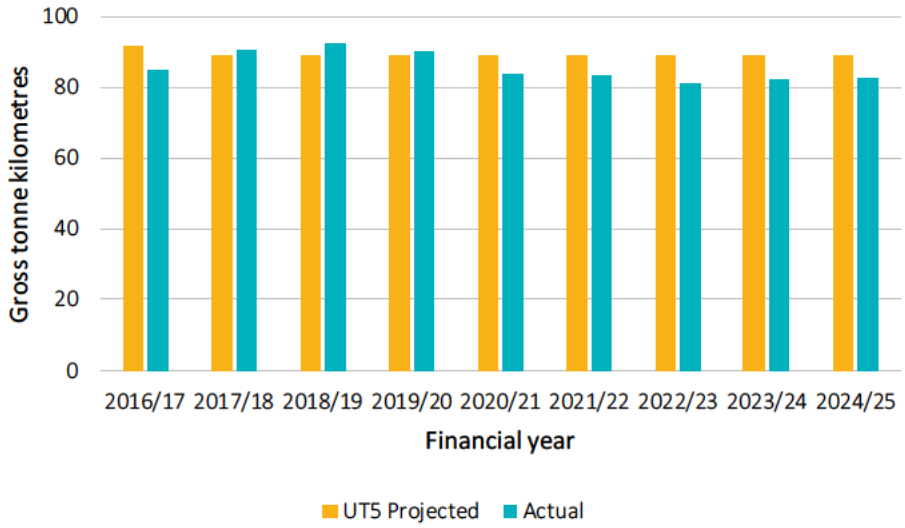
6 Exposure

6.1 Actual v Projected exposure

Gross Tonne Kilometres (GTK)

Figure 6.1 shows the actual versus projected Gross Tonne Kilometres (GTK), the exposure measure used for the modelling of derailment losses.

Figure 6.1 – Actual v Projected: Gross tonne kilometres (GTK)

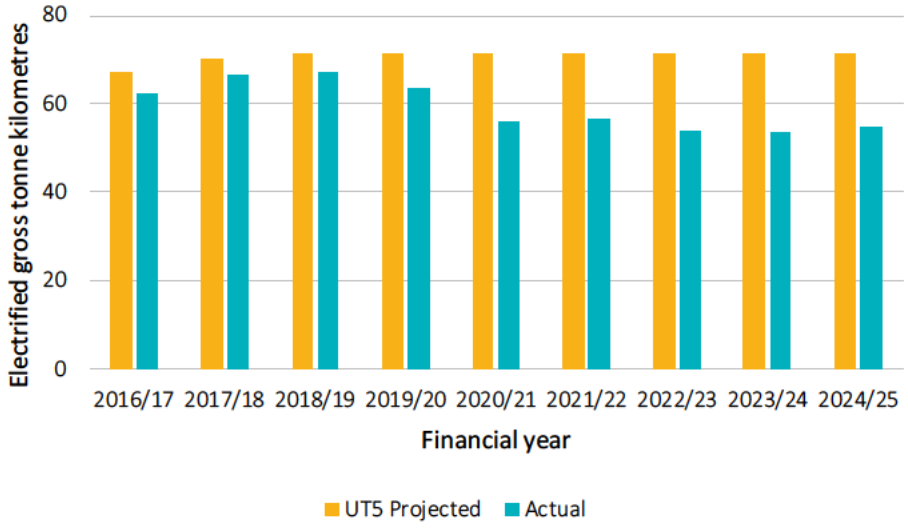


Actual GTKs were similar to the UT5 projections up to 2020/21, but lower (~10%) than projected thereafter. All else being equal, this means that previous derailment projections will be slightly overstated (as the assumed exposure was higher than actual exposure).

Electrified Gross Tonne Kilometres (eGTK)

Figure 6.2 shows the actual versus projected electrified Gross Tonne Kilometres (eGTK), the exposure measure used for the modelling of dewirement losses.

Figure 6.2 – Actual v Projected: electrified gross tonne kilometres (eGTK)

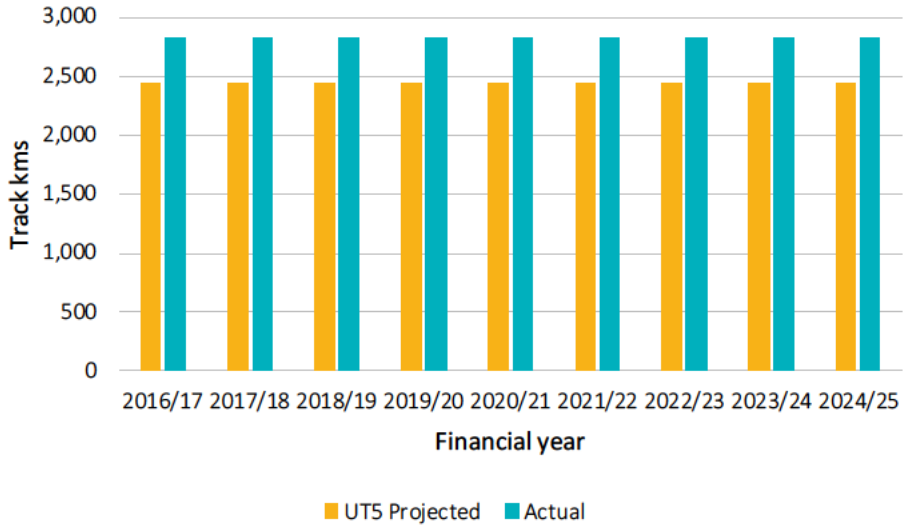


Actual eGTKs were lower (~20%) than the UT5 projections, particularly post 2019/20. All else being equal, this means that previous dewirements projections will be overstated (as the assumed exposure was higher than actual exposure). Despite the actual eGTK being lower than the original UT5 projections, Aurizon Network has advised of increasing costs of skilled electrical resources, which have led to higher actual dewirement payments than expected (discussed further in Section 8.1 below).

Track kilometres

Figure 6.3 shows the actual versus projected track kilometres, the exposure measure used for the modelling of weather losses and third-party repair losses.

Figure 6.3 – Actual v Projected: Track kilometres

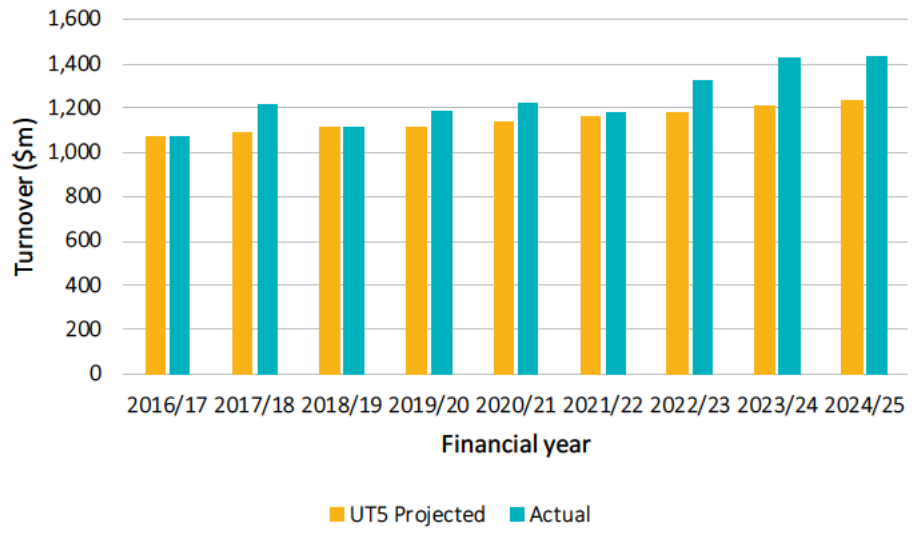


Actual track kms were higher (~15%) than the UT5 projections for all years. We understand that this change reflects data improvements relative to previous. All else being equal, this means that previous weather and third-party repair projections will be slightly understated (as the assumed exposure was lower than actual exposure).

Turnover

Figure 6.4 shows the actual versus projected turnover, the exposure measure used for the modelling of liability losses.

Figure 6.4 – Actual v Projected: Turnover

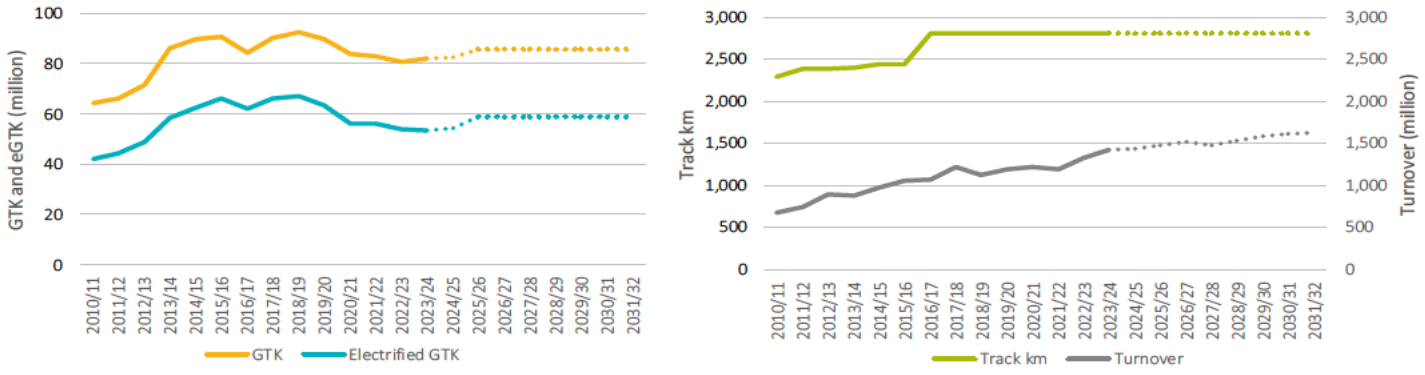


Actual turnover was similar to the UT5 projections for most periods, but higher for 2022/23 onwards. We understand that this reflects better outcomes from regulated revenue. All else being equal, this means that previous liability projections will be slightly understated (as the assumed exposure was lower than actual exposure).

6.2 Exposure projections

Figure 6.5 shows the historical and projected levels of exposure for GTK, eGTK, track kilometres and turnover. Note that both the historical and projected figures were provided by Aurizon Network.

Figure 6.5 – Historical and projected exposure



- GTK and eGTK
  - > There was a significant increase over the period from 2010/11 to 2014/15 due to the inclusion of additional coal systems – the Goonyella Abbott Point Expansion (GAPE) and Wiggins Island Rail Project (WIRP). The GTK and eGTK reduced slightly in 2020/21 and 2021/2022.
  - > Forecast levels (2024/25 onwards) are assumed to be similar to the recent history.

- Track kilometres
  - > Historical information was only provided up to 2016/17. Aurizon Network has confirmed there are no material changes from this point.
- Turnover
  - > Forecast levels are assumed to increase at a similar rate as historical levels.

7 Valuation of uninsured losses – Derailments

In this section we set out our valuation of CQCN's uninsured losses in respect of derailments.

7.1 Overview

We applied the following methodology to estimate losses in respect of derailments:

- Estimate future derailment frequency. This involved:
  - a Consideration of the number of historical derailments.
  - b Comparison of historical derailment numbers to a measure of exposure (Gross Tonne Kilometres).
  - c Projection of the future number of derailments, allowing for changes in exposure and trends observed in the historical data.
- Estimate the future cost per derailment. This involved:
  - a Review of historical derailment costs (below-rail costs only) adjusted for historical inflation to June 2025.
  - b Projecting future derailment costs with an allowance for inflation.
- The estimated total future derailment cost is obtained by multiplying the estimated frequency, the projected exposure, the assumed cost for each derailment as well as an allowance for future inflation.

We have assumed that major catastrophic derailment losses will be subject to pass through and we have not allowed for these in our estimate of self-insured costs. Specifically, we have not allowed for losses more severe than those included in Aurizon Network's own historical data for CQCN derailments.

Our analysis was performed separately by severity of derailment: low, medium and high. See Table 7.1 below. This approach is consistent with our previous review.

Table 7.1 – Derailment bands

Derailment bands	Cost
Low	Less than $25k
Medium	$25k - $500k
High	Greater than $500k

The following sections provide further detail on our approach and projections.

7.2 Actual vs Expected Experience

Table 7.2 shows the actual derailment loss experience for CQCN for the period from 2016/17 to 2024/25 relative to expectations.

Table 7.2 – Actual vs Expected experience

	Number			Average Size ($000)			Total Cost ($000)			
Severity	Actual	Expected	Difference	Actual	Expected	Difference	Actual	Expected	Difference	%
Low	90	194	-103	6	8	-2	562	1,552	-990	-64%
Medium	62	82	-20	94	103	-9	5,816	8,502	-2,686	-32%
High	23	17	6	1,021	1,300	-279	23,819	22,370	1,449	6%
Total	176	293	-118	172	111	61	30,197	32,424	-2,227	-7%

*Expected figures use previous claim frequency and average size assumptions, but actual exposure

The above table shows that relative to our projections:

- Costs associated with low and medium severity losses were lower than expected. This is mainly due to fewer than expected incidents occurring, but the average size of losses was also smaller than expected.
- Costs associated with high severity derailments were greater than expected, due to a higher number of high severity incidents than expected. The average size of these high severity derailments was smaller than expected (noting that due to the low number and high size of high severity derailments some volatility in experience is expected).
- The mix of claims was more heavily weighted towards medium and high severity claims than low severity claims than expected. This resulted in a higher total average size than expected.
- Overall, all derailment losses were $2.2m, or 7%, lower than expected.

7.3 Frequency

Our derailment frequency measure is calculated as the number of derailments per annum divided by million GTKs. We have used GTK as the exposure measure to project future derailment losses. This exposure measure has the advantage that it considers both the distance travelled and the amount of coal transported per year. We understand that this is the measure most commonly used in pricing by CQCN. We consider the frequency of low, medium and high severity derailments separately. This approach is unchanged from our previous valuation.

Figure 7.1 – Derailments per million GTKs

As shown in Figure 7.1, we note that:

- We have reduced our assumed frequency for all severity types compared to the previous review.
- The current frequency assumptions are consistent with the 8-year averages for each severity type. Experience has been consistent in recent years, and we believe that an 8-year average period means projections aren't unduly impacted by short-term volatility.
- At the previous review, claim frequencies for each severity category had reduced; however, we continued to give some credibility to the higher 2012/13 and prior experience. At the current review, we give full credibility to the more recent experience.
- We note that there can be significant volatility in the frequency from year to year in the frequency of medium and high severity derailments.

7.4 Selected average size

Figure 7.2 summarises the historical and selected average size of derailment losses. Average sizes are expressed in inflated June 2025 dollars.

Figure 7.2 – Derailments average size

Our projected average size of derailments within each severity band (blue bars) are consistent with the 8-year averages for each severity band, consistent with the frequency assumptions. The averaging period is shown by the grey lines in the figures above.

Since the previous assessment:

- Average sizes for low severity derailments have been lower in recent periods, resulting in the selection being lowered from $9.6k ($Jun25) to $6.7k.
- There has been little change to our assumed size for medium severity derailments, sitting at $124k.
- The selected average size for high severity derailments has been increased from $1.5m ($Jun25) to $2m. The most significant driver of this increase is the 2022/23 year, as a result of the Marmor derailment (DR00888 Marmor 594.812-595km 82P7) which cost $6.7m ($Jun25) in 2022/23 and another $2.4m ($Jun25) in 2023/24. This was the only high severity claim in 2022/23. Given the relatively small number of losses, we expect this assumption to be volatile, and a movement of this level is reasonable given this.

The average derailment size across all derailments (regardless of type) is $185k which is 40% higher than the average size of $132k ($Jun25) from the previous review. This increase is driven by both the reduction in the number of low severity derailments relative to medium and high severity incidents, as well as the higher average size selections for medium and high severity derailments.

7.5 Projected cost

The estimated total derailment cost for the next regulatory period is obtained by multiplying the estimated frequency, projected exposure and the assumed average cost per derailment for each period. A summary of our derailment projection results is shown below.

More detailed results are shown in Appendix C.

Table 7.3 – Projected Derailment Costs

Financial Year	GTK (millions)	Estimated Number of Derailments	Estimated Cost per Derailment	Estimated Total Cost ($000)	Previous Total ($000)[1]
2027/28	85.7	20	200	3,951	4,642
2028/29	85.7	20	206	4,075	4,789
2029/30	85.7	20	213	4,204	4,939
2030/31	85.7	20	219	4,336	5,095
2031/32	85.7	20	226	4,473	5,256
Total				21,039	24,721

[1]Allowing for actual exposure and inflation, but previous frequency and size assumptions

Note that dollars shown here are nominal

Our estimated cost of derailment losses for the UT6 period 2027/28 to 2031/32 is $21.0m. This is lower than the $24.7m estimate using the UT5 frequency and size assumptions, driven by the lower frequency selections across all size bands.

8 Valuation of uninsured losses – Other loss types

8.1 Dewirements

Dewirement losses are modelled using a similar approach to derailments, except that the exposure measure used is eGTK instead of GTK.

Actual vs Expected experience

Table 8.1 shows the actual dewirement loss experience for CQCN for the period from 2016/17 to 2024/25 relative to expectations.

Table 8.1 – Actual vs Expected experience

	Actual	Expected	Difference	%
Number	138	164	-26	-16%
Average Loss Size ($000)	28	17	11	64%
Total Cost ($000)	3,814	2,770	1,044	38%

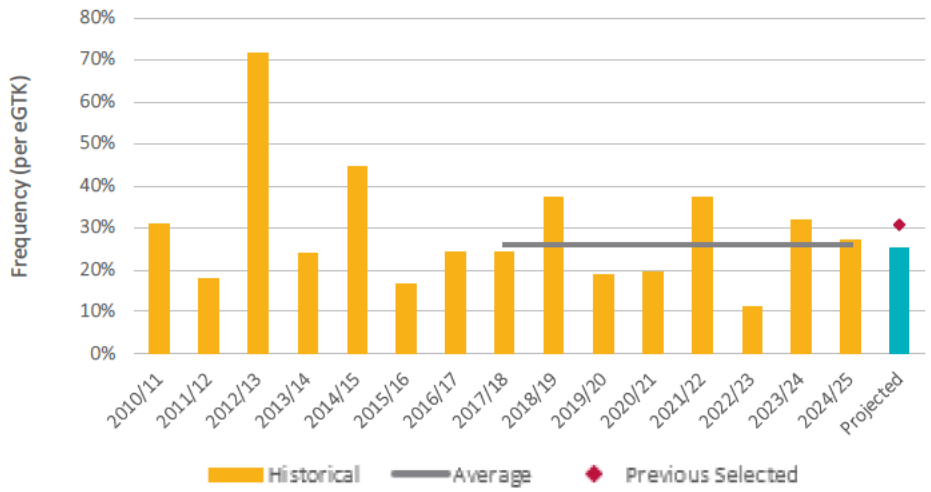
*Expected figures use previous claim frequency and average size assumptions, but actual exposure

Overall dewirement costs were 38% higher than expected, driven by a higher than expected average loss size, partially offset by fewer than expected incidents

Frequency

Figure 8.1 shows the historical and projected frequency per million eGTK.

Figure 8.1 – Dewirements frequency

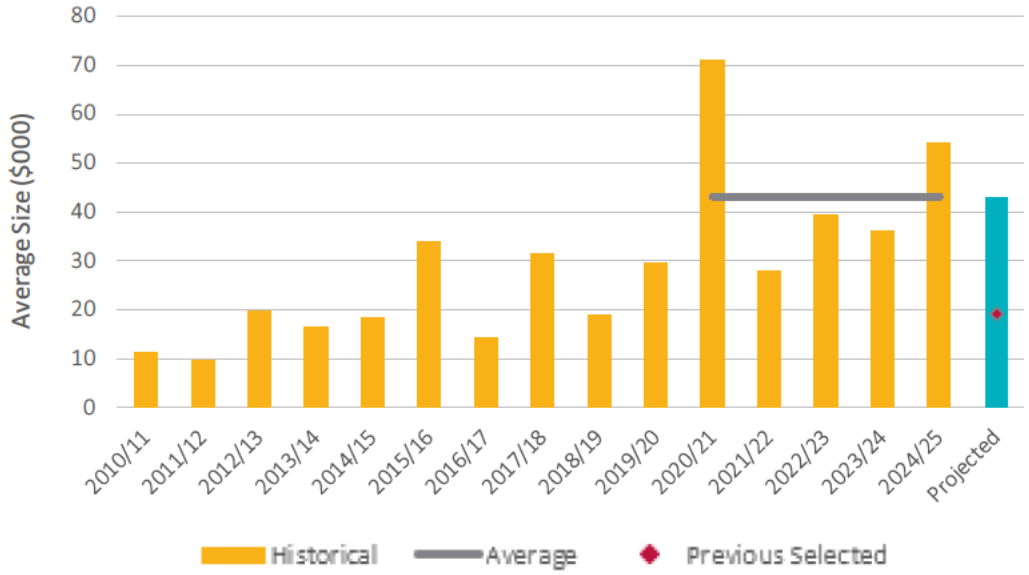


The frequency of dewirements is volatile, showing no clear trend over the period shown. We have selected a future frequency based on the average over the last 8 years, similar to derailments.

Selected average size

Figure 8.2 shows the historical and projected average size for dewirements. All figures are shown in June 2025 dollars.

Figure 8.2 – Dewirements average size



There has been a stepwise increase in the average size of dewirements over the last 5 years, which Aurizon Network has advised relates to higher costs of skilled electrical resources. Aurizon Network has advised that this level is expected to continue. Hence, we have aligned the selected average size with this period, more than doubling our average size selection from $19k ($Jun25, red marker in the graph above) to $43k (blue bar).

Projected cost

The estimated total dewirement cost for the next regulatory period is obtained by multiplying the estimated frequency, projected exposure and the assumed average size for each period. A summary of our dewirement projection results is shown below.

Table 8.2 – Projected Dewirement Costs

Financial Year	Electrified GTK (millions)	Cost per million EGTK per year ($)	**Estimated Cost ($000)**	Previous Total (adjusted) ($000)[1]
2027/28	59.0	11,618	**685**	372
2028/29	59.0	11,984	**707**	384
2029/30	59.0	12,362	**729**	396
2030/31	59.0	12,751	**752**	408
2031/32	59.0	13,153	**776**	421
Total UT6			**3,648**	1,981

[1]Allowing for actual exposure and inflation, but previous frequency and size assumptions

Note that dollars shown here are nominal

Our estimated cost of dewirement losses for the UT6 period 2027/28 to 2031/32 is $3.6m. This is higher than the $2.0m estimate using the UT5 frequency and size assumptions, driven by the significantly higher average size selection.

We assume that in the event that exceptional dewirement costs were incurred, for example, following a major cyclone, that Aurizon Network would seek pass through.

8.2 Weather related losses

Aurizon Network has provided us with details of weather-related losses to the CQCN for the 26- year period to March 2025. The majority of the losses have been caused by floods and cyclones. Full details are shown in Appendix D.

To estimate the future cost of weather-related losses to the network we:

- Calculated the historical annual losses from weather events per mainline track kilometre
- Excluded (in total) pass-through events
- Applied a selected annual loss per track kilometre to projected mainline track kilometres.

We have been informed that there have been 7 pass through events over the last 26 years, as follows:

- Queensland Flooding/Cyclone Olga January to February 2010
- Queensland Flood Damage Isaac Shire December 2010
- Flood Repairs December 2010 to January 2011
- Queensland Floods 2013
- Cyclone Marcia 2015
- Queensland Flooding 2016
- Cyclone Debbie 2017.

We have removed $53.5m (nominal) of cost from our analysis in respect of these events; with $13.9m of this relating to Cyclone Debbie (which is the only pass through event to have occurred since our previous review) (refer Appendix D).

Actual vs Expected Experience

Table 8.3 shows the actual weather-related loss experience for CQCN for the period from 2016/17 to 2024/25 relative to expectations. Losses are shown gross and net of Aurizon Network's pass-through recoveries.

Table 8.3– Actual versus Expected – Weather losses

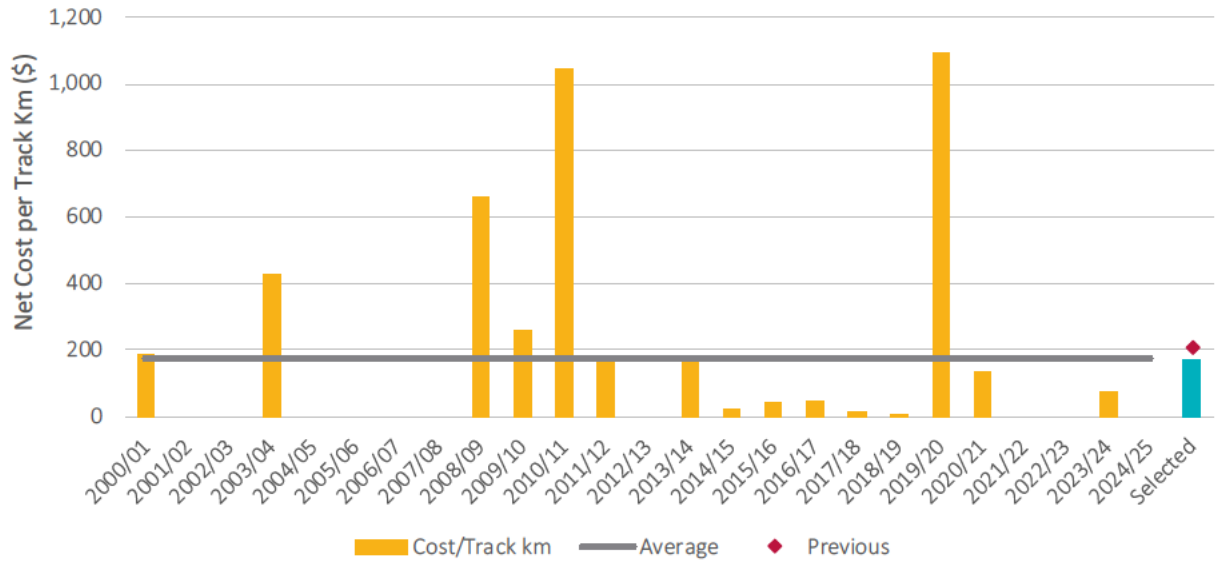
	Actual	Expected	Difference	%
Total Gross Cost ($000)	16,911	58,145	-41,234	-71%
Total Net Cost ($000)	3,000	3,489	-489	-14%

Both the gross and net costs were lower than expected. The majority of the gross cost relates to Cyclone Debbie.

Cost per Track Km

Figure 8.3 shows the net cost per track km of weather losses by year, along with our current selection for UT6 and our previous selection for UT5. All figures are inflated to June 2025 dollars.

Figure 8.3 – Weather-related net costs per track km



As large weather losses are eligible for pass through consideration (and if eligible, have nil net cost to Aurizon Network) the greatest risk in respect of natural events for Aurizon Network comes from multiple events where the total loss falls short of the $1m pass through threshold. This seems to be the case for the years that have the highest net cost in Figure 8.3. It also means that periods where significant damage was sustained due to adverse weather, don't necessarily correspond to periods with a high net cost. For example, we have assumed that the full gross cost of Cyclone Debbie ($13.9m) will be recovered.

Costs associated with weather losses are extremely volatile year on year and so we use a long period to set assumptions. Using a long period to assess weather event costs is typical in insurance. Using this long-term average has resulted in a 14% reduction to our net cost assumption for UT6 to $175 per mainline track kilometre, down from $205 at UT5 (inflated to June 2025).

Projected cost

We estimated future losses in respect of weather-related damage to the network by multiplying the assumed cost per kilometre by the projected number of mainline track kilometres for the four coal systems in the CQCN. The calculation is shown in Table 8.4 below. We have assumed that costs per kilometre would increase at the future rates of inflation for maintenance and repair costs provided by Aurizon Network. The length of track in the CQCN is based on estimates provided.

Table 8.4 – Estimated Future Claims – Weather Related

Financial Year	Estimated track kms	Estimated Cost per km per year ($)	**Estimated Cost ($000)**	Previous Total (adjusted) ($000)[1]
2027/28	2,819	189	**533**	624
2028/29	2,819	195	**550**	644
2029/30	2,819	201	**568**	664
2030/31	2,819	208	**585**	685
2031/32	2,819	214	**604**	706
Total UT6			**2,840**	3,322

[1]Allowing for actual exposure and inflation, but previous frequency and size assumptions

Note that dollars shown here are nominal

Our estimated cost of weather-related losses for the UT6 period 2027/28 to 2031/32 is $2.8m. This is lower than the $3.3m estimate using the UT5 cost per track km, due to the recent low net cost of weather-related losses per track kilometre driving down the long term average as shown above.

8.3 Third Party Repairs

Third party repair costs relate to damage to the Aurizon Network coal lines caused by third-parties net of any recovery that can be made against the responsible party. Third party repair losses are measured and projected relative to track kilometres.

Actual vs Expected experience

Table 8.5 shows the actual third-party repair loss experience for CQCN for the period from 2016/17 to 2024/25 relative to expectations.

Table 8.5– Actual versus Expected – Third party repair losses

	Estimated Claims ($000)[1]			
	Actual	Expected	Difference	%
Protest	1,145	0	1,145	
Non-Protest	3,800	2,386	1,414	59%
Total Third Party Losses	4,945	2,386	2,560	107%

*Expected figures use previous claim frequency and average size assumptions, but actual exposure

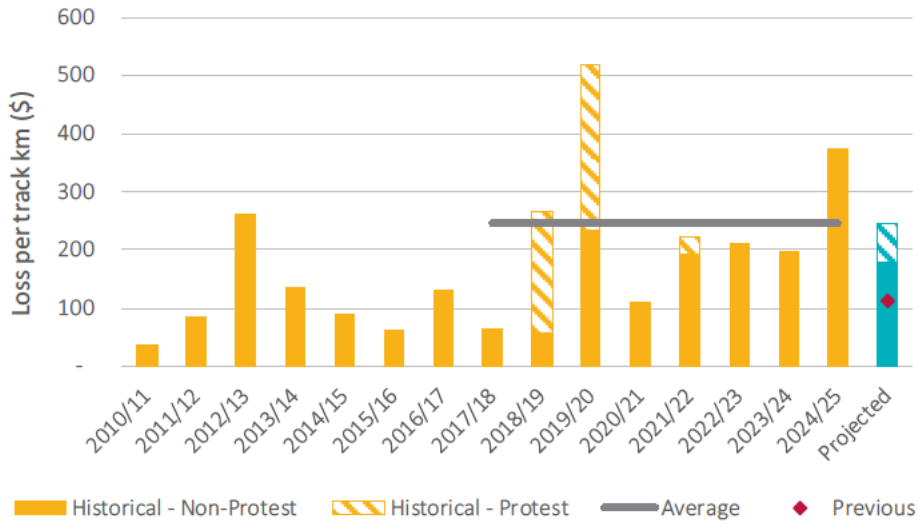
The overall cost of third-party repairs was 107% higher than expected, this can be split between:

- $1.1m of costs relating to "protests". At the previous review, there were no "protest" losses, and so this is essentially a new exposure that was not included in previous expectations. Discussions with Aurizon Network indicates it is appropriate to assume some future "protest" costs
- Non-protest third party repair costs were 59% higher than expected.

Cost per Track Km

Figure 8.4 shows the historical annual net third party repair cost per track kilometre along with our selection.

Figure 8.4 – Third Party Repair Losses per Track Kilometre



We have increased the selected cost per track km to be in line with recent experience (8-year average, aligned with derailments), this comprises of:

- An increase in the non-protest cost per track km from $110 ($Jun25) to $180
- An allowance of $65 per track km for protest costs.

Projected Cost

Table 8.6 shows our projected cost of $4.0m for third party repairs over UT6.

Table 8.6 – Projected Third Party Repairs Cost

Financial Year	Estimated track kms	Estimated Cost per km per year ($)	**Estimated Total Cost ($000)**	Previous Total (adjusted) ($000)[1]
2027/28	2,819	265	**746**	340
2028/29	2,819	273	**770**	351
2029/30	2,819	282	**794**	362
2030/31	2,819	291	**819**	373
2031/32	2,819	300	**845**	385
Total UT6			**3,975**	1,811

[1]Allowing for actual exposure and inflation, but previous frequency and size assumptions

Note that dollars shown here are nominal

9 Valuation of Below–deductible losses

9.1 Liability

For UT5 we were advised that the anticipated level of deductible for a stand-alone policy for Aurizon Network was $500k and we provided estimates on that basis. For UT6 we have been advised that the anticipated level of deductible for a stand-alone policy for Aurizon Network is $4m, and therefore have provided estimates on this basis in this report. The policy limit is $350m, with different sub-limits applying to some specific sub-classes. Should the deductible amount vary materially, our advice would need to be adjusted to accommodate this change. Our estimates for public liability exclude amounts that we expect would be recoverable under insurance.

We have used turnover as our exposure measure of public liability claims. This is one of the standard exposure measures used by public liability insurers.

9.1.1 Public Liability – Analysis

Actual vs Expected experience

Table 9.1 shows the actual experience of below-deductible liability losses over the period from 2016/17 to 2024/25 relative to expectations. We have adjusted actual losses to reflect a $500k deductible to ensure like for like comparisons with previous expectations.

Table 9.1 – Actual versus Expected liability

Financial Year	Estimated Net Claims ($000)[1]			
	Actual	Expected	Difference	%
2016/17	944	490	454	93%
2017/18	468	495	-27	-5%
2018/19	500	520	-20	-4%
2019/20	500	533	-33	-6%
2020/21	701	555	146	26%
2021/22	1,000	608	392	65%
2022/23	100	668	-568	-85%
2023/24	180	740	-560	-76%
2024/25	0	721	-721	-100%
Total	3,449	4,839	-1,389	-29%
Total (2017/18 to 2020/21)	2,169	2,103	66	3%

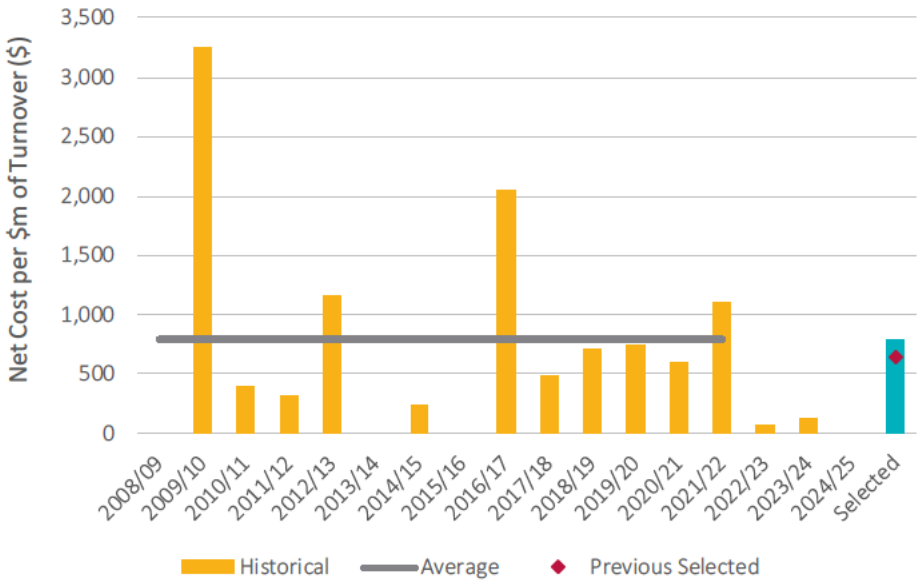
[1]Assuming $500k deductible

Actual liability payments were 29% lower than expected across 2016/17 to 2024/25. However, it can take a number of years for liability claims to fully develop and payments to emerge. Therefore, we consider it more appropriate to observe the experience for the years 2017/18 to 2020/21. The actual liability payments were close to expected (only 3% higher) for these years.

Cost per $m of Turnover

Figure 9.1 shows the historical and projected below-deductible liability costs (assuming a $4m deductible) divided by turnover.

Figure 9.1 – Liability Net Cost per $m of Turnover



We have increased the selected net cost per $m of turnover from $630 ($Jun25) to $790, reflecting the higher deductible in this review compared to the previous review.

Note that we have used the 14-year average from 2008/09 to 2021/22 as the basis for our selection. There are only a small number of liability claims per year so we have adopted a longer period when projecting costs. As liability claims take on average 30 months to be reported, we have not considered the last three years as they will be undeveloped.

Projected cost

Our estimates of CQCN's below-deductible liability losses for UT6 are shown in Table 9.2.

Table 9.2 – Results – Public liability

Financial Year	Turnover ($m)	Cost per $million of turnover ($)	**Estimated Cost ($000)**	Previous Total (adjusted) ($000)[1]
[redacted]				

[1]Allowing for actual exposure and inflation, but previous frequency and size assumptions

Note that dollars shown here are nominal

Our estimated cost of liability losses for the UT6 period 2027/28 to 2031/32 is $7.1m. This is higher than the result of $5.7m obtained by applying the previous assumptions to the current exposure and the previous $500k deductible.

10 Results

This section summarises the results of our valuation of Aurizon Network's self-insured losses with respect to:

- Uninsured derailment losses
- Other uninsured losses
- Below-deductible losses.

The results are shown on a party-party basis as described in Section 4.2 (i.e. Aurizon Network will be fully responsible for all below rail losses and have no liability for above rail losses). If this basis were to be changed our results should be reviewed.

10.1 Summary of projected costs

Table 10.1 summarises our self-insurance allowance for the UT6 period by loss type. All figures are expressed in nominal dollar of the year of loss.

Table 10.1- Summary of Estimates for CQCN by Loss Type

Loss Type	2027/28	2028/29	2029/30	2030/31	2031/32	Total	Previous (adjusted)[1]
	$000	$000	$000	$000	$000	**$000**	$000
Derailment	3,951	4,075	4,204	4,336	4,473	**21,039**	24,721
Dewirement	685	707	729	752	776	**3,648**	1,981
Weather	533	550	568	585	604	**2,840**	3,322
TP Repairs	746	770	794	819	845	**3,975**	1,811
Liability[2]	1,265	1,350	1,436	1,515	1,572	**7,139**	5,705
Total	7,181	7,453	7,731	8,008	8,269	**38,641**	37,539

[1] Adjusted for actual exposure, but based on previous frequency and size assumptions

[2] Liability amounts are not directly comparable to previous due to deductible difference

Our estimate of the annual cost starts at $7.2m for the 2027/28 financial year and increases to $8.3m in 2031/32. Our estimate across all five years is $38.6m. The largest component of the estimate is clearly derailment costs as they are typically the most frequent self-insured losses, and the most costly. The yearly increase in our estimates over the five-year regulatory period reflects both inflation and the anticipated growth in CQCN's operations (which is minimal). See Appendix E for graphs of historical and projected costs.

The estimates shown in the tables above are central estimates (i.e. intended to be the mean or expected value of the liabilities) and include an allowance for future growth in Aurizon Network's operations. The estimates are not discounted for the time value of money. The above estimates do not contain margins for expenses, reinsurance or profits and hence are expected to be lower than the commercial costs of insurance.

10.2 Comparison to UT5 estimates

Our estimate for UT6 is around $1.1m higher than the result obtained by applying UT5 assumptions. The main drivers of this change are:

- Increases in the following loss types:
  - Dewirements: There has been a stepwise increase in the last 5 years in the average cost of dewirements, and we have increased the selected average size accordingly.
  - Third Party Repairs: Higher costs than expected, partly driven by emerging costs relating to protests, have caused us to increase our selected cost per track km.

- Liability: Increases to the liability projection largely reflect the higher deductible being applied.

- Offset by reductions for the following loss types:
  - Derailments: At the previous review, claim frequencies for each severity category had reduced; however, we continued to give some credibility to the higher 2012/13 and prior experience. At the current review, we give full credibility to recent experience and have lowered the frequency selections.
  - Weather: Although there has been a weather event with a high gross cost to Aurizon Network since the previous review (Cyclone Debbie), the gross cost has still been lower than expected. Furthermore, pass through provisions have meant that the net cost has been significantly lower than expected. This has resulted in a lower expected cost going forward.

10.3 Summary of losses by exposure measure

The results shown in Table 10.1 are driven by projected exposure measures. In the event that projected exposure changes, and for ease of updating the results, we have illustrated the losses per unit of exposure specific to that particular loss. The dollars shown in Table 10.2 are as at the start of the UT6 period.

Table 10.2– Summary of Losses by Exposure Measure

Loss Type	Exposure Measure	Cost per Unit of Exposure ($)	
		Current	Previous
Derailment	GTKs (millions)	46,121	54,193
Dewirement	EGTKs (millions)	11,618	6,307
Weather	Track km	189	221
Third Party Repairs	Track km	265	121
Liability	Turnover (millions)	854	686

10.4 Notional premium

To estimate the notional premium corresponding to the estimates shown in Table 10.1 we have allowed for benchmark premium loadings. The loadings assumed are:

- **Expenses:** 22% of premiums (applied to derailments only). This loading is based on commercial property insurance benchmarks, specifically Finity's state of the insurance industry report, Optima 2024.
- **Profit and the net cost of reinsurance:** 0% of premiums. We note that the QCA did not accept the 20% allowance for reinsurance and profit margin included in our UT5 notional premium, and we have therefore not included an allowance for the UT6 notional premium. If we were to include a loading for profit and the net cost of reinsurance for UT6 it would be 20% of premiums, based on industry benchmarks.

The margins sought by insurers can vary significantly depending on the types of risks being written, the level of uncertainty surrounding those risks and the stage of the insurance cycle. The benchmarks applied are thought to be typical of those that might apply for this type of large commercial business.

We also note that unlike an insurer, Aurizon only gets the opportunity to "re-price" for the new UT period (which historically has been up to 10 years) whereas an insurer has the opportunity to re-price annually thus providing greater certainty as they can re-adjust premiums to recoup losses.

Table 10.3 shows the addition of these loadings to the estimated losses.

Table 10.3 – Estimation of notional insurance premium

Loss Type	2027/28	2028/29	2029/30	2030/31	2031/32	Total
	$000	$000	$000	$000	$000	$000
Derailment	4,820	4,972	5,129	5,290	5,457	25,667
Dewirement	685	707	729	752	776	3,648
Weather	533	550	568	585	604	2,840
TP Repairs	746	770	794	819	845	3,975
Liability	1,265	1,350	1,436	1,515	1,572	7,139
Total	8,050	8,349	8,656	8,962	9,253	43,270

Using these loadings our estimate of the notional insurance premiums corresponding to our central estimate is $43.3 million for the UT6 period.

11 Reliances and Limitations

We have relied on the accuracy and completeness of the data and other information (qualitative, quantitative, written and verbal) provided to us by Aurizon Network for the purpose of this advice. We have not independently verified or audited the data, but we have reviewed the information for general reasonableness and consistency. The reader of this report is relying on Aurizon Network and not Finity for the accuracy and reliability of the data. If any of the data or other information provided is inaccurate or incomplete, our advice may need to be revised and the report amended accordingly.

In estimating future self-insured costs the result depends on a number of assumptions including assumptions regarding the insurance coverage which will apply and deductible levels, the treatment of the specified losses as self-insured (as opposed to maintenance) and that pass through is accepted at the level assumed within the report. These assumptions are subject to policy decisions by Aurizon Network, market forces and regulatory determination. Should there be any variation in these assumptions our results will change and should be reviewed and updated accordingly.

We have prepared our estimates on the basis that they represent our current assessment of the likely future experience of Aurizon Network. Sources of uncertainty include the limited number of past events on which to base our assumptions and the presence, or absence, of large losses. Although the estimates we have prepared are best estimates, deviations of the actual experience from our estimates are normal and to be expected.

In making our estimates we have placed considerable reliance on the past experience of the portfolios. To the extent that estimates and assumptions are required there is a degree of uncertainty in the analysis. This is particularly due to the impact of a small number of large events. There are no margins included in our results to offset the potential impact of such uncertainty other than shown in Table 10.3.

This report has been prepared for the sole use of Aurizon Network for the purpose stated in Section 1. It is not intended, nor necessarily suitable, for any other purpose. Members of Finity staff are available to answer any queries, and the reader should seek that advice before drawing any conclusions or any issues in doubt. The report should be considered as a whole.

We understand that Aurizon Network may wish to provide a copy of our report to the QCA. Permission is hereby granted for such distribution on the condition that the entire report, rather than any excerpt, is distributed. No other use of, or reference to, this report should be made without prior written consent from Finity Consulting, nor should the whole or part of this report be disclosed to any other person.

Third parties, whether authorised or not to receive this report, should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein which would result in the creation of any duty or liability by Finity to the third party.

Appendices

A Data

A.1 Information Provided

The data we received for this review included:

- Exposure data
  - Fact sheets for each of the four coal systems: Blackwater, Goonyella, Newlands and Moura.
  - Track kilometres by coal system.
  - Network utilisation statistics in the form of Gross Tonne Kilometres (GTK) and Electrified Gross Tonne Kilometres (EGTK) including details of the amount of coal transported per coal system per year historically and estimated future loads to 2031/32.
- Turnover
  - Historical and projected turnover to 2031/32.
- Loss data
  - Uninsured loss data for 2016/17 to 2024/25 containing the following information:
    - Type of loss (derailment, weather, dewirement or third-party repair).
    - Location/Coal system of loss.
    - Revision code (an identifier code).
    - Basic start date (start date of repair works).
  - A listing of individual above deductible liability claims for 2016/17 to 2024/25.
- Other information
  - Individual review of weather events over the period by Aurizon Network staff to ensure that we have captured the correct net cost for each event.
  - Historical and future inflation assumptions consistent with other components of Aurizon Network's regulatory submission
  - A summary of Aurizon Network's 2024/25 insurance programme (including premium details by class of insurance). We have assumed these arrangements will remain in place for UT6 (other than a change to the liability deductible as advised by Aurizon Network).
  - Internal safety performance reports.

In addition to the above information, we had several discussions and email correspondence with Aurizon Network in order to understand the data and to ensure we were using the most appropriate data for our review.

A.2 Comments on data

There were two limitations to the data provided that had to be resolved which are set out below in Table A.1.

Table A.1 – Summary of Data Limitations

Loss Type	Data Received	Data Issues	Action/Approach
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

A.3 Data Reconciliations

We have relied on the accuracy and completeness of all information provided to us by Aurizon Network, both qualitative and quantitative, for the purpose of this review. We have checked the data for reasonableness and internal consistency between the various reports provided. However, we have not independently verified or audited the data against source documents. Nor was it possible to reconcile the information to the audited accounts.

We discussed summarised historical data with Aurizon Network staff to confirm that the annual loss costs appeared reasonable and where there have been strong trends in the data, reasons were sought to understand the drivers of these movements.

We consider the data provided to be of sufficient quality to produce estimates of future self-insured losses.

If for any reason, there is any material error or omission in the information provided, then this may materially impact our estimates in which case our advice may need to be revised.

B Network Summary

Figure B.1 – Network Map 1 – Blackwater and Moura

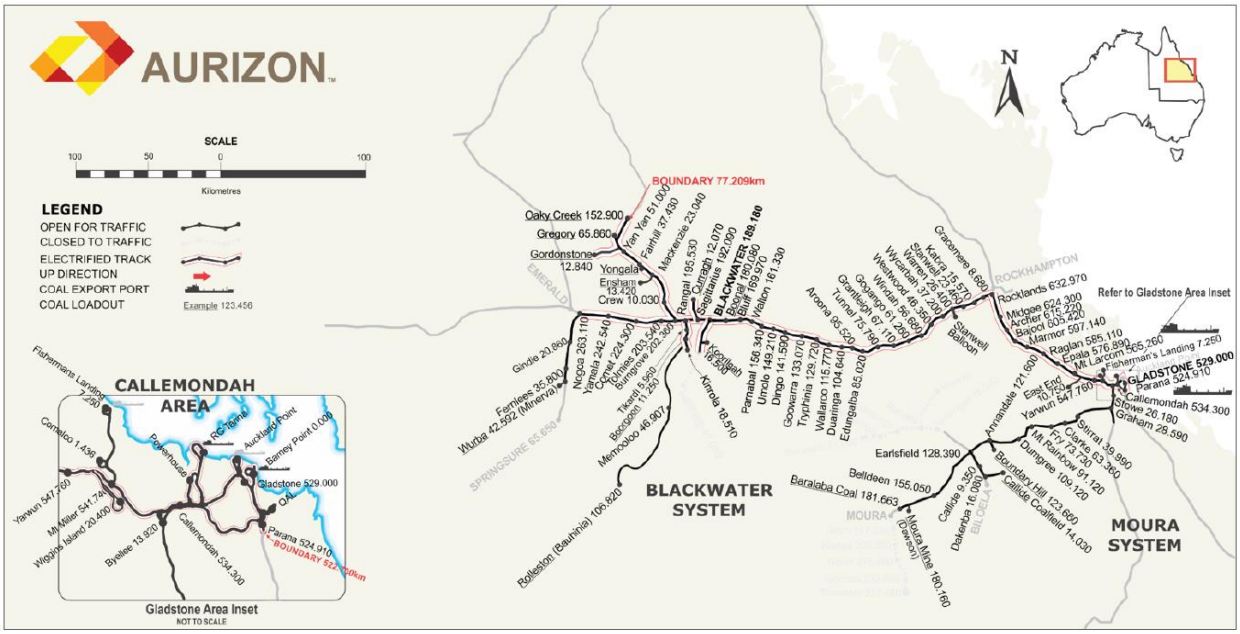
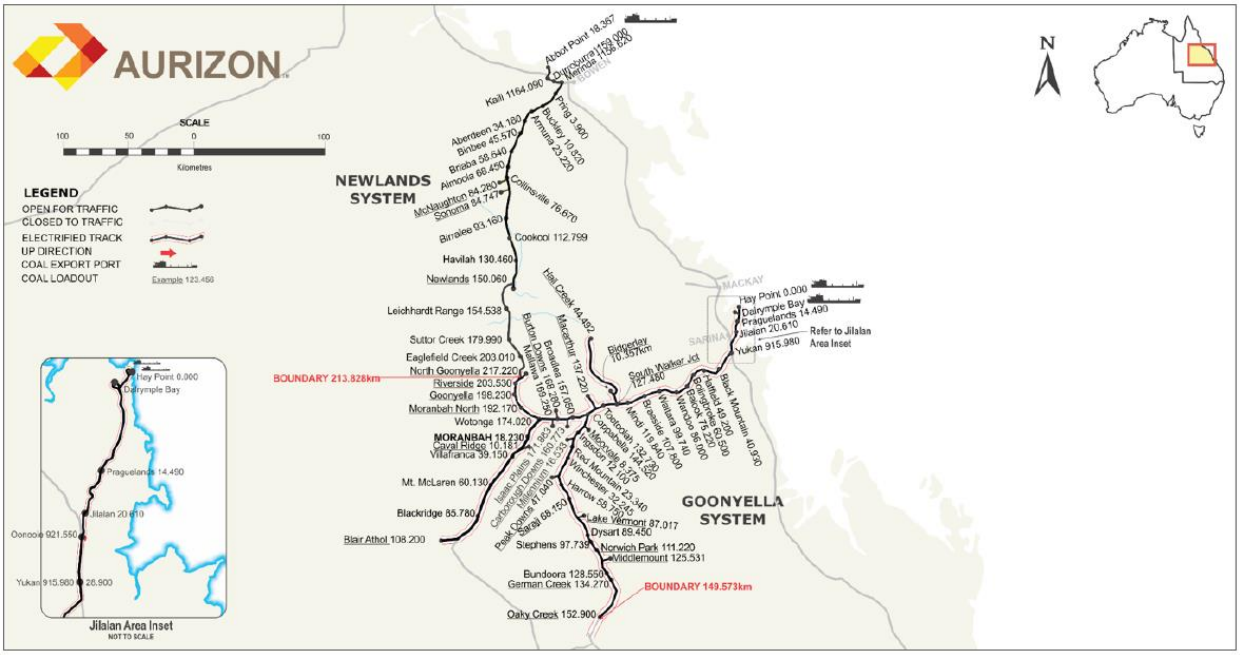


Figure B.2 – Network Map 2 – Goonyella and Newlands



C Derailment – Results

Table C.1 – Summary of Key Assumptions

Derailment Frequency (per million GTK)

	Selected Frequency	Previous Frequency
Small	0.14	0.25
Medium	0.08	0.11
Large	0.02	0.022

Derailment Cost ($)

	Selected	Previous Selected
Small	6,650	9,555
Medium	124,000	122,855
Large	2,000,000	1,549,341

Table C.2 – Derailment Losses by Severity

Financial Year	Estimated GTK (millions)	Derailment Type	Derailment Frequency per million GTKs	Estimated Number of Derailments	Estimated Below Rail Cost: Per Derailment ($000)	Estimated Below Rail Cost: Total ($000)	Previous Total ($000)[1]
2027/28	86	Low Severity	0.137	11.7	7	**84**	222
		Medium Severity	0.078	6.7	134	**898**	1,217
		High Severity	0.016	1.4	2,162	**2,969**	3,203
		Total	0.231	19.8	200	**3,951**	4,642
2028/29	86	Low Severity	0.137	11.7	7	**87**	229
		Medium Severity	0.078	6.7	138	**926**	1,256
		High Severity	0.016	1.4	2,230	**3,062**	3,304
		Total	0.231	19.8	206	**4,075**	4,789
2029/30	86	Low Severity	0.137	11.7	8	**89**	236
		Medium Severity	0.078	6.7	143	**955**	1,295
		High Severity	0.016	1.4	2,300	**3,159**	3,408
		Total	0.231	19.8	213	**4,204**	4,939
2030/31	86	Low Severity	0.137	11.7	8	**92**	244
		Medium Severity	0.078	6.7	147	**986**	1,336
		High Severity	0.016	1.4	2,372	**3,258**	3,515
		Total	0.231	19.8	219	**4,336**	5,095
2031/32	86	Low Severity	0.137	11.7	8	**95**	252
		Medium Severity	0.078	6.7	152	**1,017**	1,378
		High Severity	0.016	1.4	2,447	**3,361**	3,626
		Total	0.231	19.8	226	**4,473**	5,256
Total UT6	428	Low Severity		58.5	8	**448**	1,184
		Medium Severity		33.5	143	**4,782**	6,482
		High Severity		6.9	2,302	**15,809**	17,055
		Total		98.9	213	**21,039**	24,721

[1]Allowing for actual exposure and inflation, but previous frequency and size assumptions

Note that dollars shown here are nominal

D Weather Related and Other Events

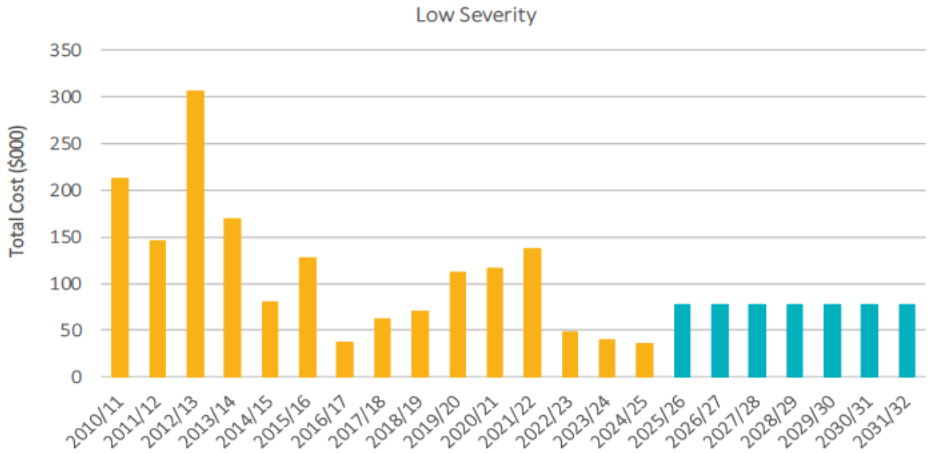
Table D.1 – Weather Related Events – CQCN

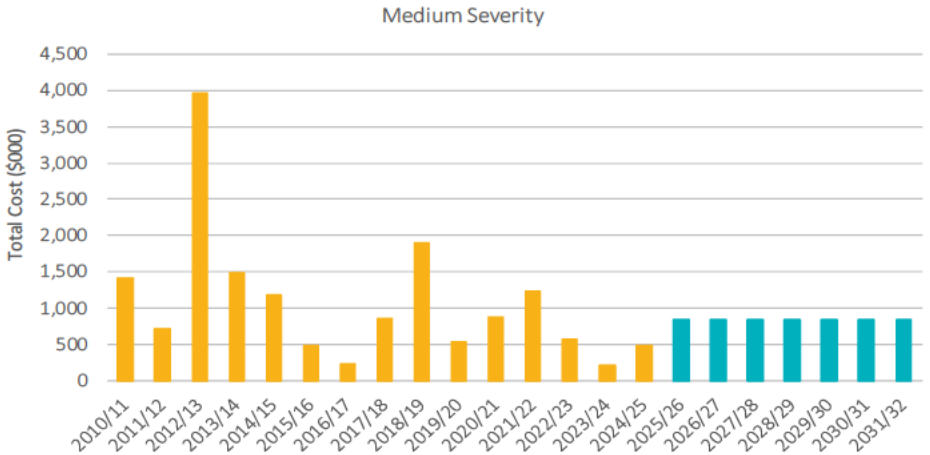
Financial Year of First Payment	Event/Description	Expenditure ($) Gross	Net
[redacted]			

E Projected Costs

The graphs below show the projected costs and are all expressed in June 2025 values.

Figure E.1 – Derailments: projected costs ($Jun25)





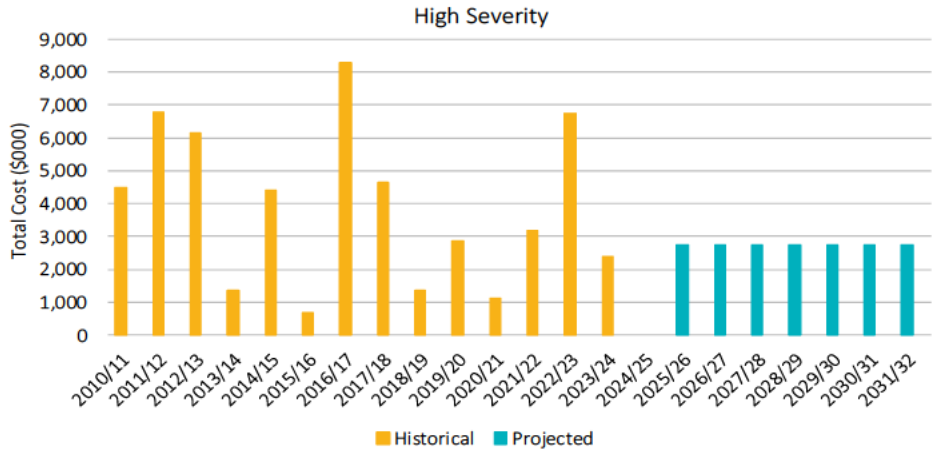


Figure E.2 – Dewirements: projected costs ($Jun25)

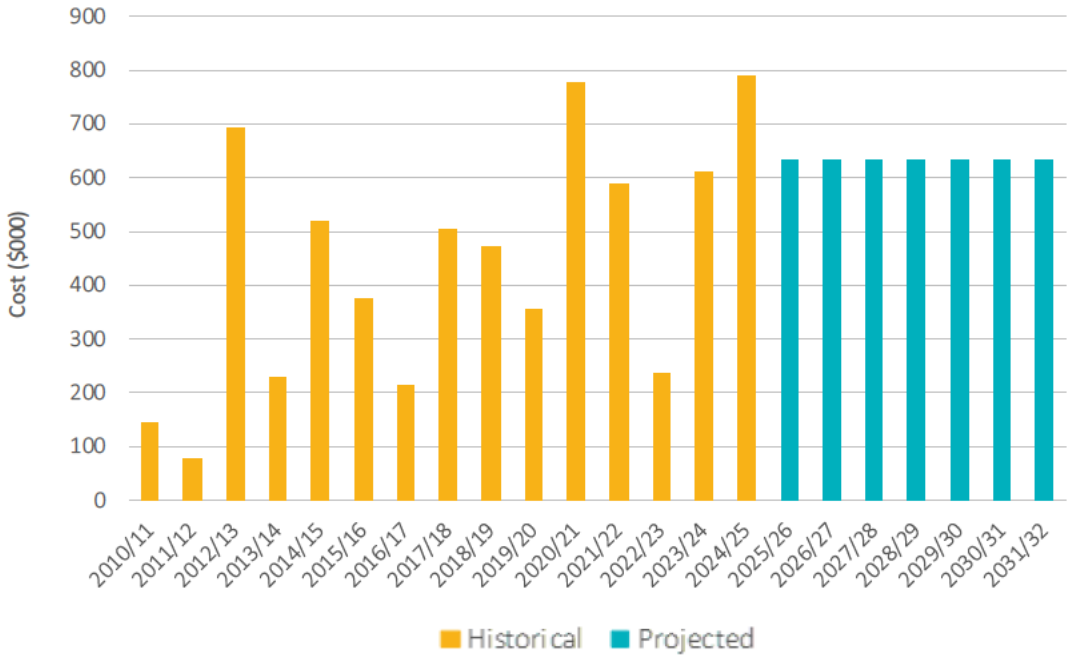


Figure E.3 – Weather: projected costs ($Jun25)

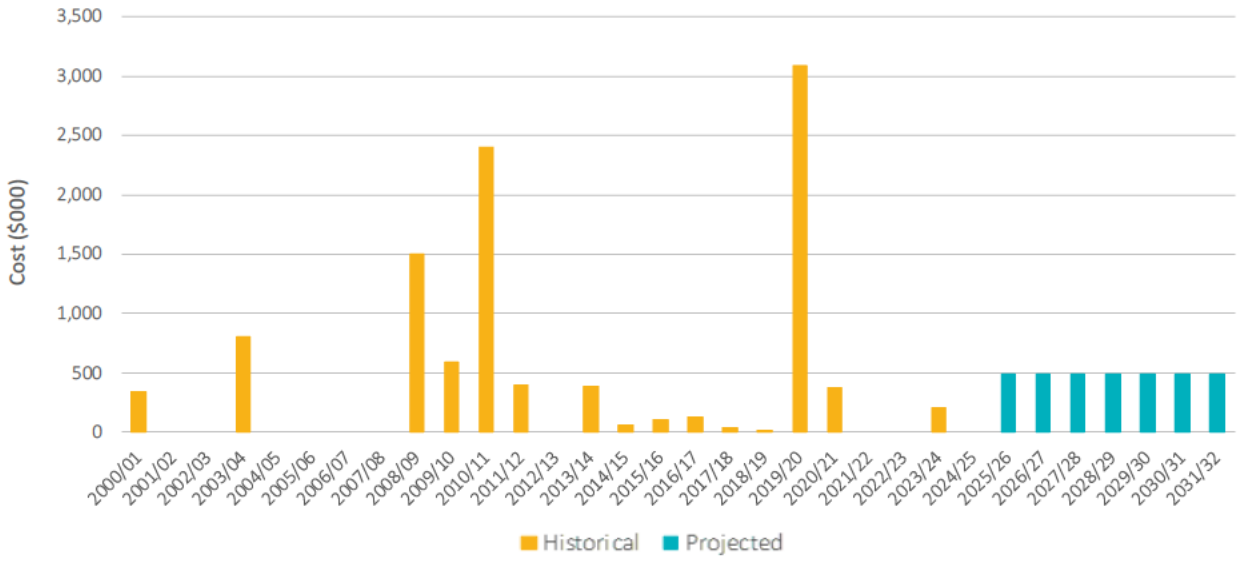


Figure E.4 – Third Party Repairs: projected costs ($Jun25)

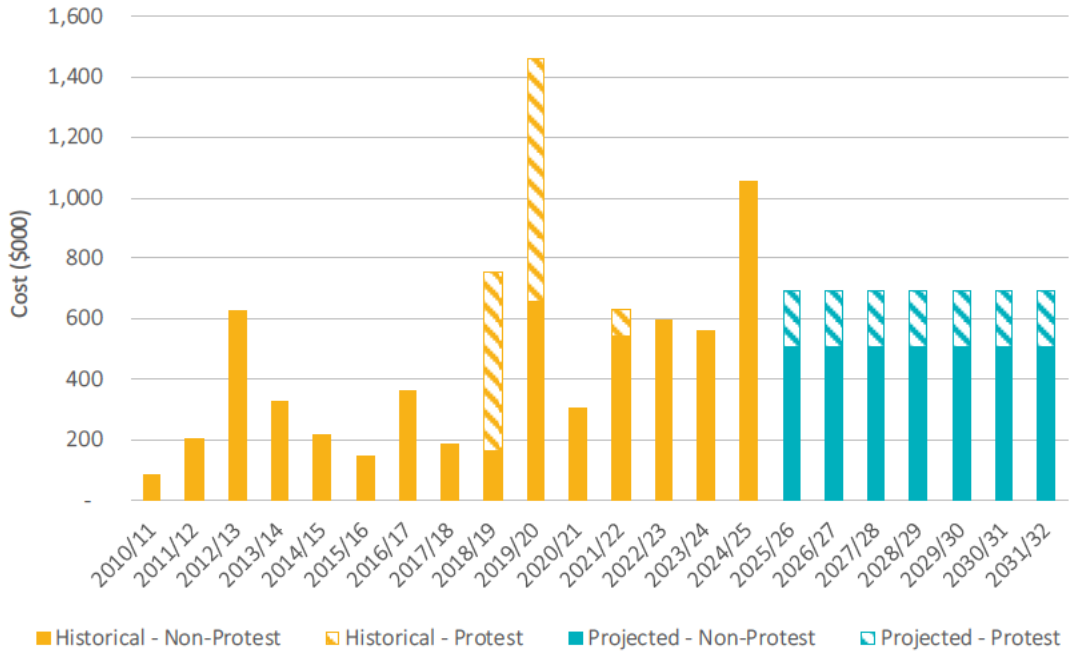
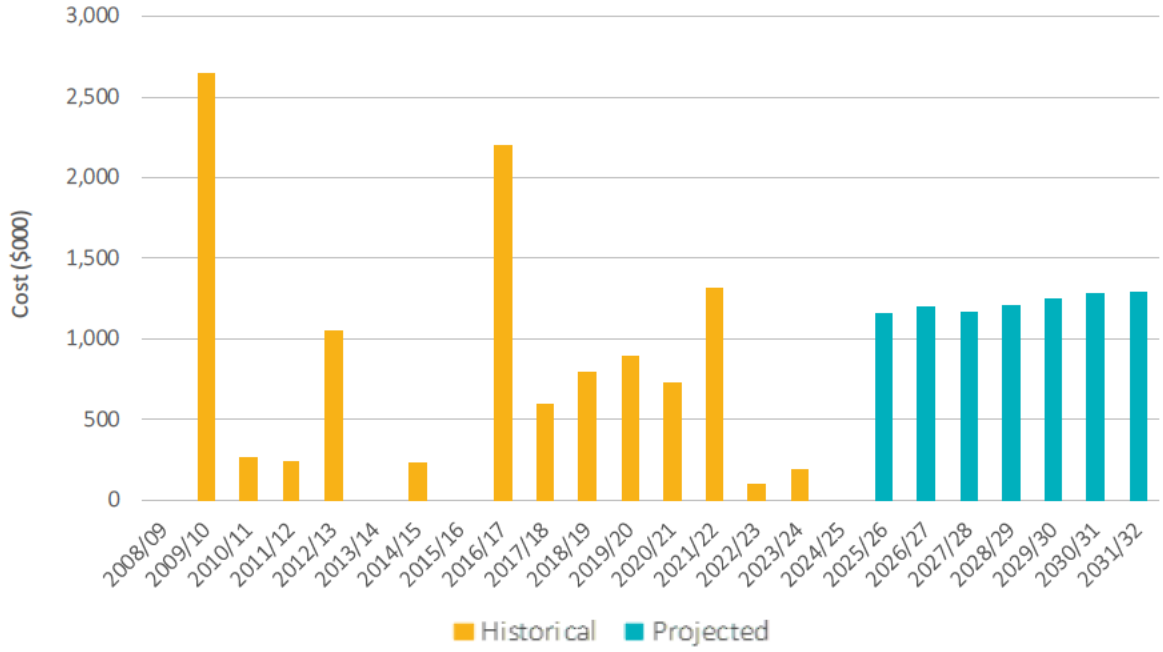


Figure E.5 – Liability: projected costs ($Jun25)



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