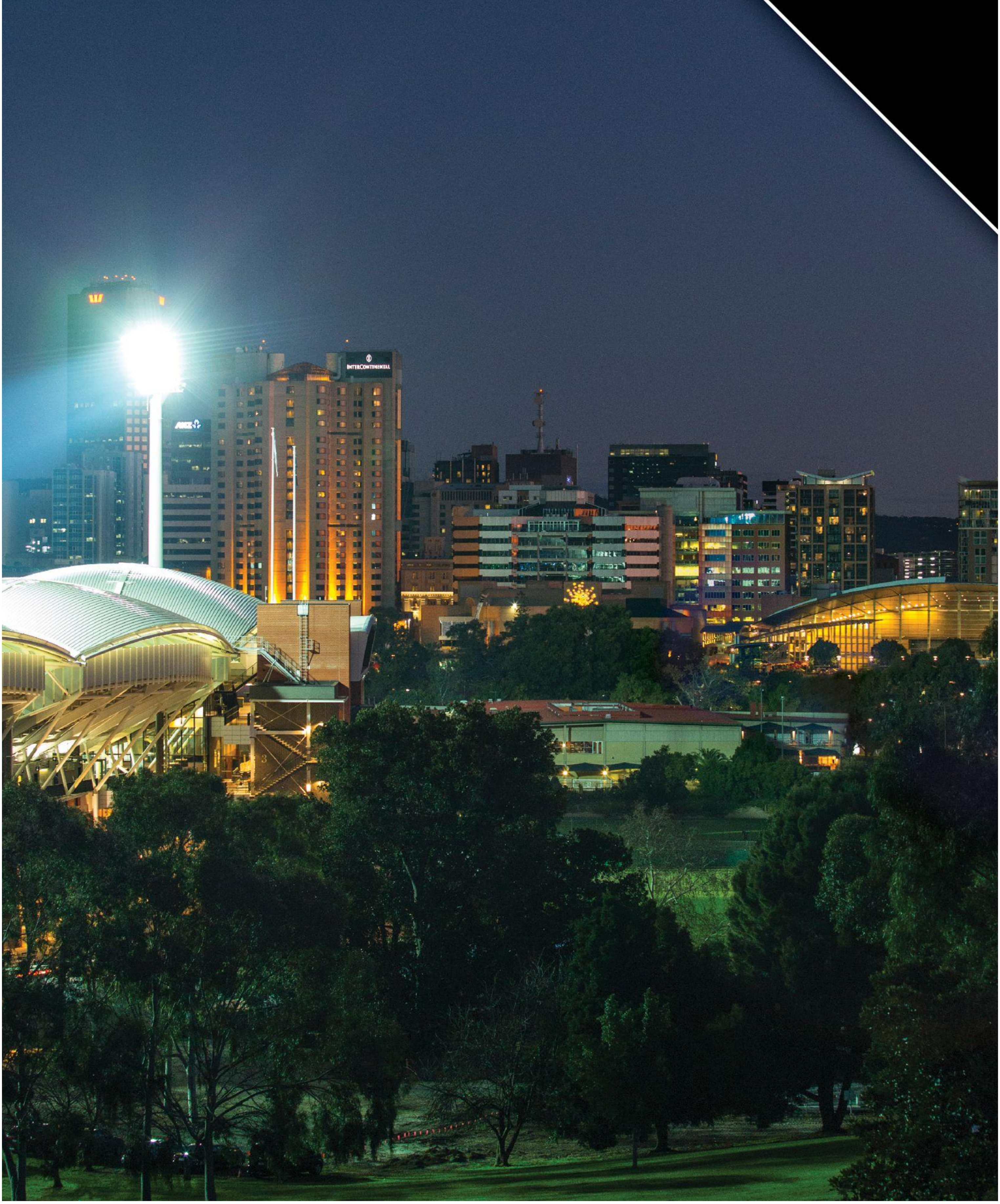
Attachment 24.2

SA Power Networks: Shared Assets Cost Reduction Method



Shared Asset Cost Reduction Method

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Shared Asset Cost Reduction Method

Contents

Shared Asset Cost Reduction Method

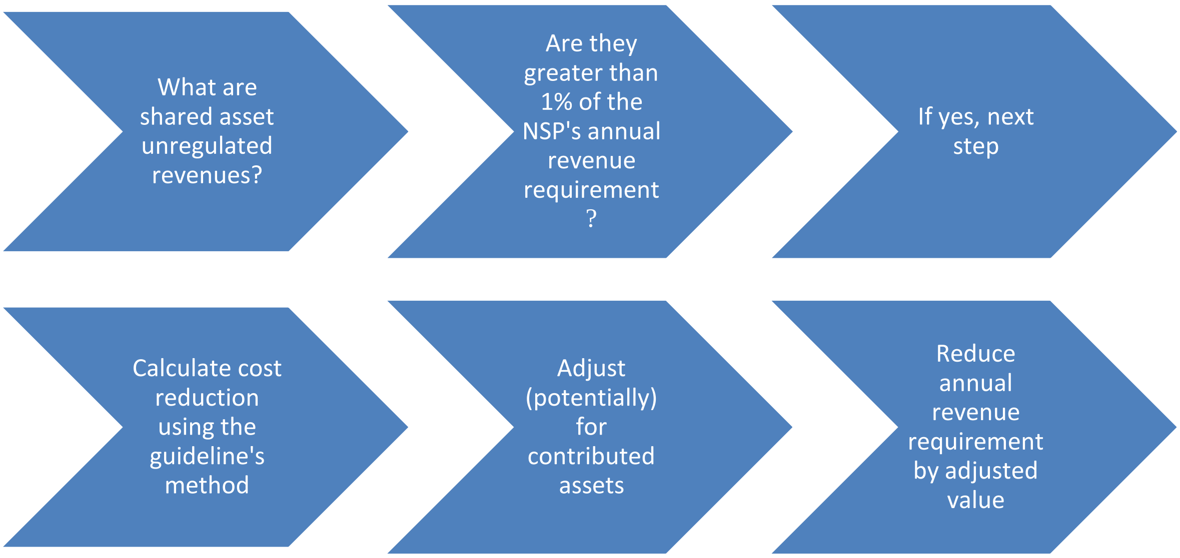
1. Overview

In accordance with the Shared Asset Guideline (**Guideline**) and Chapter 24 of our Regulatory Proposal, this document describes the methodology used to determine Shared Asset Unregulated Revenue (**SAUR**) and the subsequent Shared Asset Cost Reduction for SA Power Networks for the 2015-20 regulatory control period (**RCP**).

The methodology described below is a summary of the derivation of the detail contained in the Shared Asset Model (refer supporting documentation) and Template 7.4 Shared Assets of SA Power Networks' Reset RIN 2015-20, which has been submitted to the AER with the Proposal.

The Guideline defines the following steps for determining the cost reduction to be applied for shared asset revenues[1]:

Figure 1: Cost reduction process



2. Shared asset unregulated revenues

The first step in determining the cost reductions to apply for shared asset revenues is to establish the unregulated revenues earned from shared assets. Table1 defines the process applied by SA Power Networks in more detail.

Table 1: Derivation of shared asset unregulated revenues

Step	Proposed methodology
1.	Identify unregulated services that use shared assets (shared asset unregulated services).
1.a.	- For each unregulated service, identify the assets used to deliver the service.
1.b.	- For each asset used to deliver an unregulated service, identify how the costs of establishing the assets were allocated between regulated and unregulated services.

[1] AER, Shared Asset Guideline, p9-10.

Shared Asset Cost Reduction Method

Step	Proposed methodology
1.c.	- For each asset used to deliver an unregulated service, assess whether the allocation of the costs of establishing the assets between regulated and unregulated services overstates the current use of the assets for the provision of standard control services.
1.d.	- To the extent that an asset meets the criteria of step 1.c. it shall be considered a shared asset.
2.	Consider and classify each shared asset unregulated service as either shared asset dependent (shared asset dependent services) or using shared assets only marginally (marginal shared asset services).
2.a.	- Identify the shared assets commonly used to provide that service.
2.b.	- Assess the relative use of the shared assets identified at 2.a. by that service, by reference to the revenue received relevant to the shared assets being utilised (the shared asset proportion). The analysis is based on the service's cost build-up, which reflects how these services are priced, and therefore how revenue is actually recovered.
2.c.	- SA Power Networks has proposed a materiality threshold for the assessment of the marginal use of shared assets by a service, being 50% of revenue. That is, where a service's shared asset proportion exceeds 50% (the service derives more than 50% of its revenue from its use of shared assets), it will be considered a shared asset dependent service.
3.	Estimate the gross revenue expected to be derived from each shared asset unregulated service for each year of the next RCP.
3.a.	- Identify the methodology used to make each estimate of the gross revenue expected to be derived from a shared asset unregulated service for each year of the next RCP for inclusion in RIN data template 7.4.
3.b.	- For each shared asset unregulated service, calculate the average of the result of step 3 and apply the result evenly over each year of the next RCP to which those revenues relate. (Guideline 2.3.d and 3.1.b.).
4.	Calculate SAUR for each year of the next regulatory control period.
4.a.	- Sum the average revenue expected to be derived from each shared asset dependent service (step 3.b.).
4.b.	- Calculate the sum-product of the average revenue expected to be derived from each marginal shared asset service (step 3.b.) and its relevant shared asset proportion (step 2.b.).
4.c.	- Sum the results of step 4.a. and 4.b.

Shared Asset Cost Reduction Method

Applying the above methodology, SA Power Networks has identified the services that meet the description for shared asset unregulated services. Many of these services are shared asset dependent services, however a number are marginal shared asset services to which revenue apportionment has been applied. The shared asset unregulated services to apply for the 2015-20 RCP and their apportionment methodology are shown in Table 2 below.

Table 2: Shared asset unregulated services

Shared asset unregulated service	Shared Asset Dependent/Marginal Service	Apportionment methodology
Pole Rental - Non NBN	Dependent	100% Shared Asset
Pole Rental - NBN	Dependent	100% Shared Asset
Duct Rental	Dependent	100% Shared Asset
Facilities Access	Dependent	100% Shared Asset
Property Rentals	Dependent	100% Shared Asset
HV Test Equipment Hire	Dependent	100% Shared Asset
Training – Overheads revenue only	Marginal	100% of revenue received for overheads
Construction and Maintenance Services – Vehicle revenue	Marginal	100% of revenue received for regulated vehicles
Construction and Maintenance Services - Property/IT revenue	Marginal	100% of CAM apportionment for property and IT of revenue received for overheads

Marginal shared asset services

In respect to the provision of training to external customers, property and IT assets are the only regulated assets that are used to derive unregulated revenue. Prices for training services are set on a cost plus overhead basis (including margin). We have therefore assumed that the overhead (including margin) component of the revenue associated with this service is the SAUR.

Similarly, some unregulated construction and maintenance services may use regulated vehicles, buildings and IT, and the revenue derived from these services include a cost reflective overhead. We have therefore assessed the revenue associated with the use of regulated vehicles, and the apportionment for property and IT costs determined by the approved Cost Allocation Method (plus margin) for unregulated services, and this has been deemed to be the SAUR.

The following average annual SAUR has been determined for the 2015-20 RCP. A more detailed summary of the services and their allocation is contained in Appendix 1.

Table 3: Shared asset unregulated revenue

$'000 Nominal	2015/16	2016/17	2017/18	2018/19	2019/20	Average
Shared asset unregulated revenue	8,731	9,183	9,650	10,063	10,506	9,627

3. Materiality

The next step in the process is to determine if the SAUR is greater than 1 per cent of the annual revenue requirement. Unregulated use of shared assets is material when a service provider's annual SAUR are expected to be greater than 1 per cent of its total smoothed annual revenue requirement (**ARR**) for that regulatory year[2]. Materiality is determined by averaging SAUR across each year.

For the 2015-20 RCP, the materiality threshold is expected to be met for the first three years, but not the final two years, as per Table 4.

Table 4: Materiality test

$'000 Nominal	2015/16	2016/17	2017/18	2018/19	2019/20
Proposed smoothed ARR	901,800	924,800	948,380	972,570	997,370
Average annual SAUR	9,627	9,627	9,627	9,627	9,627
SAUR as % of ARR	1.07%	1.04%	1.02%	0.99%	0.97%
Materiality threshold	Y	Y	Y	N	N

4. Shared asset cost reduction

A cost reduction will be applied as 10 per cent of the average SAUR from shared assets in the year, for the years that the materiality threshold has been met. SA Power Networks' shared asset cost reduction for each year of the next RCP is set out in Table 5.

Table 5: Shared asset cost reduction

$'000 Nominal	2015/16	2016/17	2017/18	2018/19	2019/20
Shared asset cost reduction	963	963	963	0	0

[2] AER, Shared Asset Guideline, section 2.3b, p12.

5. Adjust for contributed assets

Cost reduction values may be reduced where there is evidence of electricity consumer benefits resulting from the provision of shared asset unregulated services[3]. This may be from asset replacements, enhancements or other network improvements.

SA Power Networks has identified that as part of the NBN rollout, some power poles will require reinforcement or replacement in order to be able to support the additional load from telecommunication cables. The benefit to electricity distribution customers has been valued as the present value of the avoided cost resulting from early improvements.

We have estimated that the asset replacements driven by make-ready work for the NBN rollout will bring forward those replacements by 11 years on average. The estimate is based on a weighted average of pole and cross-arm replacements, and takes into account the remaining economic life of the relevant asset class. The benefit to electricity consumers is calculated as the present value of the return on and of the expenditure expected to be funded by third parties, offset by 11 years from the date of that investment, using the Proposal WACC as the discount rate. The present value of the benefit stream has been discounted by 50 per cent to mitigate the risk that some of the poles subject to make-ready work may be included in the pole replacement program for the next RCP. The net value has been apportioned evenly to each year of the next RCP, congruent with the Guideline's averaging principles. The estimated net value of the benefit to customers is set out in Table 6.

Table 6: Electricity consumer benefits from SAUR

$'000 Nominal	2015/16	2016/17	2017/18	2018/19	2019/20
Electricity consumer benefits	(142)	(142)	(142)	(142)	(142)

6. Net cost reduction for shared assets

The net reduction to SA Power Networks ARR for the 2015-20 RCP is shown in Table 7 in nominal terms and real terms. The reduction for electricity consumer benefits has not been applied in the final two years, where the SAUR is below the materiality threshold.

Table 7: Net shared asset cost reduction

$'000	2015/16	2016/17	2017/18	2018/19	2019/20
Electricity consumer benefits ($ nominal)	821	821	821	0	0
Electricity consumer benefits ($2015)	800	780	761	0	0

[3] AER, Shared Asset Guideline, section 3.4, p16.

Shared Asset Cost Reduction Method

Appendix 1 – Shared Asset Unregulated Revenue – Summary of Services

Revenue Type	Description of Service	Revenue Determination	Shared Asset Allocation
Asset used comprehensively			
Pole Rental - Non NBN	Rental of overhead distribution assets for telecommunication services (non NBN)	Fixed Fee	100% Shared Asset
Pole Rental - NBN	Rental of overhead and underground distribution assets for telecommunication services - NBN.	Fixed Fee	100% Shared Asset
Duct Rental	Rental of underground distribution assets for telecommunication services (non NBN).	Fixed Fee	100% Shared Asset
Facilities Access	Facilities Access Agreements for access to other assets - e.g. towers, base stations etc	Fixed Fee	100% Shared Asset
Property Rentals	Rental fees received for lease of properties.	Fixed Fee	100% Shared Asset
HV Test Equipment Hire	Hire of high voltage test equipment by electrical contractors for compliance testing for new subdivisions.	Fixed Fee	100% Shared Asset
IT Services	Provision of IT Infrastructure services to Silk Telecoms during their establishment. Ceased in January 2007.	Fixed Fee	100% Shared Asset
Managed Communications	Lease of SA Power Networks' communications fibre network to Nextgen for delivery of data services to external organisations. Ceased in August 2012.	Fixed Fee	100% Shared Asset
Asset used marginally			
Training - Overheads revenue only	Electrical related training programs provided to external groups, principally electrical contractors requiring accreditation to work on SA Power Networks' assets. Relates to corporate infrastructure assets e.g. property, IT.	Direct cost + overheads + profit	100% of revenue received for overheads
Construction and Maintenance Services - Vehicle revenue	Construction and maintenance services provided to external groups, e.g. ElectraNet. Relates specifically to use of regulated heavy vehicles in undertaking work.	Market rates including overheads + profit	100% of revenue received for regulated vehicles
Construction and Maintenance Services - Property/IT revenue	Construction and maintenance services provided to external groups, e.g. ElectraNet. Relates specifically to use of infrastructure assets of property and IT in undertaking work.	Market rates including overheads + profit	CAM apportionment for property and IT of revenue received for overheads

Source: Shared Asset Model