SUFA RENT MODEL - ANNUAL

This document is to be read in conjunction with the attached excel workbook designed to provide a stylised representation of how the SUFA rents are determined.

The model illustrates the determination of SUFA rents and their net present values (NPVs) over 13 years. It is comprised of a baseline scenario, and three separate scenarios to show:

- the impact of volume changes on reference tariffs

- how the revenue cap adjustment mechanism works in the context of revenue shortfall and surplus

- how both volume changes and the revenue cap adjustment mechanism work in tandem.

The objective is to illustrate that the NPV of each SUFA rental stream remains unchanged on an NPV basis, for the baseline scenario and the adjustment scenarios, despite over- and/or under-recoveries in revenue.

1.1   Background

Where there is user, or third-party financing, those funders will be compensated for the investment in the SUFA asset by receiving an amount equal to the return on, and the return of, the capital component of the access charges, as well as the tax element associated with the SUFA asset.

The weighted average cost of capital (WACC) that applies to a user, or third party funded SUFA infrastructure investment, will be the regulated WACC. The return of capital (or depreciation) applied is consistent with the methodology adopted within the regulatory framework in place at the time.

The return on, and return of, capital, as well as the tax allowance attributable to a SUFA asset, will be returned to investors through rent, as a proportion of monthly access charges. The underlying principles behind the rent calculation in a regulated environment are based on the concept of the system allowable revenue (SAR). This is the same as applied in computing the reference tariffs (under Aurizon Network's 2010 and 2016 Access Undertakings). The principles underpinning the rental methodology are outlined in schedule 1 of the Extension Infrastructure Sub-Lease (EISL)[1]. Schedule 2 of the EISL explains the methodological approach based on the regulatory principles in place at this time.

The following sections discuss how Aurizon Network's regulated revenue and prices are set and how the SUFA rents are then determined from that revenue. Given the illustrative nature of the rent calculations, we have retained the data that were used for the rent calculation examples published with our UT3 SUFA final decision.

1.1.1   Maximum allowable revenue (MAR)

The regulatory framework employs a 'building block' approach to determine a revenue requirement or MAR. This approach is commonly applied by regulators to ensure the regulated business has at least enough revenue to meet the efficient costs of providing access to regulated services, including a return on investment. The components of the MAR are:

- return on capital

- return of capital

- efficient operating costs

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[1] Aurizon Network, 2017 SUFA DAAU EISL, January 2017.

- efficient maintenance costs

- net tax payable.[2]

1.1.2   Volume forecasts and reference tariffs

Volume forecasts are used to convert the approved annual MAR into reference tariffs for the coal-carrying train services in the central Queensland coal network (CQCN). The CQCN reference tariffs for non-electric coal-carrying train services used for these calculations are:

Table 1   Reference Tariffs

Tariff	Description	Starting Price in the Model[3]	Revenue Formula
AT_1	reflects the incremental maintenance costs associated with an increase in volume. It is expressed as a unit rate per thousand GTK, recognising that additional maintenance costs arise from the 'wear and tear' of below-rail assets associated with a train service, in terms of train weight (including weight of coal hauled) and distance travelled.[4]	$0.50 per '000 GTK	AT_1 Revenue = (AT_1 X GTK'000) / 1000
AT_2	reflects the incremental cost of providing additional network capacity to access holders, when a system is at full capacity. AT_2 is levied in terms of train paths, recognising this measure as a typical indicator of capacity of railway infrastructure.[5]	$2,500/ train path	AT_2 Revenue = (AT_2 X train paths) / 1000
AT_3 and AT_4	AT_3 and AT_4 are allocative components levied on a net tonne kilometre (NTK) and net tonnes basis, respectively.[6]	AT_3: $2.69/000NTK (baseline 2013/14) AT_4: $0.69/net tonne (baseline 2013/14)	AT_3 Revenue = (AT_3 X NTK'000) / 1000 AT_4 Revenue = (AT_4 x net tonnes) / 1000
AT_5 and EC (electric energy charge)	These charges are applicable for electric train services.	Not applicable. See note below this table.	
QCA Levy	Reflects the fees charged by the QCA to the beneficiaries of its regulatory services. Levied on a net tonne basis.	Not modelled.	

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[2] QCA (2016), Aurizon Network 2014 Draft Access Undertaking – Volume IV—Maximum Allowable Revenue, final decision, p. 5.

[3] For years 2013-14

[4] QCA (2015), Draft Decision on Aurizon Network's 2014 Draft Access Undertaking - Volume III - Pricing & Tariffs, p. 339.

[5] QCA (2015), Draft Decision on Aurizon Network's 2014 Draft Access Undertaking - Volume III - Pricing & Tariffs, p.339.

[6] The AT3 and AT4 tariffs recover the remaining residual revenue (each 50% of the residual revenue) on a net tonne kilometre (AT_3) and net tonne basis (AT_4). These incremental tariffs include a distance taper, where the average access charge on a dollar per km basis declines as the distance increases.

Note: the SUFA models for the purpose of this example assume the SUFA assets only cover non-electric infrastructure. Hence, AT_5 and EC are excluded from the models and from the discussions that follow.
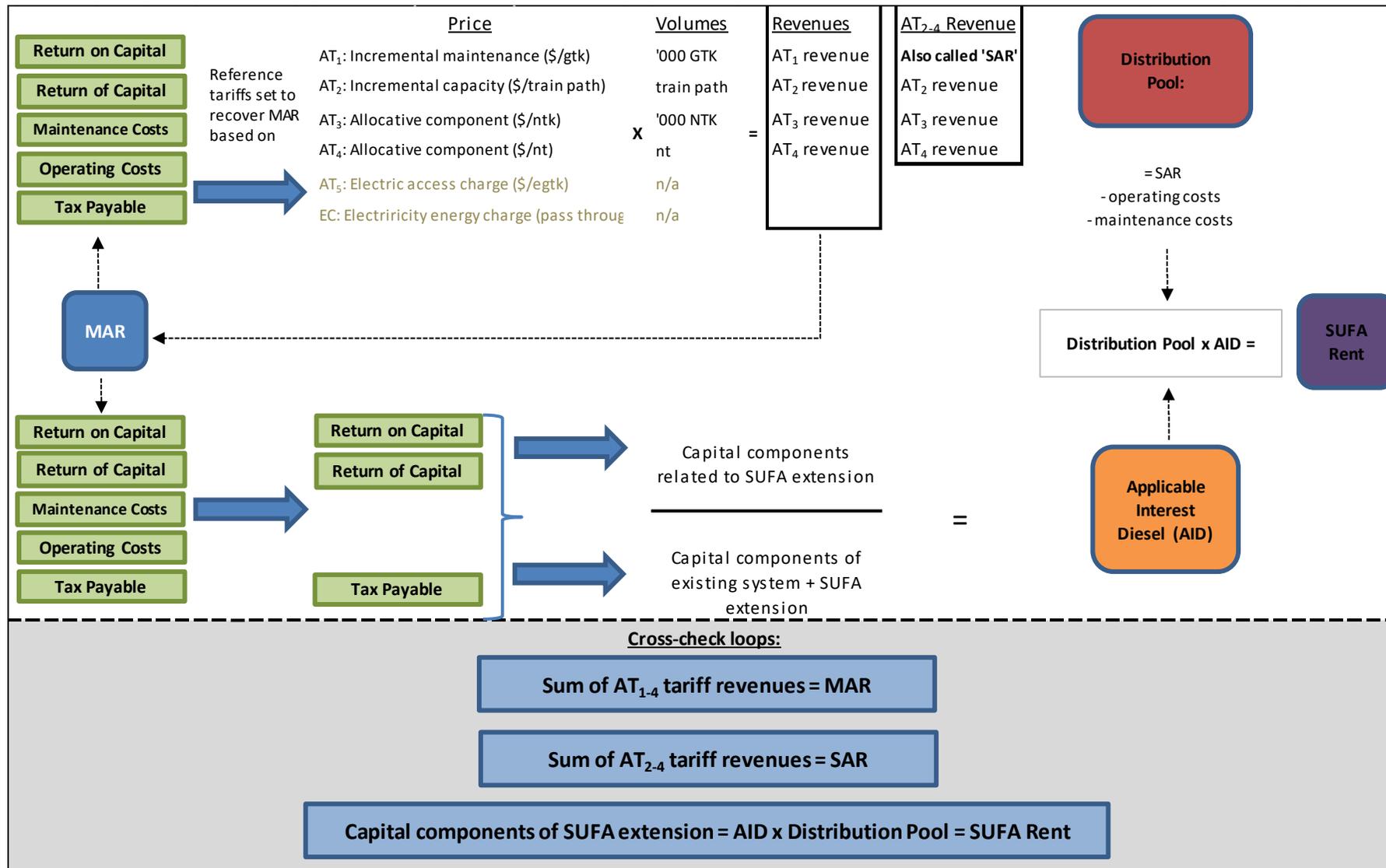
The sum of the AT_{2-4} tariff revenue (i.e. the revenue from the AT_{2-4} reference tariffs) is referred to as the system allowable revenue (SAR).

For more information and understanding of how the reference tariffs and the tariff revenues are calculated, see Aurizon Network's 2016 AU, particularly Schedule F and the definitions.

1.1.3   Determination of the SUFA rents

The following diagram is a pictorial overview of how the annual SUFA rents are determined from Aurizon Network's annual revenue requirement (i.e. the annual MAR), as depicted in **Figure** 1.

Figure 1: Determination of SUFA Rent

Source: EISL and our understanding of the SUFA annual rent model

Figure 1 shows the SUFA rent is determined as a proportion of the distribution pool applicable to the SUFA infrastructure, that is:

SUFA rent[7] = Distribution Pool x proportion of that pool attributable to the SUFA investors (AID).

The upper half of the Figure shows how the distribution pool is determined. The lower half shows how the AID is derived.

The distribution pool

The MAR and volume forecasts are used to calculate reference tariffs. As this example relates to non-electric coal-carrying services, reference tariffs AT_{1-4} are calculated. The sum of each reference tariff (AT_{1-4}) multiplied by its associated forecast volume metric should equal the MAR.

As noted above, AT_1 is designed to recover the incremental maintenance costs associated with an increase in volume. As SUFA rent does not include the maintenance costs, revenues related to AT_1 are excluded. SUFA rent is based on revenue received under reference tariffs AT_{2-4}. The sum of revenues collected from tariffs AT_{2-4} is also called system allowable revenue (SAR).

The distribution pool reflects the SAR less:

- operating costs

- maintenance costs not included in the tariff revenues associated with AT_1

- any adjustment charges and revenue adjustment amounts (discussed in the 'revenue cap adjustment' scenario).

AID and the capital components

The SUFA investors receive a proportion of the distribution pool as their rent. The allocation of the distribution pool between Aurizon Network and the SUFA investors is determined by the applicable interest diesel (AID) in this example.

The lower half of Figure 1 shows the derivation of the AID from the MAR.

Maintenance and operating costs are subtracted from MAR as SUFA rent is based on the return on and of capital, as well as the tax allowance attributable to the SUFA asset.

The AID is a simple ratio based on the share of capital components attributable to SUFA ('X' in the EISL, Schedule 2) as a proportion of the total capital component[8] of SAR, including the SUFA amount ('Z' in the EISL Schedule 2).

Hence:

$$AID = \frac{Capital\ component\ \text{for } SUFA \text{ extension}}{Capital\ components\ \text{for total system (including SUFA extension)}}$$

The terms in the denominator of the AID formula reflect the capital components for revenue related to all system assets (i.e. existing Aurizon Network assets plus the SUFA assets). The terms in the numerator reflect the capital components related to the revenue of the SUFA asset.

1.2   The Model

The model has been developed to illustrate:

- the determination of annual SUFA rents

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[7] For more detail, see Schedule 2, EISL

[8] This is not a defined term in the EISL.

- how annual rents may change for a year due to revenue over- or under-recoveries.

As demonstrated by the scenarios, any variations from the baseline for a year will be trued up in future years. The result is the SUFA rent will be rent neutral (on a net present value basis). Under this framework, the SUFA funders and Aurizon Network bear the same timing risk prior to the cash flows being corrected.

Each of the following sections describes the applicable worksheet in the model:

- assumptions - the fixed or given values for the model

- baseline - calculation of SUFA rents with no variation in volumes or revenues

- volume adjustment scenario - volumes are revised down prior to railing

- revenue cap scenario - revenue is adjusted two years after railing

- a combination of the volume adjustment scenario and the revenue cap scenario.

1.2.1   Assumptions

The model includes 13 years of operation of a system, with SUFA 1 operational from 2013-14, and SUFA 2 operational from 2018-19. The parameters in the following table are fixed (for simplicity) for the baseline and other scenarios. For avoidance of doubt the parameter assumptions reflect hypothetical values adopted for illustrative purposes. They should not be interpreted as reflecting an actual decision made by the QCA.

Table 2   Assumptions

Type	Description
Financial	
Weighted Average Cost of Capital (WACC)	Parameter assumption: 8.2%
Escalators	
Consumer Price Index (CPI)	Parameter assumption: 2.5% - used to escalate AT_2 in the spreadsheet example.
Maintenance Cost Index (MCI)	Parameter assumption: 3.5% - used to escalate AT_1.
Starting Tariffs	
AT_1 and AT_2: $0.50/'000GTK and $2,500/train path	Indicative values. For example, 2014–15 AT_1 tariff for Moura = $ 1.64/'000 GTK and AT_2 = $620.00/train path.[9]
Train and track assumptions: for existing system, SUFA 1 and SUFA 2	
Mainline Distance in km: as per project Payload: 8,500 net tonnes Gross weight - loaded: 11,000 tonnes Tare weight - empty: 2,500 Starting volume: 60,000,000 net tonnes per annum	Distance from origin to destination (mine to port) Weight of coal on each train. Indicative value.[10] Weight of train plus weight of coal. Indicative value. Weight of train. Indicative value. Indicative value used for the purposes of the spreadsheet example.

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[9] Aurizon Network, 2016 access undertaking, Schedule F, p. 394.

[10] An average Aurizon train on the CQCN has around 100 wagons and a payload of about 8,500 tonnes of coal.
   https://www.aurizon.com.au/news/news/record-136-wagon-train-to-new-coal-port

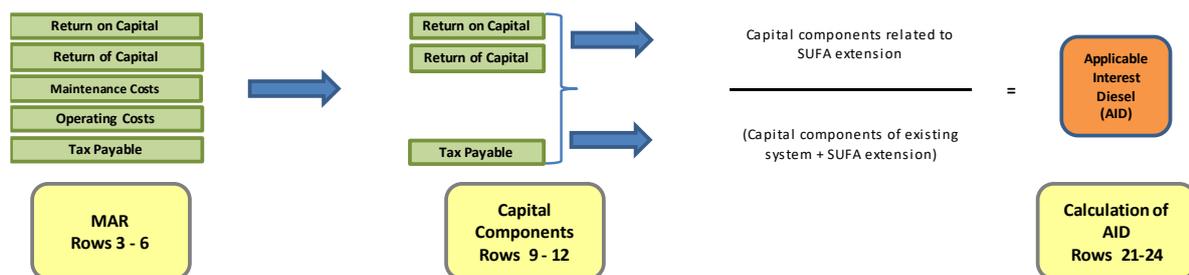| Type	Description
Calculated Volumes: for existing system, SUFA 1 and SUFA 2	
GTK'000 = train paths x average weight of loaded and empty trains x mainline distance/1000	This is the gross tonne kilometres attributed to the relevant train service (i.e. the operation of a train on the rail infrastructure from origin to destination) being the total weight of the train, including the weight of the coal being carried multiplied by the distance travelled.
Train paths = (net tonnes / payload) (rounded up to the nearest integer) X 2	Reflects the use of specified sections of the rail infrastructure (for a specified time) for carrying coal from origin (mines) to destination (ports), and return journey (from ports to mines).
NTK'000 = net tonnes x mainline distance/1000	Means the net tonne kilometres attributed to the relevant train service, determined by multiplying the net tonnes for each year by the distance travelled by that train service.

1.2.2   Baseline

Under the baseline scenario the following assumptions are made:

- MAR is equal to AT_{1-4} tariff revenue

- actual volumes equal forecast volumes

- forecast revenue equals actual revenue

- no over- or under-recovery of revenue and therefore no revenue adjustments necessary

- revenues for the SUFA assets and the pre-SUFA system are recovered through the same Reference Tariff.

Calculation of AID

Figure 2 below demonstrates how AID is calculated in the baseline tab of the worksheet. The AID is calculated for each of the SUFA projects and the existing system (the pre-SUFA system).
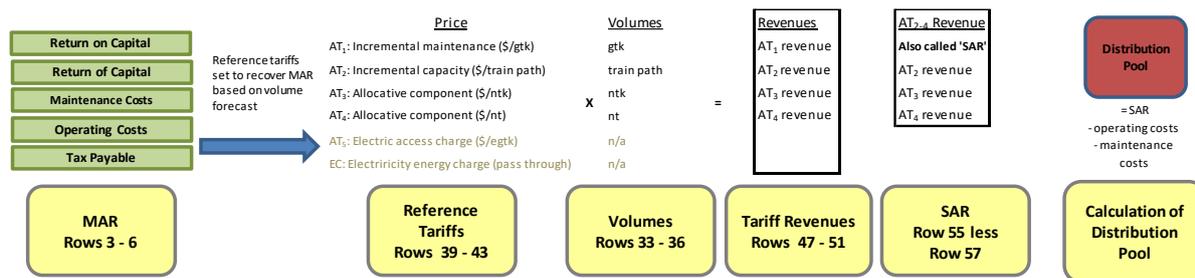
Figure 2: Calculation of AID

Step 1: Maintenance and operating costs are subtracted from the MAR.

Step 2: AIDs are calculated by dividing the capital component for the respective SUFA project (or existing system) by the capital component for the entire system (including SUFA projects).

1.2.3   Calculation of Distribution Pool

The following figure represents how the distribution pool is calculated.

Figure 3: Calculation of the distribution pool

The calculation of the distribution pool starts with the MAR.

Step 1: GTK's, train paths and NTK's are calculated given system forecast net tonnes (for existing system and SUFA projects). Calculation performed on Assumptions tab.

Step 2: Reference tariffs are determined using the MAR and system forecast volumes. AT_1 and AT_2 are escalated yearly by MCI and CPI respectively. After determining revenue recovered from the AT_1 and AT_2 tariffs, the residual revenue (i.e., 'MAR – AT_1 tariff revenue – AT_2 tariff revenue'), is recovered equally from AT_3 and AT_4.

Step 3: Revenues for each of the tariffs are calculated by multiplying the reference tariff by forecast volumes. The sum of tariff revenues for AT_{1-4} should equal to MAR.

Step 4: Subtract AT_1 revenues from the MAR. This results in the system allowable revenue (SAR).

Step 5: Subtract operating costs, maintenance costs not recovered through AT_1 tariff revenues[11].

1.2.4   SUFA rent calculation

SUFA rent is calculated by multiplying the distribution pool by the AID.

For example, rent for SUFA 1 in year 2013/14 ('Baseline' E66) is equal to the distribution pool ('Baseline' E63) multiplied by the AID for SUFA 1 ('Baseline' E22):

$149,036 X 16.5% = $24,558

The Net Present Values (NPV) of the SUFA rental streams for the 13 years are calculated at cells E69 and E70. The discount rate used is WACC.

The SUFA rental stream calculated via the distribution pool (row 66) aligns with the SUFA rental stream (row 28).

1.3   Volume adjustment scenario

1.3.1   Background

Aurizon Network's 2016 AU provides for it to seek the QCA's approval to adjust its reference tariffs prior to the beginning of each financial year with the objective of reducing future revenue cap adjustments.[12] One potential adjustment is an update of forecast volumes — for example net tonnes (nt) and gross tonne kilometres (GTK).

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[11] Any maintenance costs recovered through AT_{2-4} revenues must be deducted from the SAR to avoid maintenance-related costs being in the distribution pool.

[12] Schedule F, Clause 5.1(a)(ii), subject to Clause 5.6 of Aurizon Network's 2016 AU.

The process for reference tariff adjustments to reflect revised volume forecasts is described in Schedule F, cl. 4.1, 2016 AU.

The 'Volume adjustments' worksheet is set up as follows:

- **baseline values**: tariff revenues (rows 3-7); forecast volumes (rows 10-28); tariffs (rows 31-34)

- **revised forecast**: revised volumes (rows 37-55)

- **adjusted values**: adjusted tariffs (rows 58-61); adjusted revenues (rows 64-68); adjusted capital components (rows 71-72); adjusted rental stream SUFA 1 (rows 75-78)

- **impact on rent**: SUFA 1 (rows 75-82); SUFA 2 (rows 94-101)

- **impact on AID**: SUFA 1 (rows 116-118); SUFA 2 (rows 121-123).

1.3.2   Adjustment: net tonnes revised for SUFA 1

In this scenario, the net tonne forecast for year 2014-15 has been revised down by 5 million tonnes for SUFA 1 (F45). This could happen, for example, if a mine(s) on the SUFA 1 expansion does not ramp up as quickly as predicted.

The following table is a high level summary of impacts due to volume adjustment.

Table 3   Impact of lower forecast net tonnes

Component	Result
Volumes	Lower GTKs (F42), train paths (F43), NTK (F44) and net tonnes (F45) for SUFA 1 and in aggregate (F52 to F55)
MAR	The MAR will vary with changes to AT_1. However, the SAR will not vary with volume adjustments.
Tariffs and tariff revenues	The AT_1 and AT_2 tariffs remain unchanged from the baseline values (compare F31 with F58, and F32 with F59).
	AT_3 and AT_4 increase (compare F33 to F60, and F34 to F61) in a manner that ensures that the aggregate MAR remains the same as in the baseline (compare F7 to F68).
	This leads to a change in the distribution of MAR amongst the four tariff elements, relative to that in the baseline. The tariff revenue for AT_1 and AT_2 declines (compare F3 and F4 with F64 and F65), whilst that for AT_3 and AT_4 increases (compare F5 and F6 to F66 and F67).
SUFA Rent	The system capital components remain unchanged (see F71 and F72) as has the resulting SUFA 1 rental stream (see F75 to F78).
	As such there is no change to the NPV of SUFA 1 rental cash flows over the period defined (see E80 to E82) and no yearly variability (see F78 to Q78).

1.4   Revenue cap adjustment

1.4.1   Background

Aurizon Network operates under a 'revenue cap' form of regulation. Under a revenue cap, Aurizon Network is entitled to recover the approved revenue (SAR). If it under-recovers (over-recovers) revenue relative to the SAR, it can either:

- submit a 'revenue adjustment amount'[13] to the QCA, whereby Aurizon Network receives (repays) the difference between the actual revenue collected and the SAR, via adjustments to the reference tariffs

- request the QCA to approve an adjustment charge.

This scenario looks only at a revenue adjustment amount.

If the QCA approves a revenue adjustment submission by Aurizon Network, that adjustment amount will result in a variation to the reference tariffs two years after the revenue under- or over-recovery. For example, a revenue under- or over-recovery in 2014-15 will be adjusted through the 2016-17 reference tariffs.[14]

The 'Rev cap adjust' worksheet is set up as follows:

- **baseline values:** tariff revenues (rows 3-7); forecast volumes (rows 10-28); tariffs (rows 31-34)

- **revenue cap adjustment**: adjustment to tariff (rows 37-38)

- **baseline tariffs (including revenue cap adjustment)**: adjusted tariffs from baseline (rows 41-44)

- **actual values:** actual volumes (rows 49-67); actual tariff revenues (rows 70-74); SAR over/under-recovered (rows 76-78)

- **allocation of over/under-recovery:** baseline capital components (rows 81-84); proportions of capital components (rows 87-90); adjustment allocation (rows 93-96)

- **adjustments**: capital components (rows 99-102); rental streams (rows 111-112)

- **rental stream comparison**: SUFA 1 (rows 115-135); SUFA 2 (rows 138-158).

1.4.2   Adjustment: revenue cap adjustments

In this scenario, actual volumes are:

- lower than forecast for 2014-15, resulting in revenue under-recovery - adjusted in 2016-17

- higher than forecast for 2021-22, resulting in revenue over-recovery - adjusted in 2023-24.

Under-recovery in 2014-15

Table 3   Impact of lower actual volume (SUFA 1)

Component	Impact
Total volumes	The actual volume is lower than forecast for SUFA 1 (F57), which results in a lower combined actual volume for 2014-15 (F67) compared with baseline (F28).
Tariff revenues	Lower actual volumes result in lower total revenue and lower revenue per tariff for 2014-15 (cells F70- F74) compared with the approved allowable revenue for that year under the baseline scenario (cell F7).
	Under the 2016 AU, a revenue adjustment amount is calculated using the total actual revenue for AT_{2-4} less the adjusted system allowable revenue for AT_{2-4}. This is captured in the worksheet as the revenue adjustment amount of -$9,055 (cell F77). The negative sign indicates an under-recovery of revenue.
	The revenue shortfall amount in 2014-15 is recovered in 2016-17, when it stands at $10,596 (H78) (escalated at WACC). This is the amount that Aurizon Network will recover from customers/users.

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[13] Schedule F, cl. 4.3 Aurizon Network's 2016 AU

[14] The timing gap is to provide sufficient time for Aurizon Network to determine the under- or over-recovery and for the QCA to assess the validity of Aurizon Network's claim for the revenue adjustment amount.

Component	Impact
Tariff prices	AT_1 and AT_2 are fixed. AT_3 and AT_4 increase in 2016-17 to recover the shortfall. Revenue adjustment amounts are added onto AT_3 and AT_4 to recover the shortfall and are calculated as follows: $AT_{3\ revenue\ adjustment}$ = ($10,596 x 1000 x 50%)/22,500,000NTKs = $0.24/NTK (H37) $AT_{4\ revenue\ adjustment}$ = ($10,596 x 1000 x 50%)/90,000,000NT = $0.06/NT (H38) The resulting tariffs in 2016-17 are: AT_3 = $3.06/'000 NTK + $0.24/'000 NTK = $3.29/NTK (H43) AT_4 = $0.76/NT + $0.06/NT = $0.82/NT (H44)
SUFA Rent	As the shortfall relates to all assets (i.e. existing assets and SUFA 1), the shortfall is allocated across all assets, according to their individual share of the total capital components (the AID). The proportion of the shortfall allocated to SUFA 1 is -$2,349 (cell F94 - shortfall amount multiplied by the AID for SUFA 1 - 25.9%). This equates to a rent under-payment for 2014/15. This under-payment is repaid in 2016-17 — it is escalated at WACC and determined on the AID used in the year of under-recovery (2014-15) to equal $2,749) (H94). Rows 115 through 117 compare the difference of the baseline rental stream and the adjusted. Yearly differences are in row 117 reflecting underpayments or overpayments of rent with a corresponding true up two years later. The net present value of the baseline rental stream and the adjusted rental stream over the 13 years is calculated in cells, E119 and E120. The difference between the cash flows is calculated in E121. The result is no change to the NPV of rental cash flow over time.

Over-recovery in 2021-22

Table 4   Impact of higher actual volumes (SUFA 1 and SUFA 2)

Component	Impact
Total volumes	Actual volumes are higher than forecast for SUFA 1 and SUFA 2, which results in the combined actual volume being higher in 2021-22 (cells M54-M57, M59-M62, and M64-M67) compared with baseline (M28).
Tariff revenues	Higher volumes result in higher revenues for 2021-22 (M74) compared to the approved revenue for that year under the baseline scenario (cell M7). Under the 2016 AU, a revenue adjustment amount is calculated using the total actual revenue for AT_{2-4} less the adjusted system allowable revenue for AT_{2-4}. This is captured in the worksheet as the revenue adjustment amount of $17,712 (cell M77). This over-recovery disbursed back to users in 2023-24, when the over-recovery amount stands at -$20,727 (escalated at WACC) (O78). The negative sign indicates this amount is to be given back to customers.
Tariff prices	AT_1 and AT_2 are fixed. AT_3 and AT_4 decrease to account for the over-recovery. Revenue adjustment amounts are subtracted from AT_3 and AT_4 to disburse the over-recovery and are calculated as follows: $AT_{3\ revenue\ adjustment}$ = (-$20,727 x 1000 x 50%)/27,600,000NTKs = -$0.38 /'000 NTK (O37) $AT_{4\ revenue\ adjustment}$ = (-$20,727 x 1000 x 50%)/120,000,000NT = -$0.09/NT (O38) The resulting tariffs in 2023-24 are: AT_3 = $2.74/'000 NTK - $0.38/'000 NTK = $2.36/'000 NTK (O43) AT_4 = $0.63/NT - $0.09/NT = $0.54/NT (O44)
SUFA Rent	Following the same approach for under-recovery, the over-recovery is allocated across the existing system, SUFA 1 and SUFA 2 according to the respective share of the total capital

Component	Impact
	components (cells M93-M96) — in other words, the AID.
	The proportion of the over-recovery allocated to SUFA 1 is $3,570 (M94) and the proportion allocated to SUFA 2 is $2,062 (M95) based on the AID in years 2021/22.
	Rows 115 through 117 compare the difference of the baseline rental stream and the adjusted rental stream. Yearly differences are in row 117 reflecting underpayments or overpayments of rent with a corresponding true up two years later.
	The net present value of the baseline rental stream and the adjusted rental stream over the 13 years is calculated in cells, E119 and E120 (for SUFA 1) and E142 and E143 (for SUFA 2). The difference between the cash flows is calculated in E121 and E144. The result is no change to NPV of rental cash flow over time.

1.5   Combined adjustment

This scenario is designed to capture both the volume adjustment scenario and the revenue cap adjustment scenario. Table 5 provides a high level view of the impact of the scenario.

1.5.1   Adjustments: Volume adjustment and revenue under-recovery (2014/15) and revenue over-recovery (2021/22)

The following table provides a high level description of the following scenario as found in the combined adjustment tab:

- volumes are revised down (re-forecast) from baseline in 2014/15

- actual volumes are lower than revised forecast volumes in 2014/15

- actual volumes are higher than the baseline forecast in 2021/22.

Table 5   Impact of volume adjustment, lower actual volumes and over-recovery

Component	Impact in 2014/15	Impact in 2021/22
Total volumes	In 2014/15, the volume forecast is revised downward (F45 and F55). Actual volumes also come in lower than the baseline and the revised forecast (F91 and F101).	In 2021/22, actual volumes for SUFA 1 and 2 are greater than forecast, resulting in higher combined actual volumes (M91, M96 and M101).
Tariff revenues	Actual volumes are lower than baseline and lower than the revised forecast resulting in lower tariff revenues. The amount which can be recovered under the revenue cap adjustment is the difference in the sum of AT_{2-4} revenues with revised volumes and AT_{2-4} revenues with actual volumes (F111).	An over-recovery of $17,712 in 2021/22 is disbursed back to users in 2023/24 in the amount of -$20,727 (escalated at WACC) via lower tariffs (AT_3 and AT_4) (M111 and O112)
Tariffs	AT_1 and AT_2 are fixed. AT_3 and AT_4 are adjusted (increased) to account for the revised lower forecast volume in 2014/15 (F60 and F61) AT_3 and AT_4 are adjusted (increased) in 2016/17 due to lower actual volume railed compared to revised forecast to account for the under-recovery (H70 and H71). For more information see under-recovery table.	AT_1 and AT_2 are fixed. AT_3 and AT_4 decrease in 2023/24 to account for the over-recovery in 2021/22. (O70 and O71) See over-recovery table for calculation of the new tariff prices.
SUFA Rent	No change to NPV of rental cash flow over time (E155 and E178).	No change to NPV of rental cash flow over time (E155 and E178).

1.6   Observations

The scenarios are designed to show the sensitivity of the SUFA annual rent to volume and revenue adjustments.

Under a revenue cap form of regulation, there may be annual fluctuations in the SUFA rental stream (revenue), but the total variability of rent (revenue) is eliminated from an NPV perspective. With the revenue cap mechanism, a shortfall (or over-recovery) in revenue in one year is offset by an increase (decrease) in the allowable revenue in another year (other things remaining equal) – so over the regulatory periods, the NPV remains unchanged.

The risk for the SUFA funders is effectively the timing of the cash flows over the life of the SUFA assets, depending on when the revenue shortfall (or over-recovery) occurs and when the SUFA funders receive the adjusted rent amount.