Explanatory Note

AER review of repex modelling assumptions

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AUSTRALIAN ENERGY REGULATOR

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Contents

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
CA RIN	Category Analysis Regulatory Information Notice
capex	capital expenditure
CESS	capital expenditure sharing scheme
MEU	Major Energy Users Group
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
OEF	Operating environmental factors
opex	operating expenditure
PIAC	Public Interest Advocacy Centre
RAB	regulatory asset base
repex	replacement expenditure
RIN	Regulatory Information Notice

1 About this Explanatory Note

This Explanatory Note addresses the industry submissions on a series of assumptions that underpin the Australian Energy Regulator's (AER) replacement expenditure (repex) model. Throughout this engagement process, our goal is to help stakeholders better understand the repex model, including how it is applied during electricity distribution determinations. We expect that more informed users of the repex model would mean more certainty about the likely repex modelling outcomes and more consistent treatment of repex data, promoting regulatory certainty.

The repex model is a statistical tool used to assess electricity distributors' forecast replacement expenditure for future regulatory control periods. We have applied it in all electricity distribution decisions since 2011. Further refinements to the repex model have been applied in our most recent decisions. We released an issues paper in August 2019, and received submissions from a variety of industry stakeholders covering a number of repex modelling assumptions.

This Explanatory Note summarises the issues paper, stakeholder submissions and our position on these modelling assumptions. At this stage, we are only addressing comments on these specific modelling assumptions. Other assumptions outside the scope of this Explanatory Note, particularly those that may require more intensive industry discussion, such as changes to regulatory information notices (RIN), will be addressed in a later forum.

2 Background

The AER works to make all Australian energy consumers better off, now and in the future. We regulate energy networks in all jurisdictions except Western Australia. We set the amount of revenue that network businesses can recover from customers for using these networks.

The National Electricity Law and Rules (NEL and NER) provide the regulatory framework governing electricity distribution networks. Our work under this framework is guided by the National Electricity Objective (NEO)[1]:

> "…to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

At a revenue review, a regulated business proposes a total revenue amount it considers reflects its forecast of the efficient cost of providing network services over a specific regulatory control period. Our assessment of a distributor's proposed revenue proposal under the NEL and NER is based on a 'building block' approach to determine a total revenue allowance that comprises several cost components. One of these components is the return on the regulatory asset base (RAB), or return on capital, to compensate investors for the opportunity cost of funds invested in this business.

Capex is added to a distributor's RAB, which is used to determine the return on capital and return of capital (regulatory depreciation) building block allowances. All else being equal, higher forecast capex will lead to a higher projected RAB value and higher return on capital and regulatory depreciation allowances.

In assessing forecast capital expenditure, we are guided by the NEO and underpinning capex criteria and objectives set out in the NER. These criteria outline that a distributor's capex forecast must reasonably reflect the efficient costs of achieving the capex objectives, the costs that a prudent operator would require to achieve the capex objectives, and a realistic expectation of customer demand and the cost inputs required to achieve the capex objectives.[2] The capex objectives relate to a distributor's ability to comply with regulatory obligations and maintain the quality, reliability and security of supply of standard control services.[3] We must accept a distributor's capex forecast if we are satisfied that the total forecast for the regulatory control period reasonably reflects the capex criteria. If a distributor is unable to demonstrate that its proposal complies with the capex criteria and objectives, the NER require us to set out a substitute estimate of total capex that we are satisfied reasonably reflects the capex criteria, taking into account the capex factors.[4]

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1 NEL, s. 7
2 NER, cl 6.5.7(c)(1).
3 NER, cl 6.5.7(a).
4 NER, cl 6.12.1(3)(ii).

2.1 The repex model

We generally have regard to several factors in forming our position on whether a distributor's proposed capex is consistent with s.6.5.7 of the NER. For capex proposed as replacement expenditure, the outcomes of the repex model are used to advise and inform us where to target a more detailed bottom-up review and assist us to define a substitute estimate if necessary. We can also use the model to compare a distributor against other distributors in the National Electricity Market (NEM).

The repex model is a statistical model that forecasts asset replacement capex for various asset categories based on their age, unit costs and expected asset replacement lives. We only use the repex model to assess forecast repex that can be modelled. This typically includes high-volume, low-value asset categories and generally represents a significant component of total forecast repex.

The repex model forecasts the volume of assets in each category that a distributor would expect to replace over a 20-year period. The model analyses the age of assets already in commission and the time at which, on average, these assets would be expected to be replaced, based on historical replacement practices. We refer to this as the calibrated expected asset replacement life. The length of the historical period analysed during this process is referred to as the 'calibration period'. The calibrated expected asset replacement lives as derived through the repex model differ from the replacement lives that distributors report. We derive a total replacement expenditure forecast by multiplying the forecast replacement volumes for each asset category by an indicative unit cost.

Our repex modelling approach analyses four scenarios that consider both a distributor's historical replacement practices and the replacement practices of other distributors in the NEM. The current approach builds on our assessment in previous determinations by considering intra-industry comparative analysis for unit costs and expected asset replacement lives. The four scenarios analysed are:

1. historical unit costs and calibrated expected replacement lives (historical scenario)
2. comparative unit costs and calibrated expected replacement lives (cost scenario)
3. historical unit costs and comparative expected replacement lives (lives scenario)
4. comparative unit costs and comparative expected replacement lives. (combined scenario)

For the most recent decisions (2018 and 2019), our approach has been to set the repex model threshold equal to the highest result out of the 'cost scenario' and the 'lives scenario'.[5] This approach considers the inherent interrelationship between the unit cost and expected replacement life of network assets. A comprehensive discussion on the model is provided in the AER capital expenditure assessment outline, which can be found on our website.[6]

5 Our modelling approach means the 'historical scenario' will always be higher than the 'cost scenario' and the 'lives scenario', and the 'combined scenario' will always be lower than the 'cost scenario' and the 'lives scenario'.

6 AER, 2021–21 to 2024–25 Distribution Determinations – AER capital expenditure assessment outline, October 2019.

3 Assumptions in review

In our issues paper, we sought industry comments on four specific modelling assumptions, and encouraged suggestions on other assumptions that may be reviewed in a later forum. Below is a summary of the issues and the questions we posed.

3.1 Limiting asset replacement lives

Our repex model currently does not automatically set upper and lower bounds on distributors' historical or calibrated expected asset replacement lives. During the 2019–24 resets, we and some distributors observed unrealistically high or low expected asset replacement lives for some asset categories.

Our approach during the 2019–24 resets was to respond to any outliers, data discrepancies or unrealistic results on a case-by-case basis. Examples of our case-by-case approach were highlighted in the Evoenergy[7] and Ausgrid[8] draft and final decisions. It is worth noting that the examples highlighted in these cases tended to be on the margins of the repex model results and were often immaterial issues. We asked stakeholders the following questions:

Question 1: Do you consider that setting defined maximum and minimum expected asset replacement lives would improve the forecasting accuracy of the repex model?

Question 2: What do you consider would be the preferred approach to setting maximum and minimum expected asset replacement lives, including supporting engineering and statistical evidence?

Question 3: Is the current approach of addressing these concerns on a case-by-case basis sufficient, as we have done for previous decisions? If not, why not?

Question 4: Do you consider that there are any other elements we need to consider should we limit expected asset replacement lives?

Key issues raised in submissions

Jemena, AusNet Services, Evoenergy and the Major Energy Users Inc. (MEU) do not support limiting asset replacement lives, submitting that setting bounds will hide potential data issues and would result in unrealistic model results.[9]

The Public Interest Advocacy Centre (PIAC), TasNetworks, Ausgrid, Energex and Ergon Energy and Essential Energy support limiting asset replacement lives, submitting that

7 AER, Evoenergy – Determination 2019–24 – Draft and final decisions – Attachment 5 (capital expenditure), September 2018 and April 2019.

8 AER, Ausgrid – Determination 2019–24 – Draft and final decisions – Attachment 5 (capital expenditure), November 2018 and April 2019.

9 Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 2; AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 1; Evoenergy, *Response to review of repex modelling assumptions*, October 2019, p. 4; Major Energy Users Inc., *AER review of repex modelling assumptions Issues paper*, October 2019, p. 4.

reasonable bounds improves forecasting accuracy, and may reduce the impact of incomplete or inaccurate data.[10] While supporting limiting asset replacement lives, PIAC, TasNetworks, Ausgrid and Essential also noted the need for discretion and judgement.[11]

Overall, most stakeholders agree that the current approach of reviewing on a case-by-case basis has been effective.[12] Energex and Ergon Energy were the only stakeholders that believed that the current approach is not sufficient.[13]

In terms of other elements that we need to consider should we limit assets lives, stakeholders raised the following elements: greater stratification of assets, different operating environmental factors, asset life extension and design improvements.[14]

Position

After considering stakeholder submissions, our position is to continue the current approach of assessing issues on a case-by-case basis. In arriving at this position, we note that most stakeholders submitted that the current approach has been effective. Further, stakeholders held conflicting views on whether limiting replacement lives was appropriate. However, as many of the suggested approaches to limit replacement lives, such as using engineering evidence or cost benefit analysis, aligned with our current repex assessment approaches, we have determined that our case-by-case assessment for the repex model, which is a top-down tool, is sufficient. Finally, a large number of submissions recommended improvements to Category Analysis Regulatory Information Notices (CA RIN) to address data issues. We intend to include these issues in a review of the current CA RIN.

3.2 Calibration period

We use a distributor's recent past replacement practices to determine the expected asset replacement lives for the forecast period. In doing so, we have regard to changes in legislative obligations or other factors that might affect our analysis. This has resulted in using different calibration periods (years) for different distributors. We asked stakeholders the following questions:

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10 Public Interest Advocacy Centre, *Submission to consultation on review of repex modelling assumptions*, October 2019, p. 2; TasNetworks, *AER review of repex modelling assumptions*, October 2019, p. 2; Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 6; Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 3; Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 2.

11 Public Interest Advocacy Centre, *Submission to consultation on review of repex modelling assumptions*, October 2019, p. 2.; TasNetworks, *AER review of repex modelling assumptions*, October 2019, pp. 2–3; Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 7; AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 1; Essential Energy, *Review of repex modelling assumptions*, October 2019, pp. 2–3.

12 TasNetworks, *AER review of repex modelling assumptions*, October 2019, p. 3; AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 1; Major Energy Users Inc., *AER review of repex modelling assumptions Issues paper*, October 2019, p. 4; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 2; Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 7

13 Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 4.

14 Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 7–8; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 2; Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 2; Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 4.

Question 5: Do you consider that there is an alternative approach to selecting the calibration period?

Question 6: Are there any issues with the current approach to select the calibration period?

Question 7: What other issues or factors should we take into account when determining the calibration period?

Key issues raised in submissions

AusNet Services and Essential Energy were supportive of the current approach of using recent historical replacement practices to estimate future replacement volumes, whereas Ausgrid, Energex and Ergon Energy recommended the calibration period methodology be clarified.[15] MEU proposed using all available historical data as the calibration period, whereas TasNetworks and Jemena proposed a default of three and five years of historical data, respectively, with the option to vary the length subject to reasonable justification.[16] A majority of submissions agreed that selecting a calibration period that is representative of future expenditure requires AER judgment and discretion.[17]

Energex and Ergon Energy suggested using different calibration periods for asset classes with low volumes.[18] Similarly, Evoenergy and Jemena submitted that smaller networks have less consistent replacement and should have different calibration periods.[19] Essential Energy cautioned against locking in period of peaks and troughs in the asset replacement cycle. AusNet Services flagged the current approach would improve if we considered the slope of the replacement over the calibration period, meaning if we took into account the increasing or decreasing trend of the number of assets replaced per year.

Position

After considering stakeholder submissions, our position is to set a default period of the first three years of the current regulatory control period for the draft decision, adding the fourth year of the current period for the final decision. However, we are open to altering this period where the distributor shows evidence that this would likely improve the repex modelling results. In arriving to this position, we considered that the most recent three years of actual expenditure in the current regulatory period is likely to be most representative of future expenditure and free from any RIN reporting changes. Our view is setting a default

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15 Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 10; Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 5; AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 1 Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 3.

16 TasNetworks, *AER review of repex modelling assumptions*, October 2019, p. 3; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 3; Major Energy Users Inc., *AER review of repex modelling assumptions Issues paper*, October 2019, p. 5–6.

17 Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 3; TasNetworks, *AER review of repex modelling assumptions*, October 2019, p. 3; Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 9–10; Evoenergy, *Response to review of repex modelling assumptions*, October 2019, p. 4; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 3.

18 Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 5.

19 Evoenergy, *Response to review of repex modelling assumptions*, October 2019, p. 4; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions,* October 2019, p. 3.

calibration period, with the option to extend, provides both clarity and flexibility highlighted in the stakeholder submissions.

In response to other key issues:

- **Low-volume assets:** We have considered Energex and Ergon Energy's submission, and we consider that assessing concerns on a case-by-case basis is appropriate. This option is more pragmatic than defining when an asset volume is low enough to justify a different calibration period.
- **Smaller networks:** We have considered Jemena's and Evoenergy's submissions, and consider that the option of extending the calibration period in response to further analysis is appropriate. This option is more pragmatic than explicitly defining which networks are small enough to justify a longer default period.
- **Locking in peaks and troughs:** We have considered Essential Energy's submission and consider that the option of extending the calibration period in response to further analysis allows the flexibility to select a period that smooths any period of peaks and troughs. As to the MEU's submission regarding using all the historical data, setting a default calibration period of three years ensures that a distributor's most recent asset management replacement practices are captured for the forecast period. Trend analysis, which complements repex predictive modelling, takes a longer-term view and may rely on all the data before us to understand a distributor's replacement practices, and the replacement drivers over time.
- **Incorporating the slope of replacement within the calibration period:** We have considered AusNet Services' submission and consider that growth or decline in forecast repex is accounted for in the recalibration process. The trend in actual historical replacement volumes is typically not used as regulatory incentive schemes may influence this trend.

3.3 Modelling wooden poles

When an asset is identified for replacement, the repex model typically assumes that the asset will be replaced on a like-for-like basis with its modern equivalent and not a different asset.[20] The repex model forecasts the volume of old assets that need to be replaced, not the volume of new assets that need to be installed. However, the replacement cost of the old asset's modern equivalent does not provide a good estimate of forecast costs where old assets are commonly replaced with a different asset.

Wooden poles are often staked as a low-cost option, rather than replaced. Staking is the practice of attaching a metal support structure (a stake, nail or bracket) to reinforce an aged wooden pole.[21]

The repex model treats staked wooden poles differently to unstaked poles because they have significantly different expected replacement lives and different unit costs. For unstaked

20 For example, conductors rated to carry low-voltage will be replaced with conductors of the same rating, not conductor rated for high-voltage purposes.

21 The equivalent practice for Stobie poles is known as "plating", which similarly provides a low-cost life extension.

wooden poles, there are two appropriate unit costs – the cost of installing a new pole and the cost of staking an old pole. We use a weighted average, using the proportion of replacement and the proportion of staking, and the unit cost of pole replacement and the unit cost staking, to arrive at this blended unit cost.[22] We estimate the number of staked wooden poles replaced, and the proportion of staking over the calibration period based on the data we have available. We asked stakeholders the following questions:

Question 8: Is our current approach to forecasting repex for wooden poles clear and appropriate based on the information available? If not, why not?

Question 9: What are your views on the appropriate estimation method for wooden pole staking or replacement volumes when the required data is not available?

Question 10: Are there other approaches that could be applied to reasonably forecast repex for wooden pole asset categories?

Key issues raised in submissions

Ausgrid, AusNet Services, Essential Energy, Evoenergy and MEU considered our current approach is reasonable.[23] Jemena raised a key concern with our current approach around the heterogeneity of the underlying data and the lack of consideration of operating environmental factors in repex modelling.[24] Energex and Ergon Energy were the only distributors that submitted that the current approach is not fit for purpose as the data varies significantly between distributors.[25] Energex and Ergon Energy suggested that staking expenditure be removed from the repex modelling and separately assessed in conjunction with the distributor's asset management approach for wooden poles.[26]

Ausgrid suggested that we should reserve a level of discretion when developing our substitute forecast.[27] Ausgrid cautioned against developing a strict rule about the efficient level of staking for an electricity distributor, and then applying it as a benchmark across all electricity distributors in the NEM.[28] AusNet Services noted that the assumption of like-for-like replacement is not always valid for poles.[29] Similarly, TasNetworks submitted that it would appreciate greater clarity around such terms as like-for-like replacement and the concept of modern equivalence.[30]

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22 For example, if a distributor replaces a category of pole with a new pole 50 per cent of the time and stakes this category of the pole the other 50 per cent of the time, the blended unit cost would be a straight average of the two unit costs. If the mix were 60:40, the unit cost would be weighted accordingly.

23 Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 11; AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 2; Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 3; Evoenergy, *Response to review of repex modelling assumptions*, October 2019, p. 5; Major Energy Users Inc., *AER review of repex modelling assumptions Issues paper*, October 2019, p. 6.

24 Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 4.

25 Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 8.

26 Ibid.

27 Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 11.

28 Ibid.

29 AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 2.

30 TasNetworks, *AER review of repex modelling assumptions*, October 2019, p. 4.

Essential Energy and MEU suggested using other distributors' data as an alternative. MEU stated that the asset life for a staked pole in one network should be similar to that for a network that has less data to support the life of such an asset.[31] Essential Energy added that due consideration should be given to each distributor's individual situation.[32]

Position

After considering stakeholder submissions, our position is the current modelling approach is appropriate, given the information before us. We will continue to review modelling outcomes on a case-by-case basis. We acknowledge that the current CA RIN could be structured to elicit better data, which would address stakeholder concerns.[33]

In response to other key issues:

- **Like-for-like replacement:** Our current approach assumes like-for-like replacement with a modern equivalent asset, except for wooden poles, where we assume unstaked wooden poles can be staked. We acknowledge that in other situations non-like-for-like replacement, such as replacing a wooden pole with a non-wooden pole, asset retirement or non-network options, may be the more prudent and efficient option. While this is not directly dealt with in the repex model, as it is only one of our assessment tools, we consider that risk-based cost-benefit analysis can justify non-like-for-like replacement options.
- **Operating environmental factors:** We use the repex model as a starting point to allow us to focus on particular asset groups and categories where the model produces significantly different forecasts than a distributor's forecast. The repex model results, which relies on comparing a distributor unit costs and replacement lives to the NEM median at the asset category level, is then used in conjunction with a bottom-up assessment to understand the drivers of difference. While the comparison to the NEM median is likely to take into account differences in operating environments that distributors face, we encourage distributors to submit additional evidence as part of their regulatory proposals, including highlighting the effect Operating Environmental Factors (OEFs) may have on their unit costs.
- **The use of other distributors' data:** Our current approach may rely on other distributors' unit cost data in a situation where a distributor uses a similar asset but has no reported unit cost data in the calibration period. We encourage distributors to submit cost-benefit analysis or other evidence if they believe that benchmark unit costs applied are not suitable for particular asset categories.

3.4 Excluded asset categories

Our repex modelling approach excludes asset categories that are unique to individual distributors. This ensures that asset categories that cannot be meaningfully compared with other distributors are not included in the repex modelling threshold. Our approach typically

31 Major Energy Users Inc., *AER review of repex modelling assumptions Issues paper*, October 2019, p. 6.
32 Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 3.
33 AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 11; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions*, October 2019, p. 3–4.

includes these asset categories in our unmodelled analysis and assesses the forecasts using bottom-up analysis and other techniques. As part of this review, we have asked stakeholders the following questions:

Question 11: Do you consider the assumption and rationale underpinning the exclusion of unique assets is clear and appropriate based on the information available?

Question 12: Are there any other approaches that could be applied to reasonably model excluded asset categories, while incorporating a level of benchmarking?

Key issues raised in submissions

Evoenergy, Jemena and TasNetworks considered our current approach is appropriate.[34] However, Ausgrid, AusNet Services, Essential Energy, Energex and Ergon Energy indicated that the current approach is not clear and warrants further guidance and clarification. MEU submitted that assets should not be excluded from the modelling. MEU considered that we should use all available data and if possible, augment the data using information from other sources where there is some paucity of data.[35]

In terms of other approaches to assessing excluded assets, stakeholders pointed to the application of cost-benefit analysis,[36] engineering analysis, functional failure rates and a statistical assessment of population of asset categories. Jemena supported the use of engineering analysis to assess excluded assets, but warned against an approach of substituting costs and volumes from other distributors to forecast repex because of OEFs and that size differences make comparability unworkable.[37] Essential Energy noted that functional failure rates could be utilised to inform forecast requirements for repex for excluded assets, by comparing failure rates over time.[38]

Position

Based on stakeholder submissions, we consider that excluding unique assets is appropriate, but we understand that our methodology for asset exclusions warrants further clarification. We agree with submissions that the application of engineering, function failure rate and cost-benefit analysis are a robust way to test assets that are excluded from repex modelling, which is consistent with our current approach.

In response to stakeholder submissions, this Explanatory Note is aimed at explaining the current approach to asset exclusion. We exclude asset categories or groups from the repex model if they are unique to a particular distributor and do not exist in any other distributor's network (e.g. Stobie or Fiberglass poles).[39] A unique asset is one where the asset

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34 Evoenergy, *Response to review of repex modelling assumptions*, October 2019, p. 5; Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions,* October 2019, p. 4; TasNetworks, *AER review of repex modelling assumptions*, October 2019, p. 5.

35 Major Energy Users Inc., *AER review of repex modelling assumptions Issues paper*, October 2019, p. 8.

36 Ausgrid, *AER review of repex modelling assumptions*, October 2019, p 13.

37 Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions,* October 2019, p. 4.

38 Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 4.

39 AER, *2020–21 to 2024–25 Distribution determinations, AER capital expenditure assessment outline*, October 2019, p.15.

management practices applied to it, its unit cost and replacement lives, do not allow for meaningful comparisons with other distributors' assets.

However, if an asset is a common asset in the NEM, but due to data reporting issues, it is not reported in the distributors CA RIN over the calibration period, we may utilise similar assets' unit costs and estimated replacement lives as a substitute for missing data. We will continue to offer further clarification and guidance in future determinations, including the AER capital expenditure assessment outline,[40] on how and why we exclude particular assets from the repex model.

3.5 Other issues

We encouraged stakeholders to outline any other issues out of scope of this review. While we are not addressing these in this paper, it is constructive to list stakeholder views on potential areas of improvement for the purposes of future repex model reviews.

Key issues raised in submissions

Ausgrid, AusNet Services, Energex and Ergon Energy, Essential Energy and Jemena noted that the way data is collected and reported in the RIN is worth considering in future reviews of the repex model. Ausgrid encouraged monitoring of technological transformation to ensure RIN revisions are made following consultation.[41] AusNet Services noted that information requested in the CA RIN does not align well with asset management practices and believes a review of the data requested would be appropriate.[42]

Energex and Ergon Energy raised a concern over CA RIN data quality and preparation.[43] Essential Energy suggested aligning or merging the repex and maintenance RIN tables to allow for total expenditure reporting across asset classes.[44] Finally, Jemena recommended that RIN data quality issues are addressed to improve the usability of the repex model for benchmarking.[45]

Position

In arriving at our position on issues outside the scope of this review that are worth considering in a future repex model review or forums, we considered all stakeholder submissions. We acknowledge that the current CA RIN could be structured to elicit better data. We intend to review the current CA RIN that will include further engagement with distributors and stakeholders.

40 AER, *2020–21 to 2024–25 Distribution determinations, AER capital expenditure assessment outline*, October 2019.
41 Ausgrid, *AER review of repex modelling assumptions*, October 2019, p. 14.
42 AusNet Services, *AER review of repex modelling assumptions*, October 2019, p. 3–4.
43 Energex and Ergon Energy, *AER review of Repex modelling assumptions*, October 2019, p. 6.
44 Essential Energy, *Review of repex modelling assumptions*, October 2019, p. 4.
45 Jemena, *Submission to the AER's review of replacement expenditure modelling assumptions,* October 2019, p. 4.