SA Power Networks

Attachment 3
Rate of Return

2020-25 Regulatory Proposal

31 January 2019

This section outlines:

› the derivation of the allowed rate of return for SA Power Networks for the 2020-25 Regulatory Control Period.

Company information

SA Power Networks is the registered Distribution Network Service Provider (**DNSP**) for South Australia. For information about SA Power Networks visit www.sapowernetworks.com.au

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Disclaimer

This document forms part of SA Power Networks' Regulatory Proposal (**the Proposal**) to the Australian Energy Regulator (**AER**) for the 1 July 2020 to 30 June 2025 regulatory control period (2020-25 **RCP**). The Proposal and its attachments were prepared solely for the current regulatory process and are current as at the time of lodgment.

This document contains certain predictions, estimates and statements that reflect various assumptions concerning, amongst other things, economic growth and load growth forecasts. The Proposal includes documents and data that are part of SA Power Networks' normal business processes, and are therefore subject to ongoing change and development.

Whilst care was taken in the preparation of the information in this Regulatory Proposal, and it is provided in good faith, SA Power Networks, its officers and shareholders accept no responsibility or liability for any loss or damage that may be incurred by any person acting in reliance on this information or assumptions drawn from it for a different purpose or in a different context.

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Note

This attachment forms part of our Proposal for the 2020-25 RCP. It should be read in conjunction with the other parts of the Proposal.

Our Proposal comprises the overview and attachments listed below, and the supporting documents that are listed in Attachment 18:

Document	Description
	Regulatory Proposal overview
	Customer and stakeholder engagement report
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Attachment 4	Regulatory depreciation
Attachment 5	Capital expenditure
Attachment 6	Operating expenditure
Attachment 7	Corporate income tax
Attachment 8	Efficiency benefit sharing scheme
Attachment 9	Capital expenditure sharing scheme
Attachment 10	Service target performance incentive scheme
Attachment 11	Demand management incentives and allowance
Attachment 12	Classification of services
Attachment 13	Pass through events
Attachment 14	Alternative Control Services
Attachment 15	Negotiated services framework and criteria
Attachment 16	Connection policy
Attachment 17	Tariff Structure Statement
Attachment 18	List of Proposal documentation

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3 Rate of Return

This Attachment outlines the derivation of the allowed rate of return for SA Power Networks for the 2020–25 regulatory control period.

3.1 Rule requirements

3.1.1 Current Rules

The National Electricity Rules (**NER**) currently provide that the allowed rate of return for both debt and equity must be commensurate with the efficient financing costs of a benchmark efficient entity with a similar risk profile as that which applies to SA Power Networks in respect of its provision of standard control services (**SCS**).[1] The NER also require the value of imputation credits (**gamma**) to be estimated.[2]

The NER currently require that when the AER sets the allowed rate of return, regard must be had to all relevant estimation methods, financial models, market data and other evidence for both the return on equity and the return on debt.[3] A broader set of evidence and data must be considered than just the Sharpe-Lintner Capital Asset Pricing Model and 'on the day' method for establishing the return on debt.

The AER is also required by the National Electricity Law (**NEL**), when making its determination, to:

- do so in a manner that is likely to contribute to the achievement of the National Electricity Objective (**NEO**), including the promotion of efficient investment in network infrastructure;[4] and
- take into account the principle that a regulated network service provider (**NSP**) should be provided with a reasonable opportunity to recover at least its efficient costs.[5]

Clause 6.5.2(m) of the NER currently requires the AER to make Rate of Return Guidelines that set out the methodologies that the AER proposes to use in estimating the allowed rate of return. In addition, clause 6.5.2(p)(1) of the NER requires the AER to review the Rate of Return Guidelines at intervals not exceeding five years for the first interval and three years for all subsequent intervals, with the first interval starting from the date that the first Rate of Return Guidelines are published under the NER.

The AER published the first Rate of Return Guideline in 2013 (**2013 Guideline**). In July 2017, the AER commenced a review of the 2013 Guideline.

3.1.2 Legislative Changes

The Council of Australian Governments (**CoAG**) announced in 2017 that it intended to replace the current Rate of Return Guideline framework with a binding legislative instrument and proposed amendments to NEL and the NER to give effect to this framework.

The *Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Act 2018* (SA) (**Amending Act**) was passed by the South Australian Parliament and assented to on 22 November 2018. The Amending Act came into force on 13 December 2018.[6]

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[1] *NER 6.5.2(b).*
[2] *NER 6.5.2(n)(2) and 6.5.3.*
[3] *NER 6.5.2(e).*
[4] *NEL sections 7 and 16(1).*
[5] *NEL sections 7A and 16(2)(a).*
[6] *Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Act (Commencement) Proclamation 2018 (SA).*

The Amending Act amends the NEL to require the AER to make a binding (on the AER and on each NSP[7]) rate of return instrument[8] which specifies the methodology that must be used to calculate the return on capital and the value of imputation credits. The methodologies in the binding instrument must be automatically applied in relation to all regulated NSPs for each regulatory determination without any exercise of discretion by the AER.[9] The AER may only make a rate of return instrument if it is satisfied that it will, or is most likely to, contribute (to the greatest degree) to the achievement of the NEO.[10]

On 17 December 2018, after completing its review of the 2013 Guideline, the AER published a Rate of Return Instrument (**2018 Instrument**). Pursuant to the transitional provisions of the NEL inserted by the Amending Act, on 17 December 2018, the 2018 Instrument became the first binding rate of return instrument.[11]

At this stage, no associated amendments have been made to the NER. However, the Amending Act allows for the South Australian Minister to make Rules that revoke or amend the NER if the revocation or amendment is consequential on the enactment of the Amending Act. This includes making a rule that provides that the rate of return on capital under a rate of return instrument in force as at the start of the 2020–25 regulatory control period (**RCP**) will apply throughout the 2020–25 RCP.[12]

This is a significant change to the previous legislative and rules framework, which allowed both regulated NSPs and the AER the opportunity to depart from the Rate of Return Guidelines.

SA Power Networks' regulatory proposal for the 2020–25 RCP (**Proposal**) has been prepared consistently with the 2018 Instrument.

The 2018 Instrument calculates the rate of return as a nominal vanilla weighted average of an allowed return on equity and an allowed return on debt. [13] The gearing ratio is 60 per cent for the allowed return on debt and 40 per cent for the allowed return on equity.[14]

3.2 Return on Equity

Under the 2018 Instrument the allowed return on equity must be calculated as an estimated risk free rate plus a market risk premium (**MRP**) of 6.1 per cent multiplied by an equity beta of 0.6. [15] This equates to an equity risk premium of 366 basis points over the estimated risk free rate.

The risk free rate is to be estimated based on an average of the yield on 10 year Commonwealth Government Securities (**CGS**) over an averaging period of between 20 and 60 business days. Regulated NSPs are free to choose this averaging period subject to the requirements set out in the 2018 Instrument.[16]

3.2.1 Averaging period

SA Power Networks has applied the approach to setting the risk free rate set out in the 2018 Instrument, which is to select an averaging period agreed with the AER that will remain confidential until the period has passed.

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[7] Refer to Amending Act section 6 which inserts NEL section 18H.

[8] Refer to Amending Act section 6 which inserts NEL section 18I.

[9] Refer to Amending Act section 6 which inserts NEL section 18J.

[10] Refer to Amending Act section 6 which inserts NEL section 18I(3).

[11] Refer to Amending Act section 12 which inserts Schedule 3, Part 16 (Transition provisions for rate of return instrument). See clause 30 in particular.

[12] Refer to Amending Act section 9 which inserts NEL section 90BA.

[13] 2018 Instrument clause 36(c).

[14] 2018 Instrument clause 3.

[15] 2018 Instrument clause 4.

[16] 2018 Instrument clauses 5-8.

The proposed confidential averaging period for the setting of the risk free rate for each year of the 2020–25 RCP is outlined in RIN 1 Workbook 1 Regulatory determination template 2020-21 to 2024-25, worksheet 7.8 WACC Inputs.

In this Proposal, we adopt the Return on Equity approach in accordance with the 2018 Instrument.

3.3 Return on Debt

The 2018 Instrument continues to apply key elements of the approach adopted in the 2013 Guideline for estimating the return on debt, which are as follows:

- Adopt a benchmarking approach to estimating the allowed return on debt, which manifests in a benchmark:
  - term of debt of ten years; and
  - credit rating of BBB+.
- Adopt a 10-year trailing average return on debt (based on a 10 year term to maturity) and update return on debt estimation annually.
- Estimate a BBB+ yield. (Under the 2018 Instrument, this is to be done using a weighted average of 10 year BBB and A rated yield curves published by the Reserve Bank of Australia, Bloomberg, and Thomson Reuters. Two-thirds weight will be placed on the average yield from the BBB curves over the debt averaging period and one-third weight will be placed on the average yield from the A curves over the debt averaging period.)
- Each yield estimate is to be calculated over an averaging period between 10 business days and one year in length subject to certain requirements.
- Adopt a 10-year transition between the previous 'on-the-day' approach and the 10-year trailing average.
- Estimate the return on debt by reference to published third-party yield curves.
- For each year of the 10-year trailing average, estimate the return on debt as the simple average of rates observed over a period of time nominated by the NSP to whom the allowed return on debt will apply.17

In this Proposal, we adopt the Return on Debt approach in accordance with the 2018 Instrument.

3.3.1 Averaging period

The 2018 Instrument proposes that there be an averaging period set for each year of the relevant RCP from which the data for the allowed return on debt will be drawn. The 2018 Instrument states that the periods can be proposed by the NSP in its initial regulatory proposal and agreed by the AER on a confidential basis.[18]

The proposed confidential averaging period for the setting of the return on debt for each year of the 2020-25 RCP is outlined in RIN 1 Workbook 1 Regulatory determination template 2020-21 to 2024-25, worksheet 7.8 WACC Inputs.

[17] *AER, Explanatory Statement to the Rate of Return Instrument, December 2018, pages 14-15*.

[18] *2018 Instrument clause 23.*

3.4 Imputation credit value (gamma)

The value of imputation credits (or **gamma**) is an important input into the calculation of the corporate income tax allowance. Under the Australian imputation tax system, shareholders may receive imputation tax credits with dividends, which offset tax liabilities. Imputation credits are therefore valuable to investors and are a benefit to investors in addition to any cash dividend or capital gains they receive from owning shares.

The NER recognise that a NSP's allowed revenue does not need to include the value of imputation credits. Under the NER, NSPs are to recover revenue that compensates them for their efficient costs in providing SCS. This includes, among other things, a return to be provided to investors (**return on equity**) that is required to promote efficient levels of investment. The more that imputation credits are valuable, the less return that investors require from dividends and capital gains. However, the estimation of the return on equity does not take imputation credits into account.

Therefore, an adjustment for the value of imputation credits is required. The adjustment which is employed by the NER, is via the revenue granted to a NSP to cover its expected tax liability. Specifically, the NER require that the estimated cost of corporate income tax be determined in accordance with a formula that reduces the estimated cost of corporate tax by the 'value of imputation credits'.

In this Proposal, we adopt a gamma value of 0.585 in accordance with the 2018 Instrument.[19]

3.5 Rate of return

The proposed allowed rate of return for SA Power Networks for the 2020–25 RCP is shown in Table 3-1.

Table 3-1: Rate of return assumptions

Rate of return assumptions	Proposed
Nominal Risk Free Rate	2.44%
Nominal Pre-tax Cost of Debt	4.98%
Market Risk Premium	6.1%
Equity Beta	0.6
Post-tax Nominal Return on Equity	6.10%
Nominal Vanilla WACC	5.43%
Gamma	0.585

The nominal risk free rate is based on an average of the 20 business days ended 31 December 2018. The pre-tax cost of debt is based on the actual rate for the 2018/19 regulatory year, rolled forward with current rates. These rates will be updated with latest forecasts in our revised regulatory proposal (**Revised Proposal**), due to be lodged in December 2019.

3.6 Forecast Inflation

Clause 6.4.2(b) of the NER requires the post-tax revenue model (**PTRM**) to include a method that the AER determines is likely to result in a best estimate of inflation. Our estimate of expected inflation is currently 2.47 per cent. This is a placeholder which will be updated in our Revised Proposal and the AER's final determination based on the latest available information at the time.

It is an estimate of the average annual rate of inflation expected over a ten year period, in accordance with the AER's methodology set out in the PTRM.

[19] *2018 Instrument clause 27.*

Our estimate of expected inflation is estimated as the geometric average of 10 annual expected inflation rates. We use the RBA's forecasts of inflation for the first two years of SA Power Networks' 2020–25 RCP as the first two annual rates. We then use the mid-point of the RBA's inflation target band as the remaining eight annual rates.

3.7 Equity and Debt Raising costs

The compensation for the required rate of return on debt and equity, does not cover the transaction costs associated with raising debt and equity. In accordance with AER's PTRM methodology, we are proposing debt raising costs in the operating expenditure (**opex**) forecast because these are regular and ongoing costs which are likely to be incurred each time service providers refinance their debt. On the other hand, equity raising costs are included in the capital expenditure (**capex**) forecast because these costs are only incurred once and would be associated with funding the particular capital investments.

3.7.1 Equity Raising costs

Equity raising costs are transaction costs incurred when NSPs raise new equity in order to fund capital investment. Equity raising costs are the costs of raising equity that would be incurred by a prudent service provider acting efficiently. Accordingly, the AER provides a benchmark allowance to recover an efficient amount of equity raising costs, when a NSP's capex forecast requires an external equity injection to maintain the benchmark gearing of 60 per cent.

Our calculations are contained in the completed PTRM submitted with this Proposal. They indicate that under the AER's modelling approach an external equity injection is not required to maintain the benchmark capital structure over the 2020–25 RCP. The PTRM accordingly calculates an equity raising cost allowance of zero for the 2020–25 RCP. This calculation includes the latest AER parameters, including a distribution rate of 0.88, consistent with the 2018 Instrument.

This calculation will be updated in the Revised Proposal.

3.7.2 Debt Raising costs

Debt raising costs are transaction costs incurred each time debt is raised or refinanced. These costs may include arrangement fees, legal fees, company credit rating fees and other transaction costs. Debt raising costs are an unavoidable aspect of raising debt that would be incurred by a prudent service provider and data exists to enable us to estimate these costs.

Our actual debt raising costs are reported as finance charges rather than opex. Therefore, a separate debt raising allowance must be included in our opex to align with the regulatory treatment.

We have engaged Competition Economists Group (**CEG**) to provide an expert opinion on the total debt raising transaction costs that a benchmark efficient service provider would be expected to incur in the course of the 2020–25 RCP. CEG's report, provided as Supporting Document 3.1, considers two sources of debt raising transaction costs being:

- arrangement fee and debt raising transaction costs for the assumed debt portfolio; and
- costs relating to liquidity management and refinance risk.

The AER has, in previous determinations, accepted that liquidity management and refinance risk cost are efficiently incurred and that they must be incurred in order to meet the requirements of credit rating agencies to achieve an investment grade credit rating. However, the AER has previously rejected an allowance for these costs on the grounds that the PTRM timing benefits are sufficiently large to fully compensate for these costs. In their report, CEG demonstrates that the liquidity management costs are

higher than the PTRM timing benefits. The PTRM timing benefits are much lower than previously calculated, in large part due to the decline in the weighted average cost of capital (**WACC**).
In this Proposal, we have not included the liquidity style management costs, even though it appears that these costs exceed the PTRM timing benefits. This is an area that should be further considered by the AER and NSPs in the future.

Our proposal is for debt raising costs of 15.3 basis points per annum, based on a comprehensive sample of market data as documented in the CEG report. The CEG analysis includes explanations of why apparently high outliers in the sample have arisen. The AER has previously excluded these outliers, but the CEG analysis demonstrates that excluding these outliers tends to understate the true issuance costs.

Table 3-2: Total debt raising transaction costs[20]

Basis points per annum

	2020/21	2021/22	2022/23	2023/24	2024/25
AER debt raising transaction costs (bppa)	9.05	9.05	9.04	9.04	9.04
CEG DRT incremental to AER DRT	6.23	6.23	6.23	6.23	6.23
Debt raising transaction costs for debt component of RAB	**15.28**	**15.28**	**15.27**	**15.27**	**15.27**
Levelised debt raising transaction costs for debt component of the RAB (bppa)	**15.27**				

The total of the resulting regulatory debt raising costs for standard control services (**SCS**) are shown in Table 3-3 below.

Table 3-3: Forecast Debt Raising Costs

Nominal $ Million

	2020/21	2021/22	2022/23	2023/24	2024/25	2020-25 RCP
Debt Raising Costs – SCS	4.0	4.1	4.1	4.1	4.1	20.5

[20] *Supporting Document 3.1 Competition Economists Group – Debt transaction costs and PTRM timing benefits, Table 1-1.*

Shortened Forms

2013 Guideline	*Rate of Return Guideline in 2013*
2018 Instrument	*Updated Rate of Return Guideline in 2018*
Amending Act	*Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Act 2018 (SA)*
CEG	*Competition Economists Group*
CGB	*Commonwealth Government Bonds*
CoAG	*Council of Australian Governments*
gamma	*Value of imputation credits*
MRP	*Market Risk Premium*
NEL	*National Electricity Law*
NEO	*National Electricity Objective*
NER	*National Electricity Rules*
NSP	*Network Service Provider*
opex	*Operating Expenditure*
PTRM	*Post Tax Revenue Model*
RCP	*Regulatory Control Period*
return on equity	*Return to be provided to investors*
SCS	*Standard Control Services*
WACC	*Weighted Average Cost of Capital*