synergy

Submission to the Economic Regulation Authority

Western Power Access Arrangement No.5: Target Revenue and price control

20 April 2022

Contents

1. Executive summary

Matter	Western Power's (**WP**'s) proposed revisions to its access arrangement for the fifth access arrangement period (**AA5**) relating to target revenue and price control (**proposal**).[1]
Context	The Economic Regulation Authority (**ERA**) published its AA5 framework and approach (**F&A**) for WP's fifth access arrangement review final decision[2] in August 2021. WP's proposed AA5 published on 1 February 2022, amongst other matters, details the non-price terms and conditions for users of WP's regulated electricity networks during AA5 and its proposed network prices for 2021/22. On 4 March 2022, the ERA released an Issues Paper[3] to further inform interested parties about WP's proposal and identify key issues for stakeholder consideration and response. The ERA must consider whether WP's proposal meets the requirements of the Electricity Networks Access Code 2004 (**ENAC**), and on that basis decide whether to approve the proposed revisions. In addition to the overarching Code objective (ENAC section 2.1) and specific requirements relevant to various elements of the price control, the ENAC requires WP's proposal to contain sufficient information to enable the ERA and interested parties to make an informed view about its compliance with the ENAC (ENAC sections 4.2 and 4.3). As an electricity generator and retailer to one million customers, Synergy is the largest user of WP's electricity network. WP's AA5 proposal comes at a time where affordability and cost of living is a key customer issue. This submission presents Synergy's comments on the revenue target and price control components of WP's proposal.
Scope	Synergy's submission considers the key price control elements of WP's proposal in turn, in each case: • Identifying the ENAC requirements, including its objective and specific provisions relevant to each element of the price control • Outlining Synergy's understanding of WP's proposal based on the information available • Presenting Synergy's discussion on the extent to which WP's proposal is reasonable and consistent with the ENAC, reflective of best regulatory and industry practice and the promotion of the Code objective, including the promotion of economic efficiency for the long term interests of consumers • Concluding whether WP's proposal is reasonable and consistent with the ENAC and recommending additional information, review and analysis where appropriate.

1 https://www.erawa.com.au/AA5

2 https://www.erawa.com.au/cproot/22112/2/Western-Power-AA5-Review---Framework-and-approach---Final-decision.PDF

3 Refer Proposed revisions to the access arrangement for the Western Power Network 2022/23 – 2026/27 (erawa.com.au)

Issues	In addition to the proposed access arrangement revisions, WP's proposal contains an overview of the relevant ENAC provisions, a description of the services proposed and associated incentive schemes and adjustment mechanisms, forecasts of operating expenditure (**opex**) and capital expenditure (**capex**), an estimate of the weighted average cost of capital (**WACC**) and forecasts of revenue and the associated transmission and distribution tariffs. A series of appendices provide supporting information. Synergy has identified key elements of WP's proposal that it considers do not meet the ENAC's requirements. Consequently, Synergy recommends the ERA obtain and publish additional information and undertakes further analysis in specific areas as detailed in this submission to enable interested parties to make an informed view about the extent to which WP's proposal complies with the ENAC. Synergy makes the following recommendations which it considers would result in WP's proposal better meeting or being compliant with the Code objective and other ENAC requirements: • The ERA determines whether the proposed true-up mechanism outlined in paragraph 5.7.3 of WP's proposed access arrangement, in combination with the revenue cap form of price control proposed by WP, fully allocates demand risk in AA5 pricing year 1 to network users / end-use customers and whether this outcome reflects the ERA's F&A decision that WP, rather than network users and end-use customers, should manage demand risk • To ensure WP's access arrangement information is consistent with ENAC sections 4.2 and 4.3, particularly in combination with sections 7.3H and 7.3G, the ERA determines the customer numbers, energy volumes and maximum kilovolt ampere (**kVA**) levels listed in Table 41 of WP's AA5 Proposed Revisions document (pp. 39 - 40) should be listed by reference tariff rather than by customer segment • The ERA should not approve WP's proposed network tariffs unless it is satisfied the proposed tariffs are not only cost recovering, but also appropriately cost reflective, as is required under Chapter 7 of the ENAC, including sections 7.3G and 7.3H(c) • The ERA should undertake a detailed review of WP's model to determine whether the methods used by WP to calculate target revenue are sound and appropriate, including allowing for the compliant setting of reference tariffs under ENAC Chapter 7, particularly ENAC sections 7.3H and 7.3G • The ERA should determine whether WP's proposal to retain the capex allocation forecast made at the beginning of an access arrangement period for the allocation of actual capex and contributions from regulatory category to asset class confers an incentive upon WP to favour its forecast allocation to asset classes with relatively short economic lives and if so, whether this is compliant with the relevant ENAC requirements, including the Code objective and ENAC section 6.4(a)(i) • To ensure WP's access arrangement complies with the ENAC requirements in sections 6.4(a)(i), and the pricing principles in ENAC Chapter 7, 4.2 and 4.3, the ERA should require the regulated asset base (**RAB**) roll forward calculations to be conducted transparently at a nodal/locational level and that the ERA apply a depreciated optimised replacement cost (**DORC**) valuation constraint to the distribution and transmission network RAB values when determining both the opening and the closing capital bases of the AA5 period • The ERA should consider whether:

- Application of the real annuity method of regulatory depreciation to all asset categories and vintages, relative to WP's proposed straight-line method of depreciation, would reduce the variance between expected revenue and target revenue
- Consistent with the Code objective, the annuity method would likely reduce customers' costs relative to WP's proposed straight-line approach (i.e., taking into account the differences between WP's WACC and users'/customers', generally higher, WACC)

- The ERA should assess whether the generalised method approved by the Taxation Commissioner to calculate effective lives in the TR 2021/3 tax ruling is:
  - Consistent with the requirements of ENAC Chapter 6, particularly section 6.4(a)(i), and the Code objective
  - Fit for the purpose of calculating regulatory depreciation under the ENAC and whether WP's application of the tax ruling data has been consistently applied
- The ERA should assess whether material reductions in the economic lives of some asset categories since the fourth access arrangement (**AA4**) is consistent with good electricity industry practice and a service provider efficiently minimising costs
- The ERA should retain its current approach to determining the allowed rate of return
- The ERA should benchmark WP's proposed opex against the opex of other transmission and distribution businesses to assess whether WP's proposed base year costs are efficient
- The ERA should review the reasons why WP has not included a statistically unbiased forecast of opex for alternative options as a substitute for new facilities investment in its AA5 proposal, entailing a reduction in the capex forecast. (WP does not appear to have considered alternative options as part of determining its opex for forecast new facilities investment and, therefore, this could result in the ENAC preventing the ERA from approving those parts of WP's proposed opex consistent with ENAC sections 6.51, 6.51A and 6.52(a)(iii))
- The ERA should review WP's proposed opex for distribution system operator (**DSO**) capability ($22 million), supervisory control and data acquisition (**SCADA**) and communications ($19.5 million) to determine the extent to which they enable alternative options as a substitute for higher capex, with net savings achieved overall
- The ERA should assess whether funding to develop new capabilities, systems and strategies such as DSO, digital substations, light detection and ranging (**LIDAR**) programs, new data accessibility systems and additional response generators relate to the provision of covered services and if so whether these costs should be funded through recurrent revenue
- The ERA should confirm:
  - The capital related and non-capital related costs WP is proposing to pass through arise directly from WP's provision of covered services
  - WP is only seeking to pass through ***efficient*** capital related and non-capital related costs that arise directly from WP's provision of the relevant covered services
  - WP is not otherwise able to recover some costs through another mechanisms such as under the WEM Rules or through an 'excluded service' arrangement

- The ERA should consider whether, consistent with ENAC sections 6.4(a)(i), 6.4(a)(ii) and 6.40, WP's forecast of real labour cost increases should be set at a rate no greater than the assumed rate of productivity growth
- The ERA should consider whether a quantile forecast of the weighted average annual price at a conservative probability of exceedance might mitigate the risk of acceleration of deferred revenue being accompanied by an increase in prices
- The ERA should review and adjust WP's updated forecasts
- The ERA should review the reasons for distribution network replacement expenditure to determine whether the underlying operations and investments are consistent with ENAC section 6.4(a) and is consistent with the Code objective
- The ERA should exclude any inefficient (i.e., substitutable at lower cost) capex from being added to the capital base
- The ERA should conduct a review as to whether any of the obsolete, decommissioned, retired or redundant assets identified in WP's AA5 proposal should be treated as redundant capital under ENAC Section 6.61, and publish the review outcome as part of its Draft Decision.

Synergy considers the ENAC requires (specifically sections 4.2 and 4.3) the ERA to obtain and publish (prior to its Draft Decision) further information in relation to the matters below:

- WP's method of capex allocation to asset type
- Detail regarding WP's proposed TAB depreciation methodology
- The models and assumptions WP has used to develop its forecasts of customer connections, energy and peak demand, including releasing its forecasting models and assumptions related to the asset condition drivers of replacement expenditure
- WP's updated peak demand, energy, and customer number forecasts
- Locational forecasts documentation, including WP's most recent zone substation forecasting report
- WP's capex proposal, including capex to maintain service levels, capex to meet forecast growth and capex to improve efficiency
- Benchmarking detail to support WP's opex proposal
- Specification of the 'weighted average annual price' calculation
- Detail regarding how WP developed its capex forecast for the proposed access arrangement and why its proposed expenditure program is consistent with the Code objective, including the assumptions on which forecasts are based, a full and detailed explanation of the basis of preparation of the forecasts, evidence to show the forecasts only include costs which would be incurred by a service provider efficiently minimising costs, and evidence that the capital base for a covered network has not included any amount in respect of forecast new facilities investment not compliant with ENAC sections 6.49 to 6.51
- Why the rate of capacity expansion capex needs to increase given WP appears to be forecasting that peak demand is expected to fall over the AA5 period, and how such expansion represents the forward-looking and efficient cost of providing covered services or is otherwise required to be consistent with ENAC section 6.4
- Why distribution network replacement expenditure would need to be so much higher in AA5 than in AA4 to maintain the same level of service performance, and how such expenditure represents the forward-looking and efficient cost of

	providing covered services or is otherwise required to be consistent with ENAC section 6.4 • Evidence supporting the proposed stand-alone power systems (**SPS**) expenditures will reduce the size of WP's overall investment program and its non-capital related costs • WP's proposed network prices by reference tariff for the AA5 period (also refer Synergy's submission on WP's proposed Tariff Structure Statement (**TSS**) for more details).

2. Introduction

Synergy is Western Australia's largest electricity retailer and the largest user of WP's network. Synergy's retail and generation electricity transfer access contracts with WP collectively involve more than one million connection points. Synergy pays WP more than $1.3 billion annually for transport and metering services under its existing electricity transfer access contracts.

On 1 February 2022, WP submitted its proposed AA5 revisions. WP's proposal sets out the non-price terms and conditions for users of WP's regulated electricity networks during AA5 and the proposed prices for 2021/22. In addition to the proposed revisions to the access arrangement, WP's proposal contains an overview of the relevant provisions of the ENAC, a description of the services proposed and associated incentive schemes and adjustment mechanisms, opex and capex forecasts, an estimate of the WACC, and forecasts of revenue and the associated transmission and distribution tariffs. A series of appendices provide supporting information.

The ERA is required to review WP's proposal and decide whether to approve the proposed revisions. In its review the ERA must consider whether WP's proposal meets the objectives and specific requirements of the ENAC. In this context, on 4 March 2022 the ERA released an Issues Paper to further inform interested parties about WP's proposal and identify the key issues the ERA will consider in making its determination.

This submission presents Synergy's comments on the price control and target revenue components of WP's proposal.

2.1. Synergy's approach to this submission

Synergy has undertaken a detailed review of WP's proposal to identify the implications for Synergy and its customers. This submission reviews whether WP's proposal:

- Is reasonable and consistent with the objectives and specific provisions of the ENAC
- Is consistent with best regulatory and industry practice
- Is reasonable and efficient, including correctly incentivising network user and service provider behaviours to operate efficiently and pass-through savings.

The overarching Code objective (ENAC section 2.1) is to promote economically efficient investment in, and operation and use of, services of networks in Western Australia for the long-term interests of consumers. The ENAC contains a series of provisions relevant to various aspects of WP's proposal, for example the pricing methods (Chapter 6) and form of price control (Chapter 7). The ENAC provisions in some instances are not prescriptive and are therefore subject to interpretation. In these cases, Synergy has had regard to the extent to which WP's proposal complies with best regulatory and

industry practice and promotes economic efficiency. The ENAC (sections 4.2 and 4.3) also requires WP's proposal to provide sufficient information to enable the ERA and interested parties to understand how various elements of WP's proposal were derived and form an opinion about the extent to which the proposed arrangement complies with the ENAC. In addition, ENAC section 4.28 also requires WP's proposed price control to satisfy the Code objective and the requirements of ENAC Chapter 5.

Synergy considers the key elements of WP's proposal in turn, in each case:

- Identifying the relevant ENAC requirements
- Outlining Synergy's understanding of WP's proposal based on the information available
- Presenting Synergy's comments and conclusions.

2.2. About this submission

This submission is structured as follows:

- Section 3 provides an overview the relevant items contained in the ERA's AA5 F&A Final Decision
- Section 4 provides a summary of Synergy's position on WP's target revenue and price control provisions
- Section 5 assesses the form of the price control and the annual revenue requirement
- Section 6 assesses WP's revenue model
- Section 7 assesses the opening capital base
- Section 8 assesses the taxation asset base (**TAB**)
- Section 9 assesses regulatory depreciation
- Section 10 assesses the WACC
- Section 11 assesses WP's opex forecasts
- Section 12 assesses deferred revenue
- Section 13 assesses the forecasts of customer connections, energy and peak demand underlying WP's proposal
- Section 14 assesses WP's capex forecasts.

3. ERA F&A requirements

The ERA's AA5 F&A Final Decision included a range of positions relevant to a network user's requirement to access network services. These matters are detailed in the table below.

Item	F&A requirements	F&A Page[4]
1	**Code objective** - ENAC section 4.A1 requires the F&A to be consistent with the Code objective. The ERA considers that the Code objective must be read as a whole. There are three limbs which must be considered by the ERA. The ERA is of the view that these limbs may be balanced or weighed, but all must be considered.	3 4
2	**Interpretation** - The ENAC sets out rules for when the Code objective may conflict with specific criteria and which prevails to the extent of the inconsistency. While ENAC sections 2.3 and 2.4 provide guidance on inconsistencies and conflicts, complex interactions may arise when determining whether there is an inconsistency and which factor should prevail in each circumstance. ENAC sections 2.3 to 2.4 also may not deal with situations where there is a conflict between the three limbs of the Code objective	4
3	**User consultation** - The ERA expects that WP will consult with its users to finalise eligibility criteria and pricing prior to submitting its proposal to the ERA.	15
4	**Stakeholder submissions** - Matters that have been raised in stakeholder submissions during the F&A consultation process should be addressed.	15
5	**SPS** - If WP was able to offer stand-alone power systems as a specific service, measures would be necessary to ensure it was not subsidised by the regulated business and did not adversely affect competition. On the basis that WP can install stand-alone power systems only where it is a cheaper option than an existing network connection, the ERA maintains its position that stand-alone power systems should be captured under the existing exit and bi-directional reference services. Users will be able to access metering and any other services required in the same way they currently do for exit and bi-directional services.	10
6	**Approach to setting reference tariffs** - WP will need to demonstrate that its proposed tariffs are cost reflective, with evidence to support its proposal. In addition to the current time periods being unsuitable, the current prices provide little differentiation between time periods. The ERA expects WP to address price differentiation in its tariff structure statement. WP will need to ensure that its proposed time of use tariffs are cost reflective and encourage efficient use of the network. The tariff structure statement will also need to address how existing time of use periods will be transitioned to the revised time of use periods.	17 18
7	**Form of price control** - The ERA decided that the current form of price control should be retained with the following amendments: - a single price control will be set - the side constraint will be removed. Demand risk – "There needs to be consistency between the demand forecast and any expenditure required to meet demand. Understating the demand forecast could risk capital expenditure not being approved."	14 20

[4] Framework and approach for WP's fifth access arrangement review, final decision, 9 August 2021.

Item	F&A requirements	F&A Page[4]
	"The ERA considers that the current price control will support the development of efficient tariffs for the transition to increasing renewable energy, including distributed energy resources. Western Power is incentivised to identify innovative services and the corresponding efficient tariff structures that will best match the needs of users using the new services. The need to manage demand risk also incentivises Western Power to set tariffs that assist it to manage demand on the network and its consequent costs."	
8	**Separate price controls and the side constraint** - The ERA refers to the pricing principle defined by "... section 7.3H(c) to minimise distortions to price signals for efficient usage. This will allow any tariff re-balancing required to bring tariffs in line with efficient costs to be smoothed over the access arrangement period. Consequently, the side constraint that is currently used to manage tariff re-balancing is no longer required."	38
9	**Investment adjustment mechanism** - The following categories must be removed from the investment adjustment mechanism set out in clause 7.3.7 of the current access arrangement: • Connection of new generation capacity • Connection of new load • Augmentations to provide additional capacity.	41
10	**Gain sharing mechanism** – "… the ERA decided that the following modifications were needed to the current gain sharing mechanism: • The link to service standard performance is no longer required • The mechanism must be symmetrical • The exclusion of uncontrollable costs must be deleted."	42-43
11	**Service standards adjustment mechanism – "**the ERA decided that the current service standard adjustment mechanism with the following amendments will apply for the AA5 period. • The service standards targets must be set at the average annual level of performance achieved in the AA4 period, adjusted for anticipated changes in service reliability and where individual penalty caps applied in AA4. WP must include details of any planned disruptions, new investment or changes to maintenance activities that would affect service standard performance, in its access arrangement proposal so that the service standard targets can be adjusted if appropriate. For example, any forecast improvements in system average interruption duration index (**SAIDI**) and system average interruption frequency index (**SAIFI**) due to the installation of stand-alone power systems should be included • The relevant changes to the method for calculating service standard benchmarks must be included in the service standard adjustment mechanism • Rewards and penalties for SAIDI and SAIFI must be based on the latest value of customer reliability report prepared by the Australian Energy Regulator (**AER** • Rewards and penalties for transmission service standards must be based on the revenue attributable to customers connected to the transmission network and receiving reference services • The individual caps on penalties must be removed • The overall caps for rewards and penalties are one per cent of target revenue."	17
12	**Demand management innovation allowance mechanism –** "Target revenue for AA5 will include an annual allowance based on 0.08 per cent of approved target revenue (excluding the allowance) for each pricing year.	21

Item	F&A requirements	F&A Page[4]
	The allowance can be used during the AA5 period for projects that meet the eligibility requirements set out in the ENAC and guidelines published by the ERA. WP will be required to provide annual reports to the ERA in accordance with the guidelines published by the ERA. Expenditure claimed against the allowance will be reviewed at the next access arrangement. Any allowance that is not used will be returned to customers through an adjustment to target revenue at the next access arrangement period."	
13	**Demand risk.** WP is incentivised to identify innovative services and the corresponding efficient tariff structures that will best match the needs of *users* using the new services. The need to manage demand risk also incentivises WP to set tariffs that assist it to manage demand on the network and its consequent costs.	37

4. Summary of Synergy's position on WP's target revenue and price control proposal

To assist the ERA's consideration of this submission, Synergy has developed a 'traffic light' system (refer Table 1 below) that clearly and transparently highlights which aspects of WP's proposal to which Synergy:

- **Agrees** – where WP's proposal is consistent with the ENAC and the long-term interests of consumers, or where the submission is not consistent with the long-term interests of consumers, but where Synergy will accept WP's proposal for the purposes of this submission ('green light')
- **Sees as unclear** – where Synergy has been unable to assess WP's proposal due to insufficient information ('amber light')
- **Disagrees** – where Synergy does not agree that WP's proposal is consistent with the ENAC or is not sufficiently substantiated ('red light').

Table 1: Synergy's response on the form of price control and the calculation of the annual revenue requirement

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
Form of price control		• To comply with ENAC requirements, including the F&A, there should be no true-up of revenue in any year (WP must not pass demand risk on to users) • To ensure WP's access arrangement information is consistent with ENAC sections 4.2 and 4.3, particularly in combination with sections 7.3H and 7.3G, the ERA should determine the customer numbers, energy volumes and maximum kVA levels listed in Table 41 of WP's AA5 Proposed Revisions document (pp. 39 - 40) be listed by reference tariff rather than by customer segment	5.3.1 5.3.1 5.3.2

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
		• Removal of the side-constraint should be contingent upon WP demonstrating compliance with ENAC section 7.3H(c).	
Use of building block method		• WP proposes to adopt the building block methodology to calculate target revenue, in line with the methodology adopted in the previous access arrangement periods and used previously by the ERA and the AER. Synergy considers this is consistent with the ENAC and in the long-term interest of consumers.	6.3
Revenue modelling		• Synergy has only been able to undertake a preliminary assessment of WP's regulated revenue model, which has identified what appears to be an error in the treatment of disposals and redundant assets in the model • WP's method of allocating capex and contributions from regulatory category to asset class lacks transparency, which makes it difficult to assess the accuracy of the forecast - an inaccurate forecast could result in an inappropriate acceleration of the rate of depreciation • Synergy has concerns about the allocation of actual capex and contributions from regulatory category to asset class during the AA4 period. It appears the AA4 forecast allocation percentages rather than the actual percentages observed during the AA4 period have been applied in WP's AA5 regulatory model. Synergy recommends the ERA consider whether this is consistent with the requirements of the ENAC, including sections 6.4(a)(i), 7.3G and 7.3H.	6.3
RAB		• Synergy considers WP's proposed approach of rolling forward the RAB to determine an opening capital base for AA5, and the approach for rolling forward the RAB during AA5, should be amended as follows to ensure it complies with the requirements of the ENAC, including those in sections 6.4(a)(i), 7.3G and 7.3H: – The RAB roll forward calculations should be conducted transparently at a nodal (e.g., zone substation) level, such that the sum of the nodal RAB values is equal to the sum of the total distribution and transmission network RAB values – The RAB roll forward calculation should not result in a capital base that exceeds the DORC of the assets. • Synergy considers that transparent locational/nodal allocation of the total transmission and distribution RABs: – Would support the Code objective by giving allowing compliance with the pricing principles in ENAC sections 7.3E, 7.3G and 7.3H – May give better visibility of the network assets providing covered services under ENAC section 6.4, including any redundant assets under ENAC section 6.61. • Synergy considers that applying a DORC valuation constraint to the method of rolling forward the RAB over access arrangements would:	7.3.1 7.3.2

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
		– Reduce the inappropriate allocation of significant stranded asset risk to network users and consumers, which Synergy considers is contrary to the Code objective and the requirement in ENAC section 6.4(a)(i) – Prevent the roll forward method from resulting in a capital base that exceeds the depreciated cost of replacing existing assets with new technologies, which if not prevented, Synergy considers would fail to satisfy the Code objective of being in the long-term interests of consumers in relation to price and the efficient use of services – Help make visible, as required under ENAC sections 4.2 and 4.3, the impact of WP's proposed decarbonisation and modular grid strategy on the capital base and ensure the capital base is set at a level that is consistent with the Code objective, noting that the Code objective requires promoting efficient investment in the network.	
TAB		• Synergy considers the approach to rolling forward the TAB to determine an opening TAB for AA5, and the approach for rolling forward the TAB during AA5, as it is described by WP, is appropriate.	8.3
Return of capital (depreciation)		• Synergy supports WP's proposed use of the annuity method of depreciation for advanced metering infrastructure (**AMI**) assets and for the recovery of deferred revenue • Synergy agrees with the Australian Energy Council's (**AEC**) submission to the ERA's F&A Issues Paper that the annuity method of depreciation should also be applied to all asset categories and vintages as this would better align with the Code objective when compared to the straight-line method of depreciation used in the past • Synergy's view is that WP's method of capex allocation has resulted in a reduction in the average economic life of the proposed investment for the AA5 period when compared to that for AA4 increasing network costs • Synergy does not support reductions in the economic lives of WP assets merely due to a change in a taxation ruling that generalises the effective life of assets for taxation purposes if this results in an artificial acceleration of the rate of depreciation, as this would not be in the long term interests of consumers • Synergy has reviewed tax ruling TR 2021/3 and identified discrepancies between some of WP's proposed reduced 'economic lives' and the 'effective lives' given in the tax ruling for what Synergy views to be the equivalent asset category, with consequences that are detrimental to network users and customers • There appears to be an inconsistency in the application of the tax ruling whereby WP has reduced an asset life based on the tax ruling but has not increased an asset life consistent with the tax ruling.	9.3.1 9.3.2 9.3.3

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
WACC	✗	• Synergy considers WP's proposed WACC methodology, which departs from the ERA's current regulatory approach to determining the allowed rate of return, is not appropriate for the following reasons: – Synergy considers the ten-year floating average cost of debt proposed by WP does not realistically represent an efficient debt management strategy, particularly given the current market conditions – Allowing WP to change the calculation approach in response to market conditions would provide WP with an incentive to propose the option that maximises its allowed cost of debt for that point in the business cycle. The change would risk inflating target revenue above costs over the cycle and therefore would be inconsistent with the Code objective – Cost of debt calculated each year rather than for a 5-year period, means revenue targets will be subject to greater variability in each year of the access arrangement period, which is contrary to ENAC sections 6.4(b) and (c) – Moving from a five-year to ten-year bond rate as the basis for the rate of return estimate would risk being inconsistent with the present value principle – There are important economic efficiency arguments (price distortions leading to a misallocation of resources) for the ERA to maintain regulatory consistency between the rate of return estimation approaches applied to the natural gas and electricity infrastructure businesses.	10.3
Opex	✗	• Synergy supports the use of a 'base-step-trend' approach to forecasting recurrent opex. Synergy recommends the ERA: – Obtain and publish benchmarking information to assess WP's opex proposal to enable compliance with ENAC sections 4.2 and 4.3 – Determine whether the lack of forecast opex allocated to the procurement of alternative options is consistent with a service provider efficiently minimising costs and is otherwise consistent with the ENAC requirements, including sections 6.4(a)(i) and 6.51 – Determine whether funding to develop new capabilities, systems and strategies such as DSO, digital substations, LIDAR programs, new data accessibility systems and additional response generators relate to the provision of covered services and if so whether these costs should be funded through recurrent revenue – Require WP to provide updated, efficient and statistically unbiased forecasts to support its opex proposal, which Synergy considers is required by ENAC sections 4.2, 4.3, 4.6(a)(i), 6.50, 6.51, 7.3G and 7.3H – Obtain clarity as to the extent to which some of WP's regulatory reform program costs are proposed to	11.3.2 11.4.2 11.4.2 11.5.2 11.6.2

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
		support wholesale electricity market (**WEM**) reforms rather than covered services and whether such costs are legitimately recovered via covered services – Consider whether, to comply with the ENAC, including the requirements of sections 6.4(a)(i) and (ii), WP's forecast of real labour cost increases should be set at a rate no greater than the assumed rate of productivity growth.	11.7.2
Deferred revenue		• Synergy notes the statement made in the ERA's Issues Paper, that WP's proposal to treat deferred revenue as a balancing item introduces "… a risk that there would be both an acceleration of deferred revenue and increases in prices which would be inconsistent with the intent of the Access ENAC amendment." (p. 42) • Synergy recommends that the ERA assess whether applying a quantile forecast of the weighted average annual price with a conservative probability of exceedance would mitigate this risk.	12.2.1
Forecasts of customer connections, energy and peak demand		• The omission of important peak demand and out-dated customer numbers and energy forecasts from WP's AA5 proposal does not allow users to understand how WP has derived the elements of the proposed access arrangement and is contrary to sections 2.1, 4.2 and 4.3 of the ENAC • Therefore, the ERA should obtain and publish up to date WP customer connections, energy and peak demand forecasts prior to the ERA publishing its Draft Decision in September 2022. Synergy notes the actual historical observations of customer numbers by tariff reported for the years 2015, 2016 and 2017 in Attachment 7.3 of WP's AA4 proposal differ materially from the actual historical customer numbers for those same years reported in Attachment 7.5 of WP's AA5 proposal • WP forecasts that there will be zero national metering identifiers (**NMI**) allocated to the RT1 tariff by 2025. This assumption is incorrect • Synergy analysed the residential consumption per NMI data provided in Figure 4-6 of Attachment 7.5 of WP's AA5 proposal. Synergy found WP's residential consumption per NMI forecast to be well above its projected regression trend. Synergy recommends the ERA scrutinise WP's forecast • Transparent forecasting of the location of customer numbers, sales and peak demand is required to provide network users and the ERA with information regarding the average cost of service provision by location and WP with an opportunity to move towards a pricing regime that better signals the forward-looking efficient costs of providing reference services - Synergy recommends WP's most recent zone substation forecasting report should be provided as an attachment to the access arrangement and be published by the ERA for user review prior to the ERA's draft AA5 decision • Synergy does not have clarity over the asset condition related forecasts that inform WP's replacement capex proposal. Synergy considers the omission of these important	13.4.1 13.4.3 13.4.2 13.4.5

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
		forecasts from WP's AA5 proposal does not allow users to understand how WP has derived the elements of the proposed access arrangement and is contrary to ENAC sections, 4.2 and 4.3 and inconsistent with the Code objective. Therefore, Synergy considers it is important for the ERA to obtain and publish WP's asset condition related forecasts or any other type of forecast that informs WP's replacement expenditure proposal prior to its draft AA5 decision	
		• WP is proposing to introduce new time of use energy tariffs and new demand-based tariffs in AA5. No forecast is provided on customer connections, energy and peak demand for these new reference services. Prior to publication of the ERA's Draft Decision, Synergy requests that ERA obtain and publish WP's updated forecasts of peak demand, energy, and customer number forecasts and further information in relation to WP's updated forecasts. These should include forecasts for new tariffs. Synergy requests that the ERA review and adjust WP's updated forecasts if needed.	13.4.4
Capex	✗	• If WP's proposed capex program were approved, it would add $4.5 billion (in real 2022$) to WP's proposed opening AA5 RAB of $10.5 million, representing an increase in WP's proposed AA5 opening capital base of 43% before depreciation	14.2.1
		• The absence of critical information such as locational peak demand, locational customer number and locational capex forecasts, appears to undermine the integrity of the proposal, since it means that, contrary to the requirements of ENAC section 4.2, Synergy and other interested parties are unable to assess whether the proposed major augmentation is prudent and efficient	14.2
		• WP is forecasting a pick-up in capacity expansion capex relative to that in AA4. This is inconsistent with WP's statement that it expects peak demand will fall over the AA5 period	14.2.2
		• Synergy notes that the justification for the ability of the network to roll SPS expenditures into the RAB was predicated on it reducing network costs. Synergy cannot see any evidence in WP's proposal that SPS expenditures reduce the size of WP's overall investment program	14.2.5
		• As mentioned in the opex category above, there is no evidence of WP having considered the use of alternative options to reduce capex requirements	14.2.4
		• The allocation of capex to asset categories lacks transparency. Synergy notes that, compared to AA4, a high proportion of AA5 capex has been allocated to assets with relatively short economic lives. Allocating capex to short lived assets tends to bring forward future revenue. This outcome is NPV negative for network users and customers with a higher cost of capital than the network	14.2.7
		• Synergy seeks confirmation that all capex not related to the provision of covered services will be fully covered by cash contributions	14.2.6

WP's existing & proposed reference services	Meets Synergy / customer needs	Rationale	Submission reference
		• Synergy seeks clarity from the ERA as to whether any of the obsolete, decommissioned, retired or redundant assets identified in WP's AA5 proposal should be treated as redundant capital under ENAC section 6.61.	14.2.8

5. Form of price control

In this section Synergy outlines its response to WP's proposed form of price control in WP's AA5 proposal.

5.1. ENAC requirements

The ENAC specifies the price controls used to set target revenue may be set with reference to:

1. The service provider's approved total costs, and / or
2. Tariffs in previous access arrangements, and changes in costs and productivity (ENAC section 6.2).

ENAC section 6.4 also specifies WP's price control must include the following objectives:

- Giving the service provider an opportunity to earn target revenue that arise directly from the provision of covered services
- Giving the service provider an opportunity to earn an amount of revenue that meets the forward-looking and efficient costs that arise directly from the provision of covered services, including a return on investment commensurate with risks
- Enabling a user to predict the likely annual changes in target revenue during the access arrangement period
- Minimising, as far as reasonably possible, variance between expected revenue for the last pricing year in the access arrangement period and the target revenue for that last pricing year
- ENAC section 4.A11 also requires that an access arrangement, including the form of price, must be consistent with the F&A, unless there has been a material change in circumstances.

5.2. WP's proposal

WP proposes to move to a revenue cap form of price control without a price cap side constraint for both transmission services and distribution services. The following covered services will be provided as revenue-cap services and a single target revenue will apply to these services:[5]

- Connection service

[5] See WP's proposed AA5 Access Arrangement revisions document, pp. 29-30

- Exit service
- Entry service
- Bi-directional service
- Reference services (metering) M1 to M20
- Streetlight maintenance.

In addition, WP had considered a revenue uncertainty adjustment mechanism to share demand risk between WP and users.[6] Contrary to the requirement of ENAC section 4.11A, this approach is also inconsistent with the ERA's F&A. In its F&A, the ERA rejected WP's view that this approach was consistent with the long term interests of consumers.[7] Synergy considers WP has not provided evidence that there has been a material change in circumstances that justifies the form of price control being inconsistent with the F&A.

5.3. Synergy's comments

5.3.1. Allocation of demand risk

Synergy is concerned that, contrary to the requirements in the F&A, WP's proposed form of price control applicable to transmission and distribution services will pass demand risk onto network users and/or end-use customers because:

- The proposed true-up mechanism outlined in paragraph 5.7.3 of WP's proposed access arrangement in combination with the revenue cap form of price control proposed by WP, appears to fully allocate demand risk in pricing year 1 of AA5 to network users / end-use customers. This outcome does not reflect the ERA's F&A decision that WP, rather than network users and end-use customers, should manage demand risk

- WP is proposing to set network tariffs in each year to recover target revenue by applying (outdated) demand, customer and energy forecasts,[8] aggregated by customer segment. Synergy's view is that this approach will result in an allocation of demand risk to network users because of an incentive for WP to introduce a downward bias to the AA5 demand, customer and energy forecasts. This incentive is not adequately moderated by the risk to WP of capex not being approved by the ERA, as despite the new requirements under ENAC sections 7.3G and 7.3H, most of the network tariffs that WP has proposed for AA5 are non-locational, energy-volumetric charges rather than locational, peak utilisation charges, creating an inconsistency between the forecasts used for pricing and the expenditure required to meet locational and peak utilisation of the network. Moreover, the risk to WP of capex not being approved by the ERA due to an under-forecasting of demand is less in AA5 due to WP's capex proposal being dominated by asset replacement expenditure rather than growth expenditure

  In Synergy's view, these outcomes are not in the long term interests of consumers in relation to price and the efficient use of services and are therefore inconsistent with the Code objective, ENAC sections 6.4(a)(i), 6.4(b), 6.4(c) 6.50 and 6.51, and the pricing principles in sections 7.3 to 7.3J, particularly 7.3G and 7.3H. WP should have a strong onus to apply good

[6] See the ERA's AA5 F&A Final Decision, p. 36.
[7] See the ERA's AA5 F&A Final Decision, p. 37.
[8] Synergy has concerns regarding the level of quality and the lack of recency of the forecasts attached to WP's AA5 proposal, as well as the absence of important forecasts and related information - see Section 0 below.

electricity industry practice in forecasting demand for the purposes of its AA5 proposal, to substantiate its demand forecasts (including the methodology and assumptions used) and to provide its users and their customers with reasonable opportunity to assess and comment on its methodology, assumptions and forecasts

As discussed further in Section 13, Synergy considers WP has not adequately substantiated its demand forecasts or provided reasonable opportunity for customers and stakeholders to review and comment on the forecasts which is contrary to ENAC sections 4.2 and 4.3. Consequently, the ERA under ENAC section 4.8 should require WP to provide this information for publication prior to the ERA's draft decision, so the ERA and users can form a view as to whether the proposed revisions comply with the ENAC, as expressly required by section 4.2(b)

- Synergy considers the ENAC requires customer numbers, energy volumes and maximum kVA levels listed in Table 41 of WP's AA5 Proposed Revisions document (pp. 39 - 40) to be listed by reference tariff rather than by customer segment. Synergy considers listing the forecasts by reference tariff is required by or consistent with:
    - The ERA's F&A Final Decision, that: "The Access Code amendments will require WP to undertake a more detailed cost allocation focussed on each reference service and ensure that each tariff is cost reflective." (p. 38)
    - The ERA's AA5 F&A Final Decision that demand risk should be allocated to WP rather than to network users (pp. 36-37).
    - ENAC section 4.2(b), particularly in combination with sections 6.4(a)(i), 6.50, 6.51, 7.3G and/or 7.3H.

WP's current proposed approach of grouping customers into segments may confer upon WP an incentive to reallocate demand risk to network users by re-assigning the original forecast of customer numbers and energy volumes between tariffs within a customer segment for a pricing year. Synergy notes WP appears to have 're-assigned' customer numbers in this manner during AA4 and sets out an example of this below. Synergy also considers such re-assignment is inconsistent with the requirements of ENAC Chapter 7, particularly sections 7.3G and 7.3H.

Table 2 below collates the relevant data used as inputs to develop retail customer network tariffs provided in WP's:

- AA4 Attachment 7.3.5 Energy & Customer Numbers Forecast 2017
- AA4 Access Arrangement document
- 2021/2022 Price List Information.

For the purposes of the 2021/22 price list and price list information, WP is required to use the customer information in Table 37 of the AA4 Access Arrangement (p. 43) to determine network prices. As can be seen in Table 2 below, the numbers and volumes listed in Table 37 of the AA4 Access Arrangement are derived from the forecasts by customer tariff made at the time of WP's AA4 proposal, but these have been aggregated by WP into customer segments before inclusion in Table 37.

Table 2 –WP's AA4 customer number forecast by residential customer tariff for 2021/22, those listed in the access arrangement for price control, and those assumed in WP's 2021/2022 Price List Information Document

Source	Tariffs	Customer numbers	GWh
AA4 Attachment 7.3.5 Energy & Customer Numbers Forecast, 2017, Table 1 and Table 6	RT1 - Anytime Energy (Residential)	803,676	3,863
	RT3 - Time of Use Energy (Residential)	6,996	48
TOTAL		**810,672**	**3,911**
AA4 Access Arrangement, Table 37	RT1, RT3, RT17, RT19, RT21	810,672	3,911
TOTAL		**810,672**	**3,911**
2021/22 Price List Information, Table 1.9	RT1 - Anytime Energy (Residential)	785,699	3755
	RT3 - Time of Use Energy (Residential)	5,601	36
	RT17 – 3 Part Time of Use Energy (Residential)	19,215	109
	RT19 – Time of Use Demand (Residential)	156	11
	RT21 – Multi Part Time of Use (Residential)	1	0
TOTAL		**810,672**	**3,911**

Synergy seeks clarity as to whether WP's proposed customer segment aggregation approach affords WP with a choice over the final customer number and energy volumes that WP applies to tariffs when ultimately setting the price list and, if so, how this is compliant with the ENAC, particularly sections 4.2, 7.3G and 7.3H.

It appears under the current proposal, provided the customer segment totals remain balanced, WP considers it can depart from the original forecast of customer numbers and energy volumes by tariff when setting prices. If this is the case, Synergy considers that demand risk may be better allocated to WP if Table 41 of WP's AA5 Proposed Revisions document were to list customer numbers, energy volumes and maximum kVA levels by reference tariff rather than by customer segment.

5.3.2. Removal of the side constraint

Synergy previously expressed support for the removal of the side constraint as part of Synergy's submission to the draft AA5 F&A predicated on the new price control mechanism achieving cost reflectivity and cross subsidy minimisation provided network tariffs comply with ENAC Chapter 7, particularly sections 7.3G and 7.3H that result in efficient locational and peak utilisation price signals.

Synergy notes the ERA's position page 25 in the AA5 F&A Final Decision, that removal of the side constraint should be contingent upon the introduction of cost reflective pricing, and also re-iterates its points raised in its TSS submission about the need for WP's reference tariffs to appropriately reflect WP's efficient costs associated with providing the relevant reference services.

6. Revenue modelling

In this section Synergy outlines its response to WP's proposed revenue model in WP's AA5 proposal.

6.1. ENAC requirements

The ENAC does not contain any requirements relating to the revenue modelling methodology. However, accurate, statistically unbiased and robust modelling is essential for compliance with many of the ENAC obligations, including sections 4.2, 4.3, 6.4(a), 6.4(b), 6.4(c), 6.50, 6.51, 7.3G and 7.3H.

6.2. WP's proposal

WP's revenue model determines a revenue requirement for each of the following building block components:

- Required return on assets (including a return on working capital)
- Depreciation
- Forecast opex
- Deferred revenue recovery
- Regulatory adjustments (incentives and forecast vs actual adjustments)
- Forecast tax calculation
- Tariff Equalisation Contribution.

A smoothed average price path is then applied to determine the annual revenue caps, such that the revenue caps are equal (in present value terms) to the building block revenue requirement. WP proposes to maintain a post-tax modelling approach.

6.3. Synergy's comments

Synergy considers the building block methodology to be an appropriate basis for determining revenue caps for transmission and distribution services.

Synergy has only been able to undertake a preliminary assessment of WP's regulated revenue model due to the complexity of the model and time limitations. From the preliminary analysis, Synergy has concerns over the treatment of disposals and redundant assets in the model that result in disposals and redundant asset input data being discarded and replaced by a balancing item (rows 169 – 181 of the Dx_Asset tab).

Synergy also has concerns about the allocation of actual capex and contributions from regulatory category to asset class during the AA4 period (rows 6 – 24 of the Dx_Asset tab and rows 6 – 20 of the Tx_Asset tab). In Synergy's view, WP's method of allocating capex and contributions from regulatory category to asset class lacks transparency, resulting in potentially inappropriate accelerated depreciation. It appears the percentage values in WP's AA5 regulated revenue model's allocation matrices are identical to those forecast at the beginning of the AA4 period and used in WP's AA4 regulated revenue model, i.e., before the capex was actually spent. In other words, the actual allocation percentages observed during the AA4 period do not appear to have been applied in WP's AA5 regulatory model. This results in the calculation of target revenue not meeting the ENAC requirements, particularly sections 6.4(a)(i), 7.3G and 7.3H.

Allowing WP to retain the capex allocation forecast made at the beginning of an access arrangement period for the allocation of actual capex and contributions from regulatory category to asset class may confer an incentive upon WP to favour its forecast allocation to asset classes with relatively short economic lives. If the actual capex incurred during the access arrangement period is spent on assets with relatively long economic lives compared to the forecast made at the beginning of the access arrangement period, the assumed allocation factors will result in an artificially accelerated rate of depreciation (see Section 9 below on the broader issue of forecast depreciation being allocated to assets with relatively short economic lives).

Synergy recommends that the ERA undertake a detailed review of the model to determine whether the methods used by WP to calculate target revenue are sound, including that they are appropriately accurate and robust to enable compliance with sections 4.2, 4.3, 6.4(a), 6.4(b), 6.4(c), 6.50, 6.51, 7.3G and 7.3H.

7. RAB

In this section Synergy outlines its response to WP's proposed approach to determining the RAB in WP's AA5 proposal.

7.1. ENAC requirements

The ENAC requires the capital base to be determined in a manner which is consistent with the Code objective, ENAC sections 6.48 and 6.50 requires the capital base only includes forecast new facilities investment that is forecast to occur before the access arrangement start date.

In addition, the ENAC section 6.61 contemplates the ERA may determine and remove any redundant capital from the capital base, including determining whether the depreciation of network assets should be accelerated instead of or in addition to removing redundant capital. Synergy's comments on the treatment of redundant capital are given in Section 14.2.8 below.

7.2. WP's proposal

WP proposes to roll forward its RAB from the start of AA4 to the end of AA4 (30 June 2022) by applying the following method with all values expressed in real 30 June 2022 dollars:

- Start with the opening RAB at the commencement of AA4
- Adjust this RAB to account for actual capex undertaken in the preceding access arrangement period expressed
- Add the value of capex (net of capital contributions and asset disposals) incurred from 1 July 2018 to 30 June 2022
- Deduct the value of depreciation from 1 July 2018 to 30 June 2022.

7.3. Synergy's comments

Synergy considers WP's proposed approach of rolling forward the RAB to determine an opening capital base for AA5, and the approach for rolling forward the RAB during AA5, should be amended to achieve the following:

- The RAB roll forward calculations should be conducted transparently at a nodal (e.g., zone substation) level, such that the sum of the nodal RAB values is equal to the sum of the total distribution and transmission network RAB values

- The RAB roll forward calculation should not result in a capital base that exceeds the DORC of the assets.

7.3.1. Transparent locational RAB allocation

In Synergy's view, transparent nodal allocation of the total transmission and distribution RABs would support the Code objective and is required for compliance with ENAC sections 4.2 and 4.3, particularly in relation to the pricing principles defined under ENAC sections 7.3E, 7.3G(b) and 7.3H, these being:

> "The charges paid by, or in respect of, different customers of a reference service may differ only to the extent necessary to reflect differences in the average cost of service provision to the customers." (ENAC section 7.3E)
>
> "Each reference tariff must be based on the forward-looking efficient costs of providing the reference service to which it relates to the customers currently on that reference tariff with the method of calculating such cost and the manner in which that method is applied to be determined having regard to: …
>
> … the location of end-use customers that are currently on that reference tariff and the extent to which costs vary between different locations in the service provider's network." (ENAC section 7.3G(b))
>
> "The revenue expected to be recovered from each reference tariff must:
>
> (a) reflect the service provider's total efficient costs of serving the customers that are currently on that reference tariff;
>
> (b) when summed with the revenue expected to be received from all other reference tariffs, permit the service provider to recover the expected revenue for the reference services in accordance with the service provider's access arrangement; and
>
> (c) comply with sections 7.3H(a) and 7.3H(b) in a way that minimises distortions to the price signals for efficient usage that would result from reference tariffs that comply with the pricing principle set out in section 7.3G." (ENAC section 7.3H).

Transparent nodal allocation of the total transmission and distribution RABs would also give proper visibility of the network assets providing covered services under ENAC section 6.4, including any redundant assets under ENAC section 6.61, and is therefore likely required under section 4.2.

In Synergy's view, transparency regarding the location of network expenditure and asset value is especially important in the context of WP's proposal to transition to a modular grid. According to the description given in WP's AA5 Access Arrangement Information document:

> "The modular grid refers to a move from a purely traditional network towards one which incorporates a mix of new energy solutions, such as standalone power systems (SPS), microgrids and battery energy storage systems (BESS), that can potentially plug into or out of the grid as needed.
>
> ...

> [The] … modular grid … will support the decarbonisation of the Western Australian local economy and meet our customers' needs, whilst maintaining an affordable energy delivery service reflected in our network tariffs." (p. vi)

That is, the modular grid is an interconnected network that supports SPS and potentially disconnected microgrids in the future.

Synergy also notes the following statement made by WP in its AA5 Information document:

> "Western Power is developing the modular grid as it affords *the least cost technology*, whilst maximising benefits, to meet the requirements of the differing customer groups served by Western Power." (p. 178, emphasis added by Synergy)

In Synergy's view, the nodal/location approach to determining the capital base will be particularly important for compliance with ENAC sections 4.2 and 4.3 because it allows for transparent reporting on the capital base and changes to the capital base during the proposed transition to a modular grid. Further, if the modular grid indeed "… affords the least cost technology…" and provides "… an affordable energy delivery service reflected in our network tariffs", then network users should expect to see reductions in the capital base at a nodal/location level.

Transparent determination by WP of the capital base and redundant capital at a nodal level will provide network users and the ERA with information regarding the average cost of service provision by location and will provide WP with an opportunity to implement a pricing regime that appropriately reflects the efficient costs of providing reference services, as required under ENAC Chapter 7, particularly sections 7.3G and 7.3H. It will also give the ERA and users visibility as to what assets are being replaced by the new technologies and will be relevant information when the ERA is making a redundant capital determination under ENAC section 6.61 and also required for WP to comply with ENAC section 4.2.

7.3.2. DORC valuation constraint

As discussed in Section 14 below, WP's proposal to transition to a modular grid will entail a program of "… transformational investment in existing assets and new technology …"[9] that, in Synergy's view, presents significant investment risk, and this risk, consistent with ENAC section 6.4(a), should not be allowed to be passed on to network users and customers who have no agency over the relevant investment decisions.

Synergy acknowledges WP's position that building or buying a modern equivalent set of network assets to provide reference services would likely utilise a very different mix of technologies - e.g., distributed energy resources (**DER**), SPS and microgrid technologies - to those currently in place. Therefore, Synergy considers that the method of rolling forward the RAB over access arrangements should only be undertaken within a DORC valuation constraint. Without such a constraint in place, significant stranded asset risk will be allocated to network users and consumers, which in Synergy's view would be contrary to the Code objective.

If WP's grid transformation proposal does indeed offer the least cost and benefit maximising investment option, then Synergy anticipates application of a DORC valuation constraint would result in a lower capital base than that produced by the RAB roll-forward method.

Furthermore, given WP's acknowledgement that the least-cost mix of replacement network technologies differs from that embodied in the current capital base, Synergy considers a DORC valuation constraint should be applied to WP's proposed roll forward method, regardless as to whether WP's grid transformation proposal is approved by the ERA. Synergy considers that, without the application of a DORC valuation constraint, the roll forward method would not satisfy the Code objective because it would result in a capital base that exceeds the depreciated cost of replacing existing assets with new technologies, and this would, in Synergy's view, not be in the long-term interests of consumers in relation to price and the efficient use of services.

Applying a DORC valuation constraint to the capital base would also make visible the impact of WP's proposed decarbonisation and modular grid strategy on the capital base and ensure the capital base is set at a level that is consistent with the Code objective, noting that the Code objective requires promoting efficient investment in the network. Synergy considers, without assessing the baseline of the capital base from time-to-time, it would be difficult for the ERA to determine whether the outcome of a grid transformation investment program is efficient and, therefore, this appears to be required to ensure WP's proposal is consistent with the requirements of the ENAC, including sections 6.4(a)(i), 6.50, 6.51, 7.3G and 7.3H.

In summary, Synergy recommends that the RAB roll forward calculations be conducted transparently at a nodal level and that the ERA apply a DORC valuation constraint to the distribution and transmission network RAB values when determining both the opening and the closing capital bases of the AA5 period.

It is important that the ERA determine whether the approach WP has proposed for determining the starting capital base for AA5 is consistent with ENAC section 6.48. Synergy considers WP's proposed approach is not consistent with ENAC section 6.48 because of the matters raised in its submission above and considers its recommended approach would enable AA5 to meet the requirements of ENAC section 6.48.

8. TAB

In this section Synergy outlines its response to WP's proposed approach to determining the TAB in WP's AA5 proposal.

8.1. ENAC requirements

The ENAC does not contain any specific requirements relating to TAB calculation.

8.2. WP's proposal

WP proposes to calculate the TAB using the roll-forward method, similar to the method applied to roll forward the RAB. The key differences in the methods are:

- The TAB is rolled forward in nominal terms
- Depreciation for the TAB is calculated using the diminishing value method, as opposed to the straight-line method used for the RAB
- Depreciation is based on actual expenditure rather than forecast depreciation.

8.3. Synergy's comments

The approach to rolling forward the TAB to determine an opening TAB for AA5, and the approach for rolling forward the TAB during AA4, as it is described by WP, is appropriate, with the same caveats as that described in Section 7 above.

Synergy notes that WP's building block model has been publicly released. However, Synergy has not undertaken a detailed review of this building block model. As a result, Synergy is not in a position to comment on the appropriateness of the detailed calculations of the opening TAB and the calculations to roll forward the TAB by WP. Synergy recommends that the ERA undertake a detailed review of the building block model, with a particular focus on ensuring it, and the associated information, is consistent and complies with the ENAC requirements, including those in sections 4.2, 4.3, 6.4, 7.3G and 7.3H.

9. Return of capital (depreciation)

In this section Synergy outlines its response to WP's proposed approach to determining depreciation of the network assets comprising the capital base in WP's AA5 proposal.

9.1. ENAC requirements

The ENAC requires depreciation of the capital base to be provided for (ENAC section 6.70).

9.2. WP's proposal

WP proposes the following approach to determining depreciation:

- Asset categories – assets are assigned to asset categories with matching asset lives. WP has added the following new asset categories:
    - For transmission – transmission secondary systems with an economic life of 30 years
    - For distribution – stand-alone power systems, with an economic life of 15 years and storage with an economic life of 10 years
- Economic lives – WP proposes to maintain the economic lives that were applied in AA4, except for:
    - Transmission reactors, which WP proposes to reduce from 50 to 40 years
    - Transmission circuit breakers, which WP proposes to reduce from 50 to 40 years
    - Distribution underground cables, which WP proposes to reduce from 60 to 50 years
    - Distribution switchgear, which WP proposes to reduce from 35 to 30 years

  Under WP's proposal these changes to economic lives will affect the calculation of the depreciation for new capex. Investment undertaken in previous access arrangements will continue to be depreciated based on the previous economic lives
- RAB depreciation approach – WP proposes to depreciate assets using:
    - The real annuity method of depreciation that has been applied for AMI assets and for the recovery of deferred revenue (see Section 12 below)

- The real straight-line approach for all other categories

RAB depreciation is modelled in two parts: initial capital base (which depreciates the opening capital base from when WP was first disaggregated in 2006) and new capex in the access periods following disaggregation (which depreciates the capex for each year following disaggregation)

WP proposes to maintain the current approach for calculating WP's actual distribution capex to approved distribution regulatory categories and allocating regulatory categories expenditure to asset classes (see Section 6 above which outlines Synergy's concerns regarding WP's use of forecast allocation percentages rather than actual allocation percentages for this purpose). Both initial capital base and annual capex in each asset category is depreciated over their approved standard life

- TAB depreciation approach – WP does not appear to have articulated in its AA5 proposal the TAB depreciation methodology that WP proposes to apply to AA5. Synergy considers the ERA should require WP to provide detail regarding its proposed TAB depreciation methodology to ensure WP's resulting target revenue and associated access arrangement information complies with the ENAC requirements, particularly those in ENAC sections 4.2, 6.4(a), 7.3G and 7.3H.

9.3. Synergy's comments

9.3.1. Annuity method of depreciation

Synergy supports WP's proposed use of the annuity method of depreciation for AMI assets and for the recovery of deferred revenue.

Synergy notes the AEC's submission to the ERA's AA5 F&A Draft Decision paper, which states:

> "… the AEC considers application of a real annuity method of depreciation [Given by: Depreciation = annuity – return on the regulated capital base] would better serve clauses 6.4(b) and 6.4(c) and meet the Access Code objective – while remaining consistent with clauses 6.43 and 6.70 - when compared to the straight-line depreciation approach that has been applied in WP's previous access arrangement periods.
>
> The improvement would be due to the flat overall capital cost recovery profile that the real annuity method affords and the fact that network users face a higher weighted average cost of capital than WP. A move to the real annuity method of depreciation would thus improve the net present value of network user's cash flows without impacting the net present value of WP's cashflows, which would place downward pressure on network prices and ultimately retail prices. Moreover, the move would provide some benefit for the network by preserving the network's capital base for longer, resulting in a stronger balance sheet over the life of the assets.
>
> In addition, the AEC also considers the real annuity method would better achieve the outcomes of clause 7.3H(c) of the Access ENAC and permit the network operator to more easily and effectively deliver on its obligations under ENAC clause 6.4(b) and 7.1D so that users can easily predict the financial impact before the release of a price list."

Synergy also notes the ERA's F&A Final Decision:

> "The Australian Energy Council put forward a proposal to adopt a different method of deprecation. The determination of depreciation will be undertaken in the access arrangement review." (p. 35)

Considering the amendment to the Code objective that has occurred since the ERA's AA4 Final Decision – with the emphasis now on promoting the long-term interests of consumers - Synergy agrees with the AEC that the annuity method of depreciation should also be applied to all asset categories and vintages, as this ensures the resultant target revenue satisfies the Code objective and the specific criteria in ENAC section 6.4(c), unlike the straight-line method of depreciation that has been used in the past.

Moving from a straight-line to an annuity method of depreciation for all asset categories and vintages would be NPV neutral for WP – i.e., an annuity approach would provide WP with the same NPV in revenue over the life of the assets as the straight-line depreciation approach - but would be NPV positive for network users and for customers because those users and customers face a higher cost of capital relative to WP's cost of capital and network cost recovery using the straight-line method of depreciation approach is front-end-loaded when compared to the annuity method of depreciation approach, which has a flat cost recovery profile.

To illustrate, the two panels of Figure 1 below compare the capital recovery profiles of the straight-line depreciation approach and the annuity method of depreciation approach, applied to an investment of $1 million with an asset life of 20 years at a service provider's WACC of 5%. The present value of both capital recovery profiles for the network service provider is equal to $1 million. However, for network users and end-use customers with WACCs of greater than 5%, the present value of network charges using the annuity method of depreciation will be lower than the present value of network charges using the straight-line method of depreciation. For instance, if network customers have WACCs of 10%, a move from the straight-line method to the annuity method of depreciation in the example would result in customer network cost savings of about 4.3% in NPV terms, while the service provider would remain NPV neutral at its WACC of 5%.

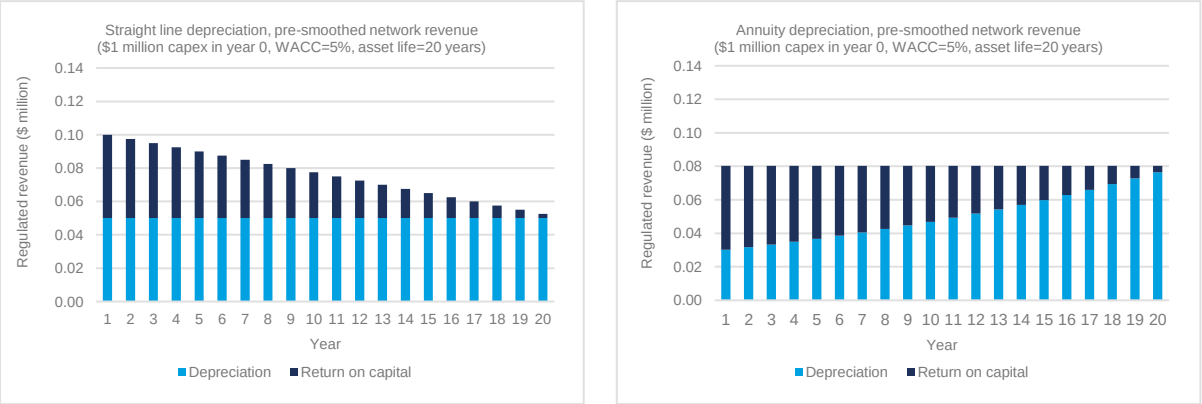


Figure 1: Illustrative comparison between capital recovery profiles for the straight-line depreciation approach and the annuity method of depreciation approach

Source: Synergy analysis

Therefore, over the long-term, a change in depreciation approach to an annuity method is in the long-term interests of consumers and would not negatively impact the cost recovery outcome of the network service provider. Given the recent change to the Code objective, Synergy considers applying the annuity method of depreciation to the undepreciated value of historical network investments as well as to all capex approved for AA5 satisfies the Code objective.

9.3.2. Method of capex allocation to asset type

Synergy notes that forecast depreciation for FY27 is 47% higher than approved depreciation for FY22, despite much of the pre-2006 capex becoming fully depreciated over the AA4 and AA5 periods. The main explanation for this is that much of the capex during AA5 is allocated to assets with relatively short economic lives, which results in a greater rate of depreciation for those assets. The two panels in Figure 2 below show the change in real depreciation by distribution (Dx) and transmission (Dx) asset category and reveal that much of the increase in AA5 is associated with assets with relatively short asset lives such as meters, information technology, SCADA and communications and SPS.

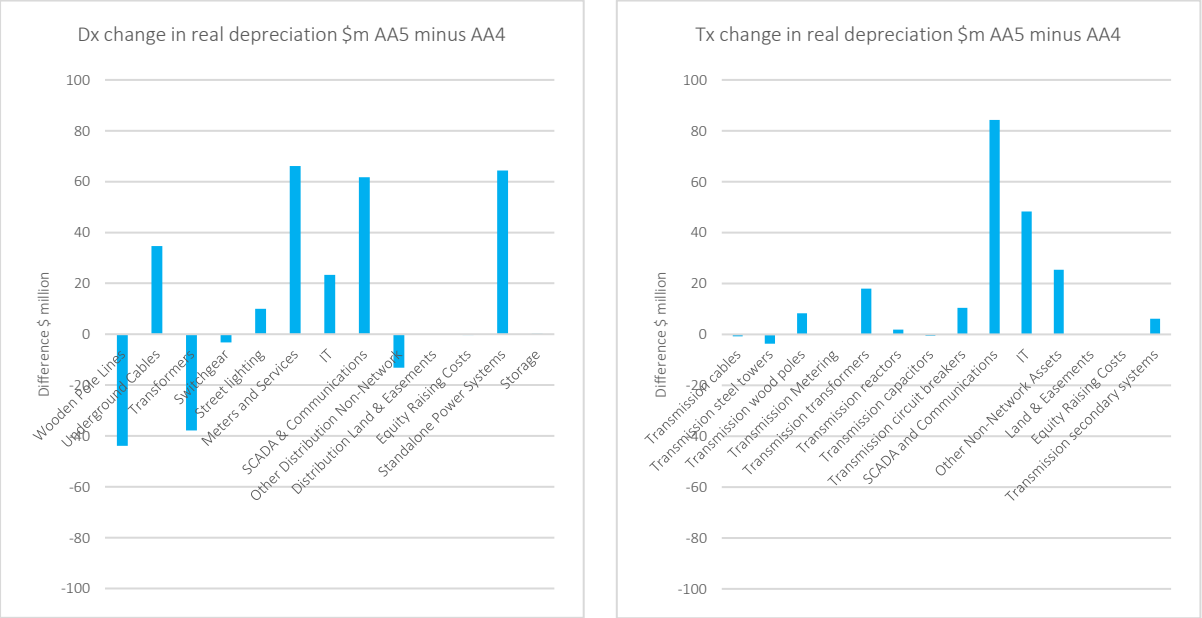


Figure 2: Distribution and transmission networks, change in depreciation from AA5 to AA4
Source data: WP, Attachment 11.1 AA5 Regulatory Revenue Model

Synergy also notes that once the ERA approves WP's capex program, there is no limitation on WP from spending the approved capex on assets with longer lives than those assumed the AA5 proposal, which underlies the importance of using actual rather than forecast allocation percentages in the allocation of actual capex and contributions from regulatory category to asset class during an access arrangement period (see Section 6 above).

As mentioned in Section 6 above, Synergy's view is that WP's method of capex allocation to asset type lacks transparency and has resulted in a reduction in the average economic life of the proposed investment for the AA5 period when compared to that for AA4. For similar reasons to those described immediately above in this section, incorrect allocation of capex from assets with relatively long lives to assets with relatively short lives would be contrary to the Code objective. This is because, as the ERA notes in its AA5 Issues Paper (p. 40), reducing asset lives brings forward the revenue that WP can earn, which means higher network tariffs in the short term.

Under such circumstances, network users and customers with a higher cost of capital than that of the network will experience a higher NPV of network charges over the life of the assets than would otherwise be the case. It is therefore critical the ERA scrutinise WP's AA5 capex allocation approach to ensure it does not result in a greater rate of regulatory depreciation than is appropriate and so that the resultant target revenue is not overstated and, therefore, inconsistent with the Code objective nor ENAC requirements in section 6.4, particularly 6.4(a)(i).

9.3.3. Reduction in the economic lives of assets

A similar issue arises from WP's AA5 proposal to reduce the economic lives of some assets but not increase the economic lives of any assets. WP claims to have based its changes in asset economic life on the 'effective life' of depreciating assets listed in the most recent tax ruling (TR 2021/3).

Synergy does not support reductions in the economic lives of WP assets merely due to a change in a taxation ruling that generalises the effective life of assets for taxation purposes. Synergy questions whether the generalised method approved by the Taxation Commissioner to calculate effective lives in the TR 2021/3 tax ruling, made for the purposes of the *Taxation Administration Act 1953* and *Income Tax Assessment Act 1997*, is fit for the purpose of calculating regulatory depreciation under the ENAC, and notes that sections 40-95 and 40-105 of the *Income Tax Assessment Act 1997* allow for effective life estimates that take account of the specific circumstances of a taxpayer's asset use, rather than Australian Taxation Office assumptions regarding 'normal industry practice'.

For the purposes of the ENAC, Synergy's view is that economic life calculations should account for the specific circumstances of WP's asset use. Synergy considers for the proposed access arrangement and associated information to comply with ENAC sections 6.4(a)(i) and 4.2, WP should explain what business practices or procurement decisions may have effected a material decrease in the economic lives of some asset categories since AA4.

Notwithstanding the discussion in the previous paragraph, Synergy has reviewed TR 2021/3 and found discrepancies between some of WP's proposed reduced 'economic lives' and the 'effective lives' given in the tax ruling for what Synergy views to be the equivalent asset category. These are as provided in Table 3 below.

Table 3 – Discrepancies between WP's proposed reduced 'economic lives' and the 'effective lives' given in the tax ruling for the equivalent WP asset category

WP asset category	WP proposed asset 'economic life'	Tax ruling asset category	Tax ruling 'effective life'
Transmission secondary systems*	30	Transmission substations (excluding power transformers and control, monitoring, communications and protection systems)	40
Distribution switchgear	30	Distribution zone substations (excluding control, monitoring, communications and protection systems)	40
Stand-alone power systems	15	Solar: Photovoltaic electricity generating system assets (incorporating photovoltaic panels, mounting frames and inverters)	20
		Diesel or gas engine: Emergency power supply assets (including batteries and uninterruptible power supply (UPS) assets)	15
Storage	10	Emergency power supply assets (including batteries and uninterruptible power supply (UPS) assets)	15
Equity raising costs**	46	Not listed	N/A

Source data: WP, AA5 Access Arrangement Information Access Arrangement document and ATO tax ruling (TR 2021/3)

*Notes: * In Synergy's view, transmission secondary systems have not been clearly defined by WP*

*** From WP's AA5 proposal, is not clear to Synergy why equity raising costs are treated by WP as a depreciating asset and why WP has proposed to reduce the economic life of equity raising costs.*

Synergy also found instances where longer effective lives are listed for a tax ruling asset category than the current economic life applied to what Synergy considers to be the equivalent WP asset category (refer Table 4 below.) Synergy questions the inconsistent application of the tax ruling and notes the negative impact on network users as a result.

Table 4 – *Examples where longer effective are lives listed for a tax ruling asset category than the current economic life applied for the equivalent WP asset category*

WP asset category	WP proposed asset 'economic life'	Tax ruling asset category	Tax ruling 'effective life'
Wooden pole lines	41	Distribution lines: Above ground (incorporating conductors; cross arms, insulators and fittings; poles - concrete, wood, steel or stobie; and transformers - pole or ground pad mounted)	45
Tx SCADA and Communications	11	Transmission: Control, monitoring, communications and protection systems	12.5
Dx Transformers	35	Distribution substations/transformers, pole or ground pad mounted	40
Dx Customer meters	15	Electricity Distribution: Customer meters (incorporating load and time switches if fitted)	25

Source data: WP, Attachment 11.1 AA5 Regulatory Revenue Model and ATO tax ruling (TR 2021/3)

To the extent WP has calculated its target revenue based on asset 'economic lives' that are less than the reasonably likely, or actual, economic lives, and that users' and customers' costs of capital are likely materially higher than WP's WACC, WP's proposed target revenue will be inconsistent with the Code objective and other requirements of the ENAC, particularly sections 6.4(a)(i) and 6.44 and also likely to be inconsistent with the requirements in sections 7.3G and 7.3H.

Synergy notes WP's AA5 building block model has been publicly released. However, Synergy has not undertaken a detailed review of this building block model. As a result, Synergy is not in a position to comment on the computational integrity of WP's RAB and TAB depreciation calculations. Synergy recommends that the ERA undertake a detailed review of the building block model including whether WP's approach is consistent with the Code objective and ENAC section 6.4(a)(i).

10. WACC

In this section Synergy outlines its response to WP's proposals regarding WACC.

10.1. ENAC requirements

The ENAC the methodology for calculating WACC must, under ENAC section 6.66, represent an effective means of achieving the Code objective and the price control objectives and be based on an accepted financial model such as the Capital Asset Pricing Model.

10.2. WP's proposal

WP has proposed an allowed rate of return (nominal, post tax WACC) of 5.05% in 2022/23, falling to 4.49% in 2026/27.

WP has proposed the following changes to the WACC approach from that applied in AA4 and from the standard approach that the ERA currently uses to determine the rate of return for the other regulated energy networks in Western Australia:

- An alternative approach to calculating the cost of debt: the current approach estimates the return on debt using a hybrid trailing average approach that includes a strategy conducted by a benchmark entity to use derivative arrangements to fix the risk-free rate over the AA5 period, whereas WP's proposed approach is to apply a floating risk-free rate to the calculation of the cost of debt over AA5

- An increase in the term of the risk-free rate: WP has proposed setting the term of the risk-free rate based on the yield on ten-year Commonwealth government bonds, as opposed to the ERA's current approach of using a five-year term for determining the risk-free rate.

10.3. Synergy's comments

For the following reasons, Synergy disagrees with WP's proposed departures from the ERA's current approach to determining the allowed rate of return in relation to AA5 and to other regulated infrastructure, such as gas networks, for the following reasons:

- Synergy does not agree with WP's assertion that "the current approach to the allowed return on debt reflects a financing strategy that a business would be unlikely to consider adopting, other than to replicate the allowance provided to it under the current approach.".[10] Firstly, in Synergy's view, any generic benchmark maturity profile employed by a regulator to estimate the cost of debt will entail simplification of real-world debt management practices. Secondly, the combination of 'on-the-day' bond rates and historical bond rates is an appropriate approach to offsetting refinancing risk and potential revenue/price volatility

  Using hedging strategies to manage the volatility of input prices over a multi-year period is a common business practice, and Synergy's view is that locking in a fixed rate at the commencement of the access arrangement period would be particularly prudent in the current environment of rising interest rate expectations. (At the time of writing, futures markets are pricing in interest rates to be more than a 2.6% higher than current levels by August 2022 - see Figure 3 below). Synergy considers the ten-year floating average cost of debt proposed by WP does not realistically represent an efficient debt management strategy, particularly given the current market conditions and is therefore inconsistent with ENAC section 6.4(a)(i) and is likely also inconsistent with sections 7.3G and 7.3H

- Synergy notes WP did not propose to implement a trailing average approach for the risk-free rate at the beginning of AA4, when the prevailing cost of debt at the start of that regulatory period was trending down. Now that the prevailing cost of debt has fallen well below the trailing average, WP appears to have changed its preference in favour of a trailing average approach. Allowing WP to change the calculation approach in response to market conditions does not satisfy the Code objective because it would provide WP with an incentive to propose the option that maximises its allowed cost of debt for that point in the business cycle contrary to the long-term interests of customers. This change would risk inflating target revenue above costs over the cycle and would therefore be inconsistent with the Code objective and ENAC sections 6.4(a)(i), 7.3G and 7.3H

- Synergy disagrees with WP's view that the approach they have proposed for estimating the cost of debt in AA5 is used by all other Australian regulators. Synergy understands that the Office of the Tasmanian Economic Regulator, for example, uses an approach that is an average of on-the-day and an historical average, weighted towards the present, for the entire cost of debt[11]

- WP's proposal to use a cost of debt calculated each year rather than for a five-year period, means revenue target adjustments will be subject to greater variability in each year of the access arrangement. When compared to the current assumption that hedging is used to lock in a risk-free rate over the regulatory period, WP's proposed method will make it more difficult

[10] WP, Access Arrangement Information: Access Arrangement revisions for the fifth access arrangement period, 1 February 2022, p. 234.
[11] Office of the Tasmanian Economic Regulator, Water and sewerage services price determination for Tasmanian Water and Sewerage Corporation, 1 July 2018 – 30 June 2022, p. 166

to assess the variance between expected and actual target revenue over the AA5 period. Therefore, WP's proposed method is inconsistent with the price control objective defined under ENAC section 6.4(c)

- Synergy agrees with the ERA's previous statements[12] and the ERA's 2022 initial position,[13] made in the context of the calculation of WACC in the context of gas networks, that the best approximation of the present value principle is to set the term of the rate of return to match the length of the regulatory period. Moving from a five-year to ten-year bond rate as the basis for the rate of return estimate would risk being contrary to the present value principle. Synergy is concerned WP's proposed change would arbitrarily increase the assumed cost of capital, inflating target revenue above costs and would therefore be inconsistent with the Code objective

- The ERA's current approach to determining the rate of return has been applied in recent gas network access arrangement decisions. There are important economic efficiency arguments for the ERA to maintain regulatory consistency between the rate of return estimation approaches applied to the natural gas and electricity infrastructure businesses. Natural gas is a complement to electricity generation and a substitute for electricity consumption. Applying a different rate of return estimation method for the electricity network sector to that of the natural gas network sector would distort relative prices resulting in an inefficient allocation of resources, an outcome that is unlikely to be in the long-term interests of electricity and gas consumers.

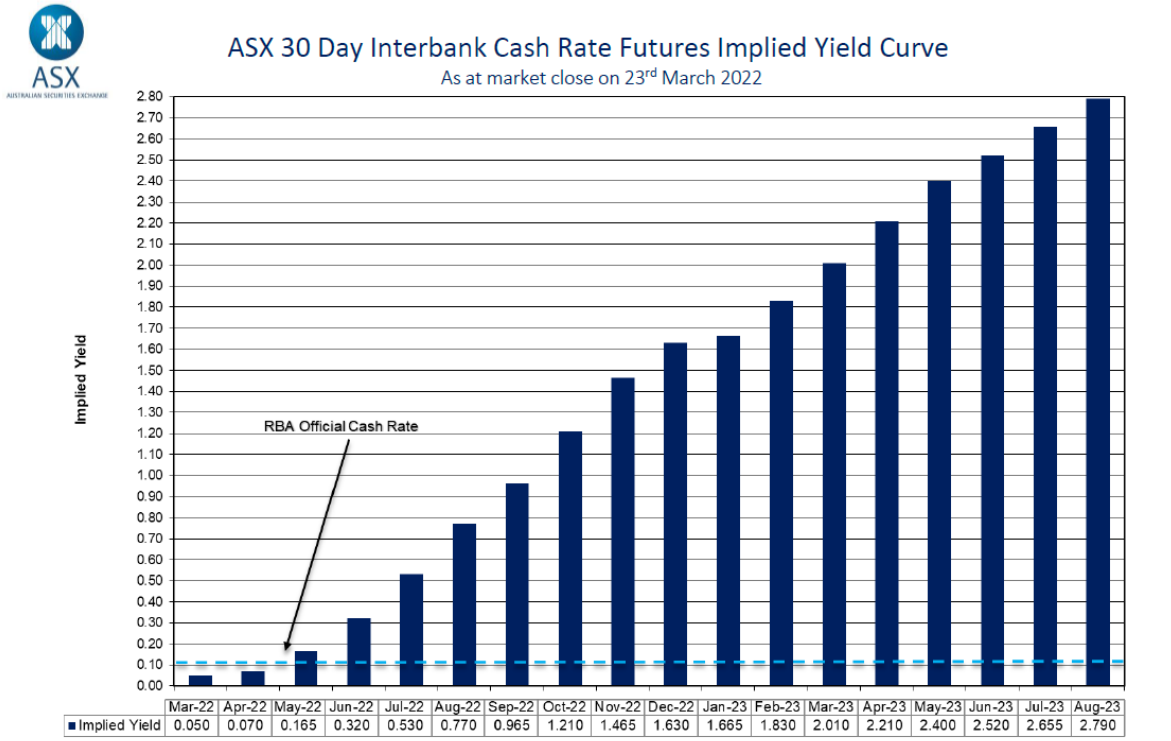


Figure 3: Future cash rate expectations

Source: Australian Stock Exchange

[12] ERA, Final Rate of Return Guidelines (2018), December 2018
[13] ERA, 2022 Gas rate of return instrument review discussion paper, December 2021, p. 22.

11. Opex

In this section Synergy outlines its response to WP's AA5 opex forecasts.

11.1. ENAC requirements

The ENAC section 6.40 requires the non-capital cost component of approved total costs must include only those non-capital costs which would be incurred by a service provider efficiently minimising costs.

11.2. Base-step-trend approach

11.2.1. WP's proposal

WP has adopted a 'base-step-trend' approach to forecasting recurrent opex.

11.2.2. Synergy's comments

Synergy supports the use of a 'base-step-trend' approach to forecasting recurrent opex.

11.3. Establishing the efficient base year

11.3.1. WP's proposal

WP's proposal in relation to establishing the efficient base year for direct costs and indirect costs are outlined in the following sections.

11.3.1.1. Direct costs

WP proposes to use 2020/21 as the base year for forecasting recurrent direct opex. In 2020/21, WP states its actual direct opex was $425 million, which was an overspend relative to the AA4 forecast for that year. WP adjusts actual direct opex by the following amounts to determine the efficient base year direct opex:

- $17 million of non-revenue cap opex is removed
- $5.6 million of opex for design costs is removed for a project that did not proceed
- $15 million of opex for actuarial adjustment costs is removed due to the adjustment in 2021/22 being substantially higher than the observed five-year average
- $1.8 million of opex for correction of unintentional underpayments is removed due to them being non-recurrent in nature
- $3.1 million of opex for regulatory reform costs is removed due to the costs being non-recurrent in nature
- $6 million of opex is added to account for adjustments due to the Mid-West Energy Project
- $43 million of opex for indirect costs is removed because indirect costs are separately forecast.

The result is an estimate of efficient base year direct opex of $348 million.

WP states that direct opex of $348 million is efficient because:

- It is in line with the ERA's approved opex for 2020/21 and the ERA's approved base year opex for 2016/17 in the AA4 Further Final Decision
- The 2020/21 base year amount embeds opex savings resulting from improvements to WP's work practices and processes, asset strategies, procurement processes and organisational structure implemented during the AA3 and AA4 periods
- WP was subject to the gain sharing mechanism during the AA4 period and responded to the incentives to improve productivity.

11.3.1.2. Indirect costs

WP proposes to use 2020/21 as the base year for forecasting recurrent indirect opex. WP's proposal does not state what is its actual indirect opex was in 2020/21, although Table 7.17 in WP's Access Arrangement Information document appears to indicate it was $151.8 million.

WP does not make any claim, nor provide any evidence, as to whether the base year for indirect opex is efficient. Synergy considers this is inconsistent with the requirement in ENAC section 4.2(b).

11.3.2. Synergy's comments

Synergy considers the most reliable way to assess whether WP's proposed base year direct opex costs of $348 million and proposed indirect opex costs of $151.8 million are efficient is to benchmark WP's proposed opex against the opex of other transmission and distribution businesses. WP does not appear to report any benchmarking results in its access arrangement proposal. In the absence of benchmarking evidence, Synergy has insufficient information to form a view as to whether WP's proposed base year direct costs opex of $348 million and proposed indirect costs opex of $151.8 million are efficient and compliant with ENAC section 6.4, particularly 6.4(a)(i). Synergy considers this is inconsistent with the requirement in ENAC section 4.2(b).

11.4. Adjusting for recurrent step changes

11.4.1. WP's proposal

WP's proposal in relation to adjusting for recurrent step changes for direct costs and indirect costs are outlined in the following sections.

11.4.1.1. Direct costs

WP proposes to adjust its base year opex by the following amounts associated with meeting new or changed regulatory obligations or new activities:

- $22.7 million of opex is added over AA5 to repair streetlight faults is added to reflect additional volume of streetlights to repair and additional cost due to increase in labour and LED material costs
- $21.8 million of opex is added over AA5 to develop a DSO capability

- $13.9 million of opex is removed over AA5 to account less manual meter reading as a result of the acceleration of the AMI deployment

- $26.4 million of opex is added over AA5 to fund a change the in approach to WP's silicone treatment program

- $5.0 million of opex is added over AA5 to support installation of devices and additional resources to analyse and prosses the data associated with a new digital substation program

- $19.5 million of opex is added over AA5 to fund cyber security, SPS and AMI implementation

- $6.4 million of opex is added over AA5 to fund SPS maintenance

- $3.8 million of opex is added over AA5 to fund a training program and increased focus on compliance and governance

- $6.1 million of opex is added over AA5 to fund LIDAR program, which entails a shift from non-recurrent to recurrent expenditure for surveying work

- $2.2 million of opex is added over AA5 for a new system to be developed to improve data accessibility for the low voltage network's power quality meters

- $5.0 million of opex is added over AA5 to fund a new strategy to deploy additional emergency response generators.

The result is a total value of step changes over AA5 of $104.9 million in additional expenditure.

11.4.1.2. Indirect costs

WP proposes to WP adjusts its base year indirect opex by the following amounts:

- $31.5 million of opex is added over AA5 for increased support services to deliver the increased capital works program

- $17.5 million of opex is added over AA5 for a new cyber function

- $19 million of opex is added over AA5 for an increase in managed contracts aligned to business-driven activities and software support linked to volume and price increases in WP'S information technology (**IT**) investment program.

The result is a total step change increase in indirect opex of $68.2 million.

11.4.2. Synergy's comments

Synergy draws the ERA's attention to the enhanced emphasis on the requirement for WP to consider alternative options to new facilities investment, resulting from amendments made to the ENAC since the commencement of AA4. Synergy notes that:

- None of the forecast base-year opex for AA5 appears to be allocated to the procurement of alternative options to new facilities investment

- WP has proposed no step change to achieve a non-zero amount of opex allocation to alternative options to new facilities investment over AA5.

The ENAC section 6.51 states that forecast capex may be included in the forward looking and efficient costs of providing covered services to the extent that it relates to investment that is reasonably expected to satisfy the new facilities investment test (**NFIT**). This has direct implications for WP's opex proposal as the NFIT requires new facilities investment to not exceed that which would be invested by a service provider efficiently managing costs (ENAC section 6.52(a)(iii)). It follows that an accurate and statistically unbiased forecast of opex as a substitute for higher cost capex is required for NFIT to be satisfied.

For all non-priority projects, consideration of alternative options is an explicit requirement for satisfaction of the NFIT (section 6.52(a)(iii) of the ENAC). In Synergy's view, the absence of a budget for procurement of alternative options to new facilities investment over AA5 indicates that WP's proposal has not considered their use as a substitute for higher cost capex solutions as part of WP's capex proposal (see Section 14 below). If WP does not include a statistically unbiased forecast of opex for alternative options as a substitute for new facilities investment in its AA5 proposal, entailing a reduction in the capex forecast, then Synergy submits that the ERA should not allow any inefficient (i.e., substitutable at lower cost) capex to be added to the capital base.

Synergy is also concerned that an assumption of zero opex for alternative options in AA5 is likely to inflate target revenue during the sixth access arrangement (**AA6**) period because proposed new facilities investment in AA5 will be inefficient due to the lack of assumed substitution of opex for capex to resolve network issues or constraints and, under WP's proposed D-factor scheme, WP will have an incentive to defer the proposed inefficient capex during AA5 to increase target revenue during AA6.

Synergy would view step changes in opex for DSO capability ($22 million), SCADA and communications ($19.5 million) as being efficient only if they enable alternative options as a substitute for higher capex, with net savings achieved overall. In any case, Synergy questions whether funding to develop new capabilities, systems and strategies such as DSO, digital substations, LIDAR programs, new data accessibility systems and additional response generators should be funded through recurrent revenue.

ENAC sections 6.4(a)(i) and 6.38 require the calculation of WP's capital and non-capital related costs can only be in relation to costs that arise directly from the provision of covered services. Synergy seeks ERA clarity as to the extent to which some of WP's costs are proposed to support WEM reforms. Synergy considers the ERA should only approve the pass through to users of the capital related and non-capital related costs where:

- Those costs arise directly from WP's provision of covered services
- WP is only seeking to pass through ***efficient*** capital related and non-capital related costs that arise directly from WP's provision of the relevant covered services
- WP is not otherwise able, or, in order to further the WEM objectives or the Code objective, should be able to recover the relevant costs through another mechanism, such as under the WEM Rules or through an 'excluded service' arrangement.

11.5. Trending the base year

11.5.1. WP's proposal

WP proposes to use the same approach to trending the base year for AA5 as it did for AA4, making use of different network growth factors and separate network growth factors for distribution and transmission and applying a weighting system to these growth factors.

11.5.2. Synergy's comments

WP's AA5 proposal states that, in estimating transmission network and distribution network growth factors "Customer numbers and maximum demand are based on the WP's 2020 peak demand, energy consumption and customer number forecasts …" to which WP refers to Appendix 7.5 of the access arrangement.[14] Synergy has reviewed Appendix 7.5 of WP's AA5 proposal and notes:

- None of the information contained within it relates to WP's peak demand forecast
- Customer number forecasts are missing for the last two pricing years of AA5 (see Section 13 below)
- Demand and customer forecast data is dated (2020) and therefore will result in any calculations based on those outdated forecasts to be inaccurate
- There is no asset condition related forecast provided with WP's AA5 proposal.

Consequently, and inconsistent with the requirements in ENAC section 4.2, users have been provided insufficient information to comment on WP's proposed trending of the base year for opex. Synergy recommends the ERA obtains and publishes this information for stakeholder assessment prior to the ERA publishing is draft AA5 decision in September 2022.

11.6. Adjusting for non-recurrent opex

11.6.1. WP's proposal

WP forecasts it will spend $72.5 million of non-recurrent opex during the AA5 period. This includes:

- $7.4 million associated with the costs incurred for 66 kV line removal
- $4.1 million associated with the Regulatory Reform Program
- $61.0 million associated with decommissioning of distribution overhead lines.

11.6.2. Synergy's comment

ENAC section 6.4(a) states the calculation of WP's capital related and non-capital related costs can only be in relation to costs arising directly from WP's provision of covered services. Clarity is sought as to the whether any of WP's regulatory reform program costs are proposed to support WEM reforms rather than to provide covered services. Synergy considers the ERA should only approve the pass through to users of the capital related and non-capital related costs where:

- Those costs arise directly from WP's provision of covered services
- WP is only seeking to pass through ***efficient*** capital related and non-capital related costs that arise directly from WP's provision of the relevant covered services
- WP is not otherwise able, or, in order to further the WEM objectives or the Code objective, should be able to recover the relevant costs through another mechanism, such as under the WEM Rules or through an 'excluded service' arrangement.

[14] WP, Access Arrangement Information Access Arrangement revisions for the fifth access arrangement period, 1 February 2022, pp. 164 & 166

Moreover, as discussed in Section 11.4.2 above, Synergy questions whether some items WP proposes to treat as step-changes in recurrent opex should actually be treated as adjustments for non-recurrent opex.

11.7. Real price growth

11.7.1. WP's proposal

WP proposes to escalate costs based on forecasts of wage growth over the AA5 period developed for WP by its consultant, Synergies.

11.7.2. Synergy's comment

Synergy notes that Synergies forecast opex productivity improvements of 0.25% per annum over AA5 but forecasts real labour cost increases of 0.77% per annum over AA5. In Synergy's view, these two numbers do not align with a basic economic expectation that wages should grow at the level of inflation plus the growth of productivity. Synergy recommends the ERA consider - to ensure the target revenue is consistent with the requirements of ENAC, particularly sections 6.4(a)(i) and (ii) – whether WP's forecast of real labour cost increases should be set no greater than the assumed rate of productivity growth.

12. Deferred revenue

In this section Synergy outlines its response to the deferred revenue forecasts in WP's AA5 proposal.

12.1. ENAC requirements

The ENAC allows for defined deferred revenue amounts to be added to target revenue, adjusting for inflation and the time value of money so that the deferral is financially neutral (ENAC sections 6.5B and 6.5C).

Amendments to the ENAC were made in July 2021 to allow WP to propose to expedite the recovery from network users of revenue that was deferred from the 2nd access arrangement (**AA2**) period, and requires the ERA to approve that proposal provided it does not result in the forecast weighted average annual price change across all reference tariffs being greater than zero for any pricing year of the access arrangement period (ENAC section 6.5D).

12.2. WP's proposal

As part of the ERA's access arrangement decision for the AA2 period, revenue amounts were deferred to future access arrangement periods for both distribution and transmission, to be recovered as a real annuity over the average life of assets on each system (42 years for distribution and 50 years for transmission). WP proposes to recover $182.9 million of this deferred revenue during the AA5 period. This amount has been determined on the recovery method previously approved in prior access arrangement periods.

The ERA's Issues Paper notes:

> "As Western Power's proposal results in an increase in charges to customers, it has not accelerated the recovery of the deferred revenue. However, Western Power proposes that the accelerated recovery of deferred revenue be applied as a balancing item during the AA5 review." (p. 41)

Further, the ERA noted:

> "The Access Code provisions for the acceleration of deferred revenue were only intended to be used up to a level that results in flat nominal prices for customers. … additional costs may arise during the AA5 period. If this occurs, there is a risk that there would be both an acceleration of deferred revenue and increases in prices which would be inconsistent with the intent of the Access Code amendment." (p. 42)

12.2.1. Synergy's comment

Synergy notes the statement made in the ERA's Issues paper, that WP's proposal to treat deferred revenue as a balancing item introduces "… a risk that there would be both an acceleration of deferred revenue and increases in prices which would be inconsistent with the intent of the Access Code amendment." (p. 42). The ERA indicates this is because of outstanding issues and uncertainties in WP's proposal that may affect costs during AA5; WP has suggested there may be a need to re-open the access arrangement before the end of the AA5 period to recover costs WP has not accounted for.

In Synergy's view, the intent of the recent amendments to section 6.5D of the ENAC should be respected and considers that the issue of cost uncertainty may be exacerbated if the ERA accepts WP's proposal to use a cost of debt calculated each year rather than for a five-year period (see Section 10 above), as this would result in revenue target adjustments being subjected to greater variability in each year of the access arrangement.

Moreover, as pointed out in Section 13 below, WP has not provided a forecast of export sales by tariff for pricing year 4 and pricing year 5 of the AA5 period. It is therefore not possible, and therefore inconsistent with ENAC section 4.2, for Synergy to assess the forecast weighted average annual price changes that might occur in the last two years of the access arrangement. A related issue is the critical importance of ensuring WP's energy and customer number forecasts are efficient and reasonable.

Section 6.5D of the ENAC does not state whether the "… forecast weighted average annual price change across all reference tariffs (as determined based on the reference tariff change forecast included in the proposed revisions, in nominal terms)" must be an expected forecast or whether it could instead be based on a quantile forecast. Synergy notes that, if the forecast weighted average annual price was a quantile forecast at a conservative probability of exceedance, then the risk of an acceleration of deferred revenue being accompanied by an increase in prices might be mitigated.

Synergy's also notes that the concept of a 'weighted average annual price' is not defined in the ENAC. Synergy does not have enough information to understand how the notion of a 'weighted average' calculation will be applied given the wide variety of network pricing parameters that are expressed in uncommon units of measurement. Synergy may not necessarily agree, for example, with a definition of 'weighted average annual price' that simplistically divides the target revenue allocated to a reference tariff by WP's total energy forecast for that reference tariff, as many customers face prices that are not volumetric in nature and there is no guarantee that nominal prices for those customers will remain flat under such an approach.

WP has provided insufficient information to enable Synergy to understand how the 'weighted average annual price' calculation will be applied and, therefore, the extent to which ENAC section 6.5D applies. Synergy recommends the ERA obtains clarity on this.

13. Forecasts of customer connections, energy and peak demand

In this section Synergy outlines its response to the forecasts of customer connections, energy and peak demand that WP has used as an input in developing its AA5 proposal.

13.1. ENAC requirements

The ENAC does not provide any explicit provisions regarding forecasts of customer connections, energy or peak demand. However, transparent, accurate forecasting is key to ensuring consistency with the price control objectives, as provided for ay ENAC section 6.4(b) and (c).[15] Such forecasts are also required for the target revenue to be consistent with other specific ENAC requirements, particularly those in sections 6.4(a)(i), 6.50, 6.51, 7.3G and 7.3H.

In addition, ENAC section 4.2 states:

> "4.2 Access arrangement information must enable the Authority, users and applicants to:
>
> (a) understand how the service provider derived the elements of the proposed access arrangement; and
>
> (b) form an opinion as to whether the proposed access arrangement complies with the ENAC."

Further ENAC section 4.3 of states:

> "4.3 Access arrangement information must include:
>
> (a) information detailing and supporting the price control in the access arrangement; and
>
> (b) information detailing and supporting the pricing methods in the access arrangement, including descriptions on how the tariff structure statement complies with the pricing principles and how the service provider has engaged with users and customers in developing the tariff structure statement; and
>
> (c) if applicable, information detailing and supporting the measurement of the components of approved total costs in the access arrangement; and
>
> (d) information detailing and supporting the service provider's system capacity and volume assumptions; and
>
> (e) any information specified as guidelines."

The ERA's Guidelines for Access Arrangement Information[16] requires that capex forecasts capex must be accompanied by, among other things, "the forecasts of load growth relied upon to derive the forecasts and details of the methods and assumptions used to develop the forecasts of capex from the forecasts of load growth".

Synergy submits that ENAC sections 4.2,4.3, 6.4(a)(i), 6.50, 6.51, 7.3G and 7.3H, and the Guidelines for Access Arrangement Information require WP to provide sufficient information substantiating its forecasts of customer connections, energy and peak demand so that the ERA, users and applicants can understand how WP derived its forecasts of capex, opex and prices and can form an opinion as to whether the proposed access arrangement complies with the ENAC. The forecasts are critical in that regard.

[15] These ENAC provisions permit a user to predict likely changes in target revenue and minimise the variance between expected revenue for the last pricing year in the access arrangement period and the target revenue for that last pricing year.

[16] ERA, *Electricity Networks Access ENAC 2004 - Guidelines for Access Arrangement Information (Version 2)*, 6 December 2010.

The following sections describe issues for the ERA's consideration with respect to WP's forecasts. Synergy considers that if these forecast issues are not resolved, AA5 will result in:

- Inappropriate allocation of demand risk, including an inability to accurately calculate the target revenue and efficient costs of each reference service and therefore an inability to compliantly apply ENAC sections 6.4(a)(i), 7.3G and 7.3H

- An inaccurate, and therefore inefficient, estimation of capex and opex requirements, including an inability to accurately apply NFIT as required under ENAC sections 6.50 and 6.51.

13.2. WP's proposal

In this section Synergy outlines the forecasts of customer connections, energy and peak demand that WP has used as an input in developing its AA5 proposal.

13.2.1. WP's peak demand forecast

WP's AA5 proposal states that, in estimating transmission network and distribution network growth factors used to determine WP's opex and capex forecasts, "Customer numbers and maximum demand are based on the Western Power's 2020 peak demand, energy consumption and customer number forecasts …". In making this statement, WP refers to Appendix 7.5 of its AA5 access arrangement proposal.[17]

Synergy has reviewed Appendix 7.5 of the access arrangement proposal and found that none of the information contained within it relates to WP's peak demand forecast.

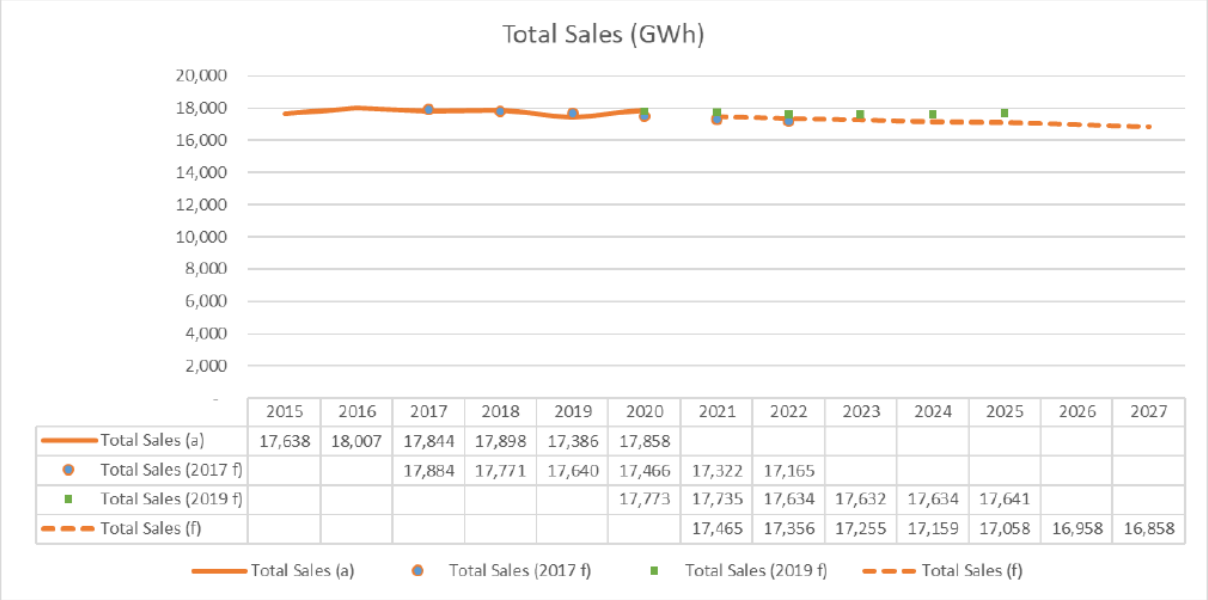
The only indication of WP's peak demand forecasting outcomes that Synergy can find in WP's AA5 proposal is the following statement in Attachment 8.1 which WP states is a plot of an Australian Energy Market Operator (**AEMO**) peak demand forecast:

> "Western Power is forecasting peak demand to fall slightly over the AA5 period under both the low and (POE90) and medium (POE50) demand scenarios, and to remain flat under the high (POE10) demand scenario." (p. 33)

13.2.2. WP's total energy sales forecast

WP's forecasts of total energy sales are provided in Figure 3.1 of Attachment 7.5 of WP's AA5 proposal, reproduced as Figure 4 below. Synergy calculates that over the period from end June 2020 to end June 2027, WP is forecasting an average compound annual growth rate (**CAGR**) in total energy sales of -0.82%. This compares to an observed average CAGR in total energy sales of 0.25% over the period from end June 2015 to end June 2020.

[17] WP, Access Arrangement Information Access Arrangement revisions for the fifth access arrangement period, 1 February 2022, pp. 164 & 166



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Sales (a)	17,638	18,007	17,844	17,898	17,386	17,858							
Total Sales (2017 f)			17,884	17,771	17,640	17,466	17,322	17,165					
Total Sales (2019 f)						17,773	17,735	17,634	17,632	17,634	17,641		
Total Sales (f)							17,465	17,356	17,255	17,159	17,058	16,958	16,858

Source: Energy and Customer Numbers Forecast 2020.xlsx [EDM# 55409628]

Notes:

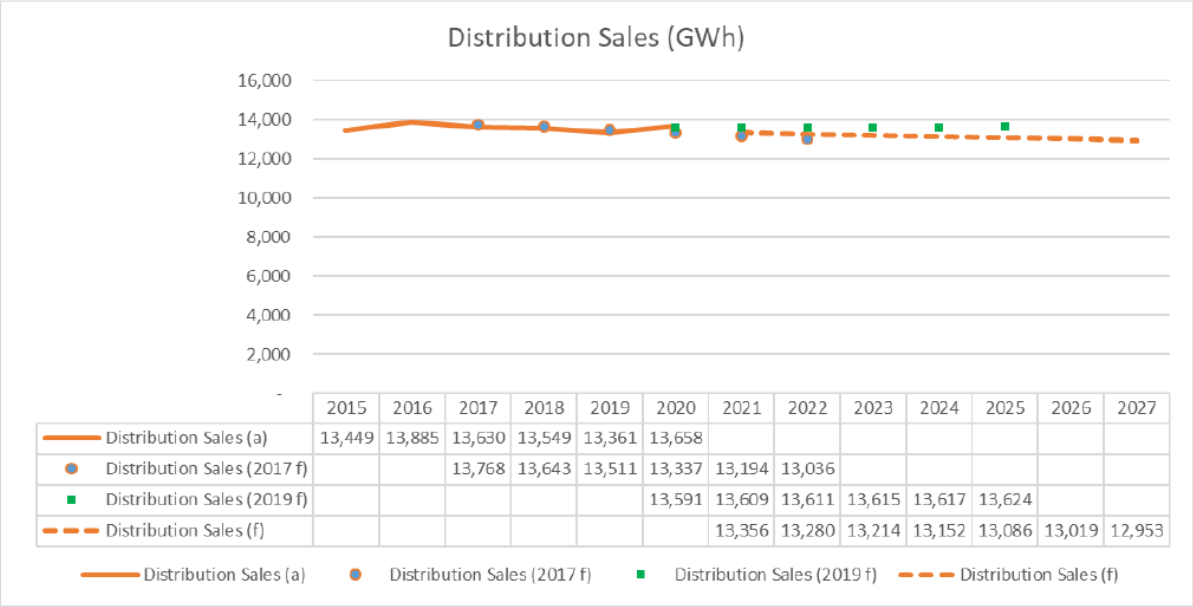
(1) Total Sales is defined as the sum of Distribution, Transmission Export Sales, Streetlights and Unmetered Supplies.

Figure 4: WP AA5 proposal, 'Total Sales forecast (GWh)"

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

13.2.3. WP's total distribution sales forecast

WP's forecasts of distribution sales are provided in Figure 3.2 of Attachment 7.5 of WP's AA5 proposal, reproduced as Figure 5 below. Synergy calculates that over the period from end June 2020 to end June 2027, WP is forecasting an average CAGR in distribution sales of -0.75%. This compares to an observed average CAGR in distribution sales of 0.31% over the period from 2015 to 2020.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Sales (a)	13,449	13,885	13,630	13,549	13,361	13,658							
Distribution Sales (2017 f)			13,768	13,643	13,511	13,337	13,194	13,036					
Distribution Sales (2019 f)						13,591	13,609	13,611	13,615	13,617	13,624		
Distribution Sales (f)							13,356	13,280	13,214	13,152	13,086	13,019	12,953

Source: Energy and Customer Numbers Forecast 2020.xlsx [EDM# 55409628]

Notes:

(2) Chart shows electrical power exported from the South West Interconnected System at the Distribution Network level. That is, excludes the Transmission Connected Customer power

Figure 5: WP AA5 proposal, 'Distribution Sales forecast (GWh)'

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

13.2.4. WP's customer connections forecast

WP's forecasts of customer connections are provided in Table 3.2 of Attachment 7.5 of WP's AA5 proposal, reproduced as Table 5 below. By Synergy's calculation, over the period from end June 2020 to end June 2025, WP is forecasting an average CAGR in NMI customer count of 1.58%. This compares to an observed average CAGR in total energy sales of 1.90% over the period from end June 2015 to end June 2020.

WP's customer numbers forecast ends in pricing year 3 of the AA5 period. Synergy has not been able to locate a customer numbers forecast in WP's AA5 proposal that includes pricing year 4 and pricing year 5 of the AA5 period.

13.2.5. WP's export sales by tariff forecast

WP's forecasts of export sales by tariff are provided in Table 3.4 of Attachment 7.5 of WP's AA5 proposal, reproduced as Table 6 below.

WP's export sales by tariff forecast ends in pricing year 3 of the AA5 period. Synergy has not been able to find any export sales by tariff forecast in WP's AA5 proposal that includes pricing year 4 and pricing year 5 of the AA5 period.

Table 5 – *WP AA5 proposal, 'Customer count (NMI) forecast by tariff'*

Tariff	2021	2022	2023	2024	2025
RT1	497,598	300,141	191,901	84,024	-
RT2	69,193	69,250	69,306	69,362	69,417
RT3	5,251	5,324	5,402	5,483	5,564
RT4	4,031	4,034	4,037	4,041	4,044
RT5	306	306	306	306	306
RT6	3,658	3,766	3,877	3,988	4,099
RT7	277	277	277	277	277
RT7Z	19	19	19	19	19
RT8	54	55	57	59	60
RT11	-	-	-	-	-
RT13	320,745	325,761	331,168	336,734	342,301
RT14	2,151	2,153	2,154	2,156	2,158
RT15	10,459	10,623	10,800	10,983	11,165
RT16	749	750	751	751	752
RT17	260,459	469,286	589,776	710,267	806,905
RT18	5,870	5,875	5,879	5,884	5,889
RT19	151	151	152	152	153
RT20	6,413	6,418	6,423	6,428	6,433
RT21	1	1	1	1	1
RT22	38	38	38	38	38
Other	15	15	15	15	15
RT9	280,203	285,718	291,661	297,781	303,901
RT10	19,278	19,278	19,278	19,278	19,278
Distribution Total	**1,486,918**	**1,509,239**	**1,533,280**	**1,558,027**	**1,582,774**
TRT1	40	40	40	40	40
Total	**1,486,958**	**1,509,279**	**1,533,320**	**1,558,067**	**1,582,814**

Source: Energy and Customer Numbers Forecast 2020.xlsx [EDM# 55409628]

Notes:

(3) Historical NMI count reported as at June each year
(4) Other refers to active NMIs that are not yet allocated to a tariff
(5) All RT1 NMIs are assumed to have been reclassified to RT17 by 2025
(6) Generators (RT11) have not been included in this forecast

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

Table 6 – *WP AA5 proposal, 'Forecast Export sales by tariff (GWh)'*

Tariff	2021	2022	2023	2024	2025
RT1	2,328 GWh	1,361 GWh	850 GWh	364 GWh	0 GWh
RT2	572 GWh	555 GWh	537 GWh	519 GWh	501 GWh
RT3	32 GWh	31 GWh	31 GWh	30 GWh	30 GWh
RT4	309 GWh	300 GWh	290 GWh	280 GWh	271 GWh
RT5	677 GWh	683 GWh	684 GWh	686 GWh	687 GWh
RT6	1,773 GWh	1,807 GWh	1,835 GWh	1,862 GWh	1,887 GWh
RT7	2,692 GWh	2,713 GWh	2,719 GWh	2,724 GWh	2,729 GWh
RT7Z	447 GWh	451 GWh	452 GWh	452 GWh	453 GWh
RT8	162 GWh	165 GWh	168 GWh	170 GWh	173 GWh
RT11	0 GWh	0 GWh	0 GWh	0 GWh	0 GWh
RT13	1,554 GWh	1,531 GWh	1,521 GWh	1,514 GWh	1,505 GWh
RT14	27 GWh	26 GWh	25 GWh	24 GWh	23 GWh
RT15	56 GWh	55 GWh	54 GWh	54 GWh	54 GWh
RT16	101 GWh	98 GWh	95 GWh	92 GWh	89 GWh
RT17	1,245 GWh	2,154 GWh	2,638 GWh	3,101 GWh	3,440 GWh
RT18	386 GWh	375 GWh	363 GWh	350 GWh	338 GWh
RT19	10 GWh	10 GWh	9 GWh	9 GWh	9 GWh
RT20	800 GWh	776 GWh	750 GWh	725 GWh	700 GWh
RT21	0 GWh	0 GWh	0 GWh	0 GWh	0 GWh
RT22	1 GWh	1 GWh	1 GWh	1 GWh	1 GWh
Other	1 GWh	1 GWh	1 GWh	1 GWh	1 GWh
RT9	134 GWh	138 GWh	140 GWh	143 GWh	146 GWh
RT10	50 GWh	50 GWh	50 GWh	50 GWh	50 GWh
Distribution Total	**13,356 GWh**	**13,280 GWh**	**13,214 GWh**	**13,152 GWh**	**13,086 GWh**
TRT1	4,109 GWh	4,077 GWh	4,042 GWh	4,007 GWh	3,972 GWh
Total	**17,465 GWh**	**17,356 GWh**	**17,255 GWh**	**17,159 GWh**	**17,058 GWh**

Source: Energy and Customer Numbers Forecast 2020.xlsx [EDM# 55409628]

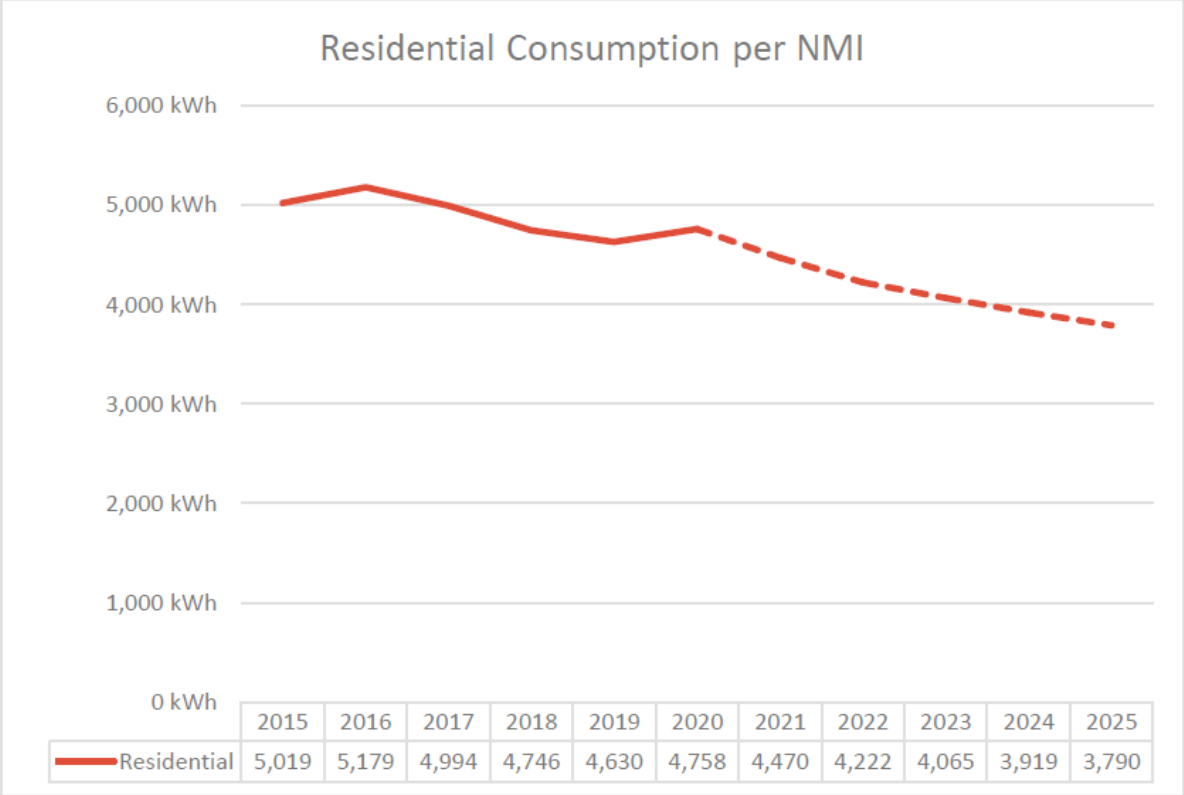
Notes:

(9) Historical NMI count reported as at June each year
(10) Other refers to active NMIs that are not yet allocated to a tariff
(11) All RT1 NMIs are assumed to have been reclassified to RT17 by 2025
(12) Generators (RT11) have not been included in this forecast

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

13.2.6. WP's average residential consumption forecast

WP's forecasts of average residential consumption are provided in Figure 4.6 of Attachment 7.5 of WP's AA5 proposal, reproduced as Figure 6 below. The figure in WP's attachment is accompanied with a statement that "…average residential consumption is expected to continue the recent downward trend …" (p. 7). Synergy calculates that WP is forecasting an average CAGR in residential consumption per NMI of -4.55% over the period from end June 2020 to end June 2025. This compares to an observed average CAGR in residential consumption per NMI of -1.06% over the period from end June 2015 to end June 2020.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	5,019	5,179	4,994	4,746	4,630	4,758	4,470	4,222	4,065	3,919	3,790

Figure 6: WP AA5 proposal, 'Residential Consumption per NMI'

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

13.3. Overview of WP's approach

For customer connections and energy, WP's AA5 proposal uses a forecast from 2020. It is not clear to Synergy why a more up-to-date forecast using 2021 observations has not been used for the AA5 proposal.

As discussed above, WP does not provide:

- Its own peak demand forecast to network users for the AA5 period
- Its energy and customer number forecasts by tariff for the last two pricing years of the AA5 period
- A total customer number forecast for the last two pricing years of the AA5 period.

The information that WP provides about its methodology for forecasting customer connections, energy and peak demand is found in Attachment 7.6 of WP's AA5 proposal and in a National Institute of Economic and Industry Research review of the approach in Attachment 7.7 of WP's AA5 proposal.

WP describes a forecasting process that is done in two stages:

1. System forecasts for customer numbers, energy sales and peak demand that are derived from forecasts of composite trends by zone substation

2. A separate forecast of connections per tariff is produced to create the revenue forecasts – this forecast is reconciled to the system total to guarantee consistency between the outputs.

WP states that in the first stage, forecasts are completed both bottom up (zone substation level) and top down (network level) using a variety of predominantly time-series forecasting techniques, and that the bottom up and top down forecasts are then reconciled and compared to ensure local and global trends are incorporated correctly.

WP states that the external variables considered in their forecasts include:

- Economic activity: variables that measure the level of activity in the economy
- Price: volumetric component of the electricity price
- Seasonal: temperature and other weather variables
- Substitution: capture any influence of alternatives to network delivered energy.

Very little additional information is provided by WP about the specific forecasting methodology or forecasting assumptions used for forecasting customer connections, energy and peak demand for each tariff category. For instance, Synergy can find no information in Attachments 7.6 and 7.7 of WP's AA5 proposal that describes how the forecast of connections per tariff is used to produce a forecast of energy sales by tariff.

13.4. Synergy's comments

13.4.1. Omission of forecasts and forecasting information

As discussed in Section 5 above, the form of price control proposed by WP allocates significant demand risk to network users and customers. In Synergy's view, this inappropriate allocation of demand risk relates in part to an incentive for WP to introduce a downward demand bias to the AA5 customer and energy forecasts. This incentive is not adequately moderated by the risk to WP of capex not being approved by the ERA, because:

- WP's capex proposal for AA5 is heavily weighted to replacement capex (see Section 13.4.5 below), which is more a function of asset condition rather than being a function of peak demand
- Notwithstanding the new requirements under ENAC section 7.3G, most of the network tariffs that WP has proposed for AA5 are non-locational, energy-volumetric charges rather than locational, peak utilisation charges, creating an inconsistency between the forecasts used for pricing and the forecasts used to justify the expenditure required to meet locational and peak utilisation of the network.

In Synergy's view, this places a strong onus on WP to apply best forecasting practices for the purposes of its AA5 proposal to substantiate its demand, customer numbers and energy forecasts (including the methodology and assumptions used) and to provide network users and stakeholders with reasonable opportunity to review and comment on its methodology, assumptions and forecasts.

The forecasts that WP has provided in Attachment 7.6 of WP's AA5 proposal are from 2020. In Synergy's view these forecasts appear to be out of date.

As discussed further below, Synergy considers that:

- WP has not provided its peak demand forecast to network users for the AA5 period
- WP has not provided its energy and customer number forecasts by tariff for the last two pricing years of the AA5 period
- WP has not provided a total customer number forecast for the last two pricing years of the AA5 period.

Moreover, WP has not adequately substantiated its forecasts or provided reasonable opportunity for customers and stakeholders to review and comment on its demand forecasts. Synergy considers this does not allow users to understand how WP has derived the elements of the proposed access arrangement, nor how it complies with ENAC sections 6.4(b) and (c), and is therefore contrary to sections 4.2(a) and 4.3. Further, Synergy notes the ERA under ENAC section 4.8 can require WP to provide this information. It is important that this information is made available to users prior to the ERA's draft AA5 decision so users (and the ERA) can form a view as to whether the proposed revisions comply with the ENAC, as required by ENAC sections 4.2 and 4.3.

The omission of important peak demand, customer numbers and energy forecasts from WP's AA5 proposal does not allow users to understand how WP has derived the elements of the proposed access arrangement and is contrary to ENAC sections 4.2 and 4.3 and inconsistent with the Code objective. Therefore, it is important for the ERA to obtain and publish WP's forecasts of customer connections, energy and peak demand.

13.4.2. Locational forecasts

It is evident from Attachment 7.6 of WP's AA5 proposal that WP produces forecasts of peak demand, customer numbers and energy sales by zone substation. Synergy understands WP produces an annual demand forecasting report that provides granularity at the substation level. However, this report is not provided as an attachment to the AA5 proposal. Synergy recommends WP's most recent zone substation forecasting report should be provided as an attachment to the access arrangement and be published by the ERA for user review prior to the ERA's draft AA5 decision.

For the same reasons as those expressed in Section 7 above, Synergy's view is that transparency regarding the location of customer numbers, sales and peak demand is especially important in the context of WP's proposal to transition to a modular grid. Transparent forecasting of these variables at a nodal level will provide network users and the ERA with information regarding the average cost of service provision by location and will provide WP with an opportunity to move towards a pricing regime that better signals the forward-looking efficient costs of providing reference services. Further, limited transparency about the forecasting methodology and forecasting assumptions used by WP makes it difficult for users and the ERA to assess whether those forecasts are reasonable.

In Synergy's view the information provided is insufficient to:

- Meet the requirements of ENAC sections 4.2 and 4.3 of the ENAC
- Determine whether the AA5 price control is consistent with ENAC sections 6.4(c) and 6.4(b).

13.4.3. Quality of forecasts and forecasting information

Synergy recommends more information is made available prior to the ERA's AA5 draft decision to support WP's forecasts and proposed revisions, including:

- Historical data for dependent and independent variables that is used in the customer count by tariff and the export sales by tariff modelling
- The specification of the preferred forecasting models used by WP, for each forecast type (number of customer connections, energy and peak demand) and for each customer category. This information should include coefficients for each independent variable and relevant measures of goodness of fit and statistical significance
- Forecasts of independent variables used in developing forecasts of connections, energy or demand
- Details of any post-modelling adjustments undertaken, including post-modelling adjustments to account for solar PV, batteries and electric vehicles.

Synergy notes the information provided by AEMO in support of its WEM Electricity Statement of Opportunities[18] and suggests that this is also the type of information typically provided as part of access arrangement proposals by network service providers in the NEM. Information of this type is required to assess the extent to which WP's proposed access arrangement complies with the ENAC requirements, including the Code objective, so efficient decisions can be made in relation to the investment and operation of the network. This information is particularly relevant to determine the reasonableness of the AA5 revisions.

Some of the information WP has provided about its forecasts raise important matters. For instance:

- Synergy notes the actual historical observations of customer numbers by tariff reported for the years 2015, 2016 and 2017 in Attachment 7.3 of WP's AA4 proposal differ materially from the actual historical customer numbers for those same years reported in Attachment 7.5 of WP's AA5 proposal (compare Table 7 and Table 8 below). For example, WP reported in its AA4 proposal that the actual observed number of customers on the RT1 tariff in 2015 was 922,431, whereas WP's AA5 proposal reported that the actual observed number of customers on the RT1 tariff in 2015 was 680,224. This is a discrepancy of about a quarter of a million customers. Discrepancies of similar magnitude are found for the equivalent export energy consumption values by tariff (compare Table 9 and Table 10 below)
- WP forecasts that there will be zero NMIs allocated to the RT1 tariff by 2025. Synergy does not agree with this forecast. Many Synergy connection points will remain on the RT1 tariff over AA5, e.g., those on remote parts of the network that will not have access to AMI. The presence of unrealistic forecasting assumptions such as the non-use of the RT1 reference tariff

18 See AEMO's 2017 Electricity Statement of Opportunities for the WEM, including the accompanying methodology report. Available here: http://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Planning-and-forecasting/WEM-Electricity-Statement-of-Opportunities

casts doubt upon WP's overall forecasting approach, particularly that which relates to the forecast of connections per tariff used to create WP's revenue forecasts

- Synergy reiterates the concern expressed in Section 5.3 above regarding the regulatory incentives placed upon WP to underestimate its energy consumption forecasts. As a benchmarking exercise, Synergy analysed the residential consumption per NMI data provided in Figure 4-6 of Attachment 7.5 of WP's AA5 proposal. In doing so, Synergy estimated the least-squares growth rate of the 2015 to 2020 actuals data by fitting a linear regression trend to their logarithmic values. Synergy found WP's residential consumption per NMI forecast to be well above its projected regression trend (see Figure 7 below). This appears contrary to the accompanying statements in WP's report that "… average residential consumption is expected to continue the recent downward trend" (p. 7). Synergy notes the ERA's AA5 F&A Final Decision that "the ERA is able to review and adjust the demand forecast if needed" (p. 36).

Prior to publication of the ERA's Final Decision, Synergy requests that ERA obtain and publish updated forecasts of peak demand, energy, and customer number forecasts and further information in relation to WP's updated forecasts. Synergy requests that the ERA review and adjust WP's updated forecasts if needed.

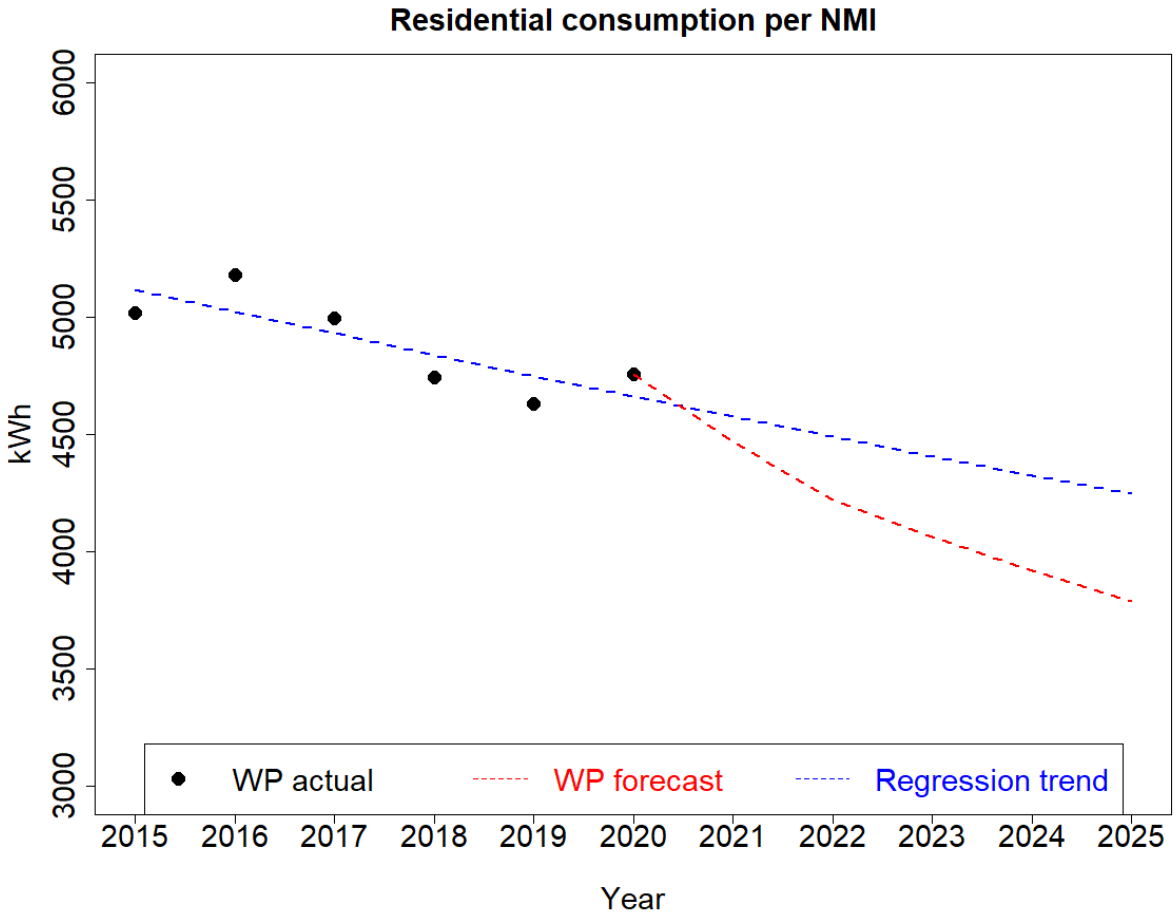


Figure 7: *Residential consumption per NMI with regression trend*

Source: Synergy analysis of data provided in WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

Table 7 - *WP AA4 proposal, 'average connection numbers per financial year (totals exclude unmetered connections)'*

Actuals	FYE					
Tariff	2012	2013	2014	2015	2016	2017
RT1	871,182	886,883	905,381	922,431	811,759	805,153
RT13	-	-	18	6,183	152,175	183,723
RT2	82,961	83,316	83,874	85,316	76,208	74,250
RT14	2	2	10	113	1,043	1,363
RT3	21,536	21,841	21,751	20,337	10,878	8,295
RT15	-	-	-	767	8,922	9,415
RT4	13,459	14,390	14,771	14,453	11,502	9,966
RT16	1	1	4	104	251	385
RT5	115	121	125	135	166	290
RT6	1,640	1,753	2,100	2,786	3,489	3,830
RT7	246	255	261	264	266	271
RT7Z	8	8	8	9	10	9
RT8	56	56	56	58	58	57
RT9		*237,387*	*240,864*	*249,640*	*255,731*	*265,442*
RT10		*15,862*	*15,675*	*15,420*	*15,801*	*16,318*
TRT1	38	38	38	38	38	38
Total	991,244	1,008,664	1,028,397	1,052,994	1,076,765	1,097,045

Source: WP, Attachment 7.3.5 Energy & Customer Numbers Forecast - 2017 Access Arrangement Information 2 October

Table 8 – *WP AA5 proposal, 'Historical customer count (NMI) by tariff'*

Tariff	2015	2016	2017	2018	2019	2020
RT1	680,624	696,100	705,623	711,707	716,888	725,972
RT2	69,351	69,473	69,123	69,055	68,360	68,796
RT3	4,773	4,758	4,843	4,970	5,120	5,155
RT4	3,984	3,953	3,973	3,987	3,993	4,015
RT5	283	286	293	300	303	308
RT6	3,403	3,471	3,544	3,614	3,650	3,667
RT7	266	270	275	276	280	278
RT7Z	18	18	20	20	19	19
RT8	56	56	56	57	54	54
RT11	25	24	23	23	25	25
RT13	278,366	286,456	292,379	297,732	302,625	316,420
RT14	2,097	2,126	2,155	2,153	2,145	2,144
RT15	10,126	10,132	10,184	10,245	10,266	10,264
RT16	701	716	730	747	749	747
RT17	15,565	16,376	17,198	17,437	17,644	18,306
RT18	5,205	5,338	5,481	5,619	5,723	5,852
RT19	138	142	147	147	149	150
RT20	6,010	6,098	6,190	6,284	6,362	6,390
RT21	1	1	1	1	1	1
RT22	25	28	30	31	34	38
Other	88	57	40	37	30	14
RT9	237,378	262,967	267,553	270,622	273,508	275,857
RT10	14,074	15,909	16,904	19,881	19,457	19,273
Distribution Total	**1,332,557**	**1,384,755**	**1,406,765**	**1,424,945**	**1,437,385**	**1,463,745**
TRT1	41	41	40	40	40	40
Total	**1,332,598**	**1,384,796**	**1,406,805**	**1,424,985**	**1,437,425**	**1,463,785**

Source: Energy and Customer Numbers Forecast 2020.xlsx [EDM# 55409628]

Notes:

(1) Historical NMI count reported as at June each year
(2) Other refers to active NMIs that are not yet allocated to a tariff

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

Table 9 - *WP AA4 proposal, 'export consumption per financial year (GWh)'*

Actuals	FYE					
Tariff	2012	2013	2014	2015	2016	2017
RT1	4,985	4,967	4,961	4,740	4,392	4,434
RT13	-	-	-	34	778	974
RT2	1,307	1,221	1,176	1,088	1,100	1,089
RT14	-	-	-	2	14	28
RT3	170	164	158	138	83	64
RT15	-	-	-	2	50	55
RT4	2,100	2,145	2,037	1,812	1,411	1,058
RT16	-	-	2	29	55	72
RT5	370	371	393	409	498	650
RT6	1,402	1,440	1,572	1,776	1,994	1,942
RT7	2,690	2,644	2,569	2,590	2,642	2,595
RT7Z	402	408	426	470	474	449
RT8	225	226	218	210	207	191
RT9	*122*	*126*	121	124	129	131
RT10	*35*	*34*	33	32	33	38
TRT1	2,925	3,297	3,843	4,131	4,014	3,995
Total	16,732	17,045	17,509	17,587	17,875	17,764

Source: WP, Attachment 7.3.5 Energy & Customer Numbers Forecast - 2017 Access Arrangement Information 2 October:

Table 10 – WP AA5 proposal, '*Historical Export sales by tariff (GWh)'*

Tariff	2015	2016	2017	2018	2019	2020
RT1	3,346 GWh	3,518 GWh	3,464 GWh	3,347 GWh	3,329 GWh	3,502 GWh
RT2	739 GWh	722 GWh	679 GWh	652 GWh	619 GWh	611 GWh
RT3	34 GWh	34 GWh	32 GWh	31 GWh	31 GWh	32 GWh
RT4	362 GWh	356 GWh	338 GWh	331 GWh	320 GWh	318 GWh
RT5	579 GWh	608 GWh	613 GWh	642 GWh	670 GWh	687 GWh
RT6	1,728 GWh	1,783 GWh	1,773 GWh	1,807 GWh	1,809 GWh	1,818 GWh
RT7	2,587 GWh	2,667 GWh	2,641 GWh	2,724 GWh	2,722 GWh	2,786 GWh
RT7Z	467 GWh	474 GWh	482 GWh	497 GWh	456 GWh	461 GWh
RT8	198 GWh	196 GWh	184 GWh	187 GWh	173 GWh	167 GWh
RT11	3 GWh	2 GWh	2 GWh	6 GWh	7 GWh	5 GWh
RT13	1,583 GWh	1,686 GWh	1,639 GWh	1,558 GWh	1,506 GWh	1,566 GWh
RT14	41 GWh	39 GWh	35 GWh	31 GWh	29 GWh	28 GWh
RT15	61 GWh	63 GWh	59 GWh	56 GWh	55 GWh	57 GWh
RT16	114 GWh	114 GWh	111 GWh	108 GWh	104 GWh	103 GWh
RT17	99 GWh	106 GWh	106 GWh	105 GWh	105 GWh	109 GWh
RT18	433 GWh	427 GWh	409 GWh	404 GWh	387 GWh	386 GWh
RT19	9 GWh	10 GWh	10 GWh	10 GWh	10 GWh	10 GWh
RT20	906 GWh	916 GWh	881 GWh	871 GWh	848 GWh	824 GWh
RT21	0 GWh	0 GWh	0 GWh	0 GWh	0 GWh	0 GWh
RT22	2 GWh	2 GWh	2 GWh	1 GWh	1 GWh	1 GWh
Other	3 GWh	2 GWh	1 GWh	1 GWh	0 GWh	0 GWh
RT9	124 GWh	129 GWh	129 GWh	130 GWh	131 GWh	135 GWh
RT10	32 GWh	33 GWh	39 GWh	49 GWh	49 GWh	51 GWh
Distribution Total	**13,449 GWh**	**13,885 GWh**	**13,630 GWh**	**13,549 GWh**	**13,361 GWh**	**13,658 GWh**
TRT1	4,189 GWh	4,122 GWh	4,215 GWh	4,349 GWh	4,025 GWh	4,200 GWh
Total	**17,638 GWh**	**18,007 GWh**	**17,844 GWh**	**17,898 GWh**	**17,386 GWh**	**17,858 GWh**

Source: Energy and Customer Numbers Forecast 2020.xlsx [EDM# 55409628]

Notes:

(7) Historical NMI count reported as at June each year

(8) Other refers to active NMIs that are not yet allocated to a tariff

Source: WP, Attachment 7.5, Energy and Customer Number Forecast Report (2020), Access Arrangement Information, 1 February 2022

13.4.4. Forecasting customer connections, energy and peak demand for new tariffs

WP is proposing to introduce new time of use energy tariffs and new demand-based tariffs in AA5. No forecast is provided on customer connections, energy and peak demand for these new reference services.

Provided Synergy's AA5 pricing expectations are met it expects it will nominate, over time, a large proportion of new NMIs with appropriate metering on time of use reference tariffs.). New customers tend to have different patterns of energy use than existing customers (as a result of trends in building construction and appliance use and efficiency). Consequently, this suggests the forecast energy and peak demand of residential customers on the new time of use energy tariffs will be different from the forecast energy and peak demand of existing residential customers who will remain on existing tariffs.

Also, given that the purpose of the new time of use energy tariffs and the new demand-based tariffs is to drive changes in patterns of energy consumption by customers, it would be reasonably expected customers on these tariffs would have different patterns of consumption than similar customers on existing tariffs.

It is unclear to Synergy whether WP has taken account of the type of customers that will be on the new time of use energy tariffs and the new demand-based tariffs, and whether WP has taken account of the effect these tariffs will have on patterns of energy use. (WP has not discussed the practical workings and effects of these tariffs on customers with Synergy.) Not taking into account for these effects could result in inaccurate forecasts of energy and peak demand for these customers and potentially affect the price path that customers face over the period of AA5.

As stated in the preceding section, prior to publication of the ERA's Draft Decision, Synergy requests that ERA obtain and publish WP's updated forecasts of peak demand, energy, and customer number forecasts and further information in relation to WP's updated forecasts. These should include forecasts for new tariffs. Synergy requests that the ERA review and adjust WP's updated forecasts if needed.

13.4.5. Lack of forecasting information related to the drivers of replacement expenditure

The level of capex that WP expects to be required to upgrade transmission and distribution assets to meet network reliability standards is only partly dependent on peak demand forecasts.

Based on the capex values listed in Table 11 and Table 12 of Section 14 below, proposed AA5 investment to support asset replacement and renewal expenditure is greater than that for the growth expenditure category by a factor of:

- 2.3 for the transmission network
- 7.3 for the distribution network.

This suggests that the underlying forecasts that determine the requirement for asset replacement expenditure are now potentially far more important a contributor to network costs than the underlying forecasts that determine the requirement for network growth expenditure.

Synergy does not have clarity over the asset condition related forecasts that inform WP's replacement capex proposal. Synergy considers the omission of these important forecasts from WP's AA5 proposal does not allow users to understand how WP has derived the elements of the proposed access arrangement and is contrary to ENAC sections, 4.2 and 4.3 and inconsistent with the Code objective. Therefore, Synergy considers it is important for the ERA to obtain and publish WP's asset condition

related forecasts or any other type of forecast that informs WP's replacement expenditure proposal prior to its draft AA5 decision.

14. Capex

In this section Synergy outlines its response to the capex forecasts in WP's AA5 proposal.

14.1. WP's proposal

WP sets out a forecast of AA5 capex in its Access Arrangement Information document. WP's proposed capex for AA5, less cash contributions and gifted assets, as well as WP's actual post adjustments capex for AA4, less cash contributions and gifted assets, is depicted in Figure 8 below.

WP is proposing a program of "… transformational investment in existing assets and new technology …"[19] to move to a modular grid.

WP's AA5 proposal states the following:

> "Our proposed investment will help us deliver on our Corporate Strategy, which will ensure the Western Power Network is future focused to enable the most flexible connection and operation of DER and large-scale renewables possible, for the benefit of all Western Australians.
>
> More specifically, our proposed capex plan during the AA5 period is designed to:
>
> - maintain overall safety of the network in line with jurisdictional obligations, with actual performance not deteriorating below current levels
> - maintain current service standard levels, as measured by the SSBs [i.e., service standard benchmarks], whilst ensuring ongoing sustainability of the network and optimising the transition to the modular grid
> - deliver services at the agreed levels and at the lowest practical cost
> - satisfy applicable regulatory obligations and maintain current network compliance risk ratings
> - enable increased levels of renewable generation connection to our network
> - implement Energy Transformation Strategy Stage 1 outcomes, as applicable (e.g. five-minute settlement, DER Roadmap)
> - meet Government policies and requirements, including SPS roll out and climate change policy, and support the Economic Stimulus Package (ESP)." (pp. 177 - 178).

WP proposes to invest $5,375.6 million (in real 2022$) of capital to deliver covered services over AA5. This compares to $3,984.6 million (in real 2022$) of proposed actual post adjustments investment over AA4.

[19] WP, Access Arrangement Information for the AA5 Period, 1 February 2022, p. 19.

Of the proposed investment, approximately $1,034.5 million (in real 2022$) consists of forecast capital contributions or gifted assets in AA5. This compares to $1,049.3 million (in real 2022$) of actual capital contributions or gifted assets in AA4. Capital contributions and gifted assets are not permitted to be added to the RAB.

WP forecasts $4,532.7 million (in real 2022$) will be added to the RAB and recovered through reference and non-reference tariffs in AA5. This compares to $3,211.5 million (in real 2022$) of proposed actual capex that WP intends to add to the RAB over AA4. If these values are approved, it will amount to a 41% increase in capex between AA4 and AA5 in real terms at a time when customers are concerned with affordability and cost of living.

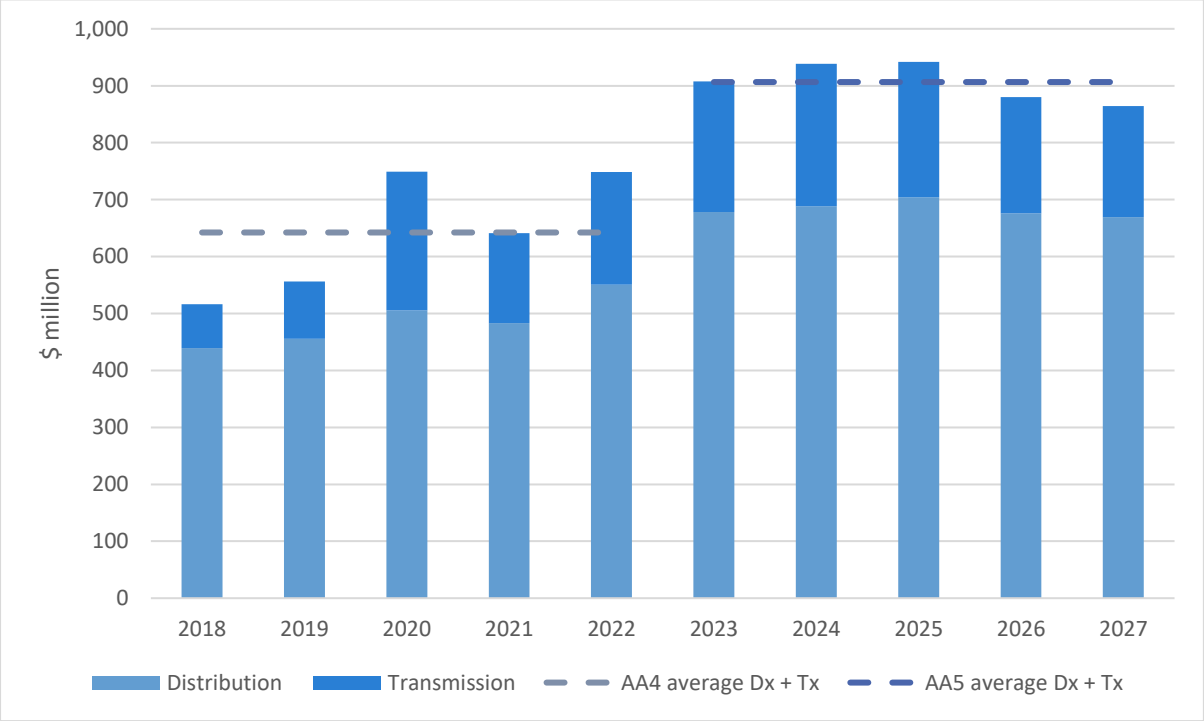


Figure 8: WP's forecast capex for AA5, less cash contributions and gifted assets, compared with WP's proposed actual post adjustments capex for AA4, less cash contributions and gifted assets (real 2022$ million)

Source data: WP, Attachment 11.1 AA5 Regulatory Revenue Model

Detailed regulatory expenditure category breakdowns of WP's forecast capex for AA5, less cash contributions and gifted assets, and WP's proposed actual post adjustments capex for AA4, less cash contributions and gifted assets, are provided in Table 11 and Table 12 below.

Table 11 - *WP's forecast distribution capex for AA5, less cash contributions and gifted assets, compared with WP's proposed actual post adjustments distribution capex for AA4, less cash contributions and gifted assets (real 2022$ million)*

Growth	Actual AA4				Forecast			Proposed AA5		
Growth										
Capacity Expansion	29.8	6.7	14.4	4.5	17.7	39.3	28.1	22.2	25.5	21.8
Customer Driven	18.6	40.8	44.1	30.5	45.5	29.6	29.6	29.7	30.0	30.3
Asset replacement and renewal										
Asset Replacement	85.9	81.1	62.4	43.0	109.1	261.9	272.1	275.9	264.3	265.3
State Undergrounding Power Program	-5.2	2.6	21.2	36.5	-4.3	0.0	0.0	0.0	0.0	0.0
Metering	14.8	25.0	29.7	19.0	21.9	68.2	66.1	74.0	66.1	61.0
Smartgrid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wood Pole Management	160.5	129.0	153.6	163.1	97.1	89.8	90.2	78.0	82.3	82.8
Improvement in service										
Reliability Driven	2.1	5.1	6.8	2.4	6.2	0.3	0.0	0.0	0.0	0.0
Rural Power Improvement Program (RPIP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCADA & Communications	6.3	6.6	17.0	19.2	14.5	37.1	36.8	42.3	50.3	52.6
Compliance										
Safety, Environmental & Statutory	17.6	32.1	30.4	44.3	67.2	49.8	49.2	50.6	50.7	50.7
Corporate										
IT	28.3	31.6	34.3	33.0	38.6	47.0	51.4	51.3	60.5	57.9
Business Support	20.0	28.8	41.3	12.9	68.6	17.5	26.8	41.8	8.1	8.4
Equity Raising Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPS Adjustment	0.0	0.0	0.0	23.6	21.0	0.0	0.0	0.0	0.0	0.0
Total	**439.2**	**455.7**	**505.9**	**483.4**	**550.5**	**678.4**	**688.6**	**704.2**	**676.3**	**669.5**

Source data: WP, Attachment 11.1 AA5 Regulatory Revenue Model, [Dx_Inputs tab]

Table 12 - *WP's forecast transmission capex for AA5, less cash contributions and gifted assets, compared with WP's proposed actual post adjustments transmission capex for AA4, less cash contributions and gifted assets (real 2022$ million)*

Category	Actual AA4				Forecast		Proposed AA5			
Growth										
Capacity Expansion	16.2	9.0	21.0	34.6	27.8	31.7	45.2	21.2	19.9	15.2
Customer Driven	-36.0	-27.4	73.3	-14.7	29.1	4.0	3.2	3.3	3.3	3.3
Generation Driven	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asset replacement and renewal										
Asset Replacement	33.9	50.9	63.1	59.9	35.3	73.6	72.4	65.2	64.9	66.9
Improvement in service										
Reliability Driven	0.9	0.5	-0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
SCADA & Communications	13.3	23.0	23.5	35.5	32.2	46.2	47.2	55.9	55.7	59.4
Compliance										
Safety, Environmental & Statutory	23.2	17.4	24.4	23.6	31.1	41.8	42.7	46.3	31.7	25.6
Corporate										
IT	15.2	15.8	19.9	13.5	16.5	23.4	25.6	25.3	24.9	21.5
Business Support	10.7	11.1	18.1	5.5	26.2	8.7	13.3	20.7	3.3	3.1
Equity Raising Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**77.3**	**100.3**	**243.1**	**158.0**	**198.2**	**229.3**	**249.8**	**237.9**	**203.8**	**195.0**

Source data: WP, Attachment 11.1 AA5 Regulatory Revenue Model, [Tx_Inputs tab]

14.2. Synergy's comments

Due to time limitations and Synergy's lack of access to supporting information (see comments below and in Section 13 above), Synergy has not undertaken a detailed bottom-up review of WP's capex forecasts, nor has Synergy sought to benchmark WP's capex forecasts against capex forecasts by other network service providers.

Nevertheless, Synergy does have specific comments about WP's capex forecasts. These are provided in the sections that follow.

In addition to these specific comments, Synergy considers that WP has not provided sufficient detail regarding its capex forecasts. Synergy notes that, inconsistently with ENAC section 4.2, the ERA's Guidelines for Access Arrangement Information require that information supporting forecasts of cost must include:

- The assumptions on which forecasts are based
- A full and detailed explanation of the basis of preparation of the forecasts

- Evidence to show the forecasts only include costs which would be incurred by a service provider efficiently minimising costs.

Synergy considers WP has not met this standard in its capex proposal, including regarding the specific issues highlighted below.

In addition, and inconsistent with ENAC section 4.2, there is insufficient information in WP's capex proposal to determine whether it is consistent with ENAC section 6.50 and 6.51.

Synergy requests the aforementioned information be obtained and published by the ERA prior to publication of the ERA's Draft Decision.

14.2.1. Modular grid major augmentation proposal

Synergy considers a major focus of WP's AA5 capex proposal relates to WP's intent to transition to a modular grid.

WP's grid transformation strategy goes well beyond the scale and scope of any major augmentation that has been proposed by WP since the ERA's determination of WP's initial capital base (using the DORC valuation method under Section 6.46 of the ENAC) at the start of the first access arrangement period in 2007. If WP's proposed AA5 capex program were approved by the ERA, the five years of expenditure would be larger than the value of WP's entire capital base ($4.3 billion in real 2022$) when regulation commenced in 2007. It would add $4.5 billion (in real 2022$) to WP's proposed opening AA5 RAB of $10.5 million, representing an increase in WP's proposed AA5 opening capital base of 43% before depreciation.

The absence of critical information such as locational asset condition, locational peak demand, locational customer number (see Section 13 above) and locational capex forecasts, appears inhibits users to assess whether the proposed major augmentation is prudent and efficient. Synergy recommends the ERA seeks for WP to explain in detail how it has developed its capex forecast for the proposed access arrangement and demonstrate why its proposed expenditure program is consistent with the Code objective and other specific criteria set out in the ENAC and for the ERA to publish this information for user review prior to its draft AA5 decision.

14.2.2. Capacity expansion

From Table 11 and Table 12 above, when comparing the AA4 actuals to the AA5 forecasts, Synergy notes that WP is proposing an 87% increase in capacity expansion expenditure for the distribution network and a 23% increase in capacity expansion expenditure for the transmission network. As highlighted in Section 13 above, WP has not submitted any of its own peak demand forecasts with its AA5 proposal. The only indication of WP's peak demand forecasting outcomes that Synergy can find in WP's AA5 proposal is the following statement in Attachment 8.1:

> "Western Power is forecasting peak demand to fall slightly over the AA5 period under both the low and (POE90) and medium (POE50) demand scenarios, and to remain flat under the high (POE10) demand scenario." (p. 33)

Given WP's statement that it expects peak demand will fall over the AA5 period, the reason why WP is forecasting a pick-up in capacity expansion capex relative to that in AA4 is not clear to Synergy. In other words, Synergy has not been given sufficient information to understand why the rate of capacity expansion capex would need to increase if peak demand is expected to fall over the AA5 period.

14.2.3. Asset replacement

WP is proposing to invest $2.1 billion dollars (real 2022$, excluding contributions) in asset replacement and renewal expenditure over AA5. Synergy notes:

- From Table 11 above:
    - The distribution network replacement expenditure forecast represents a 251% increase above AA4 actuals
    - The distribution network metering expenditure forecast represents a 204% increase above AA4 actuals
- From Table 12 above, the transmission network replacement expenditure forecast represents a 41% increase above AA4 actuals.

It is not clear to Synergy why distribution network replacement expenditure needs to be so much higher in AA5 than in AA4 to maintain the same level of service performance. This appears to suggest the underlying operations and investments may not be consistent with ENAC section 2.1. As discussed in Section 13.4.5 above, an absence of critical information such as locational asset condition forecasts means that Synergy and other interested parties are unable to assess whether the proposed replacement expenditure is prudent and efficient.

14.2.4. Appropriate allocation between opex and capex

As discussed in Section 11.4.2 above, the ENAC section 6.51A states that forecast capex may be included in the forward looking and efficient costs of providing covered services to the extent that it relates to investment that is reasonably expected to satisfy the NFIT. The NFIT requires new facilities investment to not exceed that which would be invested by a service provider efficiently managing costs (section 6.52 of the ENAC). It follows that an accurate and statistically unbiased forecast of opex as a substitute for higher cost capex is required for NFIT to be satisfied.

For all non-priority projects, consideration of alternative options is an explicit requirement for satisfaction of the NFIT (section 6.52(a)(iii) of the ENAC). Synergy has not been able to find a budget for the procurement of alternative options in WP's AA5 proposal. In Synergy's view, the apparent absence of a budget for procurement of alternative options to new facilities investment over AA5 appears to indicate that WP's proposal has not considered their use as a substitute for higher cost capex solutions as part of WP's capex proposal.

If WP does not include any opex allowance for alternative options as a substitute for new facilities investment in its AA5 proposal, entailing a reduction in the capex forecast, then Synergy submits that the ERA should not allow any capex that it identifies can be substituted with opex at a lower cost to be added to the capital base or that WP cannot show satisfaction of the NFIT requirements in ENAC sections 6.50 and 6.52, including the associated requirement in 6.52(a)(iii).

14.2.5. SPS expenditure

Synergy notes the justification for the ability of the network to roll SPS expenditures into the RAB was predicated on it reducing network costs. Synergy cannot see any evidence in WP's proposal that SPS expenditures will reduce the size of WP's overall investment program and its non-capital related costs. Similarly, as mentioned in Sections 11 and 14.2.4 above, there is no information of WP having considered the use of alternative options to reduce SPS capex requirements. Alternative options

providers should be able to compete against capex solutions and against each other to deliver SPS opex solutions. In Synergy's view it is essential WP test the contract market to determine whether opex provision of SPS solutions can be delivered at a lower cost than WP capex solutions - WP should run competitive procurement processes to find the least cost option rather than automatically treating SPS as a capex solution. Synergy can see no budget in WP's proposal for the provision of SPS as an alternative option to network investment. The NFIT requires that the ERA not approve any forecast of new facilities investment, including SPS investment, that has not considered alternative options.

14.2.6. Proposed investments not related to covered services

Synergy considers the ERA should only approve the pass through to users of the capital related and non-capital related costs where:

- Those costs arise directly from WP's provision of covered services
- WP is only seeking to pass through ***efficient*** capital related and non-capital related costs that arise directly from WP's provision of the relevant covered services
- WP is not otherwise able, or, in order to further the WEM objectives or the Code objective, should be able to recover the relevant costs through another mechanism, such as under the WEM Rules or through an 'excluded service' arrangement.

Synergy notes ENAC section 6.4 provides that target revenue can only be earnt for the provision of covered services, and ENAC section 6.38 provides that the calculation of WP's capital related and non-capital related costs can only be in relation to covered services.

Synergy seeks clarity as to the extent to which some of WP's investment program is proposed to support WEM reforms. In particular, Synergy understands that the WEM reform activities may require significant investment in SCADA and communications systems and Synergy notes that WP has proposed a significant capex investment in SCADA and communications infrastructure for AA5. Therefore, Synergy recommends the ERA determine and is satisfied WP's proposed capex in relation to SCADA meets the conditions outlined above.

Any proposal to invest for a purpose not in relation to covered services is inconsistent with the ENAC because it relates to WP undertaking activities determined by AEMO and the WEM Rules. These activities are not reference services regulated under the ENAC and subject to the ERA's determination under the F&A and ENAC section 5.2. Therefore, the mechanism for recovering the cost of these activities need to be defined in the WEM Rules. Synergy recommends that the ERA also determines whether WP should be compensated for these activities under the AEMO's allowable revenue mechanism, including making sure WP is not (double) recovering the costs of these activities under the access arrangement.

WP also identifies some investment programs that are designed to support the State Government's Economic Stimulus Package (**ESP**).[20] For example, WP's Access Arrangement Information document states "The proposed investment for customer driven projects in the AA5 period also includes $91.6 million for the relocation of other transmission assets to support the WA Government's ESP" (p. 193). Similarly, WP refers to installation of a third 132/11 kV transformer at Cook Street substation as being

[20] WP, Access Arrangement Information Access Arrangement revisions for the fifth access arrangement period, 1 February 2022, p. 178

"… interlinked with the East Perth Power Station redevelopment …" an ESP project which WP refers to as "… a priority project for the WA Government.". [21]

For the purposes of the ENAC sections 6.38 and 6.4, Synergy notes the ERA will need to consider the inclusion of any costs in the determination of target revenue that reflect WP's forward-looking and efficient costs arising directly from WP's provision of covered services.

14.2.7. Allocation of capex from regulatory category to asset category

WP's method of allocating capex from regulatory category to asset class lacks transparency (see Section 6 above). Synergy notes that, compared to AA4, a high proportion of AA5 capex has been allocated to assets with relatively short economic lives. Allocating capex to short lived assets tends to bring forward future revenue. This outcome is NPV negative for network users and customers with a higher cost of capital than the network.

Synergy recommends the ERA scrutinise WP's method of capex allocation from regulatory category to asset class and ensure that the allocation of actual capex reflects the correct allocation, rather than the forecast allocation assumed at the beginning of the access arrangement period. Moreover, as mentioned in Section 9.3 above, Synergy notes there are implications for the rate of depreciation if WP spends approved capex on assets with longer lives than those assumed in the access arrangement proposal. This depreciation treatment underlies the importance of accurately forecasting the allocation of capex and contributions from regulatory category to asset class for an access arrangement period.

14.2.8. Redundant capital

ENAC section 6.61 states that the ERA may require an amount of redundant capital to be removed from the capital base to the extent (if any) necessary to ensure that network assets which have ceased to contribute, in any material way, to the provision of covered services are not included in the capital base.

WP's AA5 Access Information document indicates that for WP's:

- Transmission network:
    - The "… asset replacement and renewal capex forecast covers expenditure on poor condition or obsolete transmission network assets." (p. 189)
    - WP identifies some cases where transmission assets are to be decommissioned or retired (e.g., p. 194)
- Distribution network:
    - "… large geographical areas of overhead network will be decommissioned" and replaced with SPS (p. 201)
    - Some capacity expansion expenditure will be associated with decommissioning of network assets (pp. 205 – 206)
- SCADA and Telecommunications network:

[21] WP, Access Arrangement Information Access Arrangement revisions for the fifth access arrangement period, 1 February 2022, p. 194

- WP "… proposes to invest $188.4 million to replace critical SCADA and Telecommunication network infrastructure that is obsolete ..."

WP also indicates "… there are no asset disposals forecast over the AA5 period." (p. 245).

Synergy seeks clarity from the ERA as to whether any of the obsolete, decommissioned, retired or redundant assets identified in WP's AA5 proposal should be treated as redundant capital under ENAC section 6.61.

14.2.9. Application of the NFIT and net benefit guidelines

WP has not provided sufficient information to demonstrate that its proposed capex program for AA5 will satisfy the NFIT. This is particularly problematic given the material increase in capex for asset replacement, SPS, IT, and SCADA and communications systems. To the extent that some of this cost does not meet the NFIT, its addition to WP's RAB would be in contravention of the ENAC, and also contrary to the long-term interests of consumers. Synergy recommends the ERA be satisfied that the proposed AA5 investments for these matters meets NFIT.