Overview of the regulatory proposal

Regulatory proposal for the ACT electricity distribution network 2019–24
January 2018

evoenergy

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1. Background

The National Electricity Rules (Rules) under the National Electricity Law[1] require a Distribution Network Service Provider (DNSP) to submit to the Australian Energy Regulator (AER) a regulatory proposal and a Proposed Tariff Structure Statement (TSS) related to the services provided in connection with its distribution network at least 17 months before the expiry of a distribution determination that applies to the DNSP.[2] Given Evoenergy's distribution determination will expire on 30 June 2019, its regulatory proposal and a Proposed TSS must be submitted by 31 January 2018.[3]

The key themes of Evoenergy's regulatory proposal and TSS are set out in Table 1 and are consistent with the issues identified during the consumer engagement process.

Table 1 Key themes of Evoenergy's regulatory proposal

Maintaining safety, quality, reliability and security of supply	Evoenergy's regulatory proposal reflects the key capital projects required to maintain the safety, quality, reliability and security of supply. These include investing in feeders to increase the capacity of existing zone substations to provide required capacity for major developments in the Molonglo and Gold Creek districts, continuing the replacement and refurbishment program for ageing poles and underground cable, and constructing a second connection point to the NSW transmission network. Evoenergy is also facing increasing technical challenges in maintaining the quality and reliability of supply in the face of a rapid increase in the adoption of distributed energy resources (DER) such as solar photovoltaics (PV), wind and battery storage. To meet these challenges, Evoenergy's regulatory proposal includes expenditure on systems that will provide greater network visibility and control to manage two-way power flows.
Striking the right cost/reliability trade-off	Evoenergy is acutely aware of the level of energy prices currently impacting consumers. However, it is also aware that maintaining reliability of supply is vitally important. Evoenergy has thus sought to manage the network component of electricity prices by finding the right balance between cost optimisation and reliability of supply for the long-term interest of consumers. Evoenergy has optimised its capital expenditure (capex) program by overlaying a top-down assessment onto its bottom-up, asset-specific planning approach. This assessment has identified nearly $46 million in opportunities to reduce or defer augmentation expenditure (augex) and replacement expenditure (repex). Evoenergy has also significantly reduced its operating expenditure (opex) over the current regulatory period through organisational restructuring, process improvement and adoption of new technologies. Evoenergy's proposed approach to forecasting opex is aimed at reflecting these efficiencies in the new regulatory period while also meeting new regulatory obligations with respect to vegetation management.

[1] Adopted in the ACT as the National Electricity (ACT) Law by the *Electricity (National Scheme) Act 1997* (ACT).

[2] Rules, clause 6.8.2.

[3] While the ACT distribution determination for 2014–19 is currently being remade, Evoenergy assumes that when the AER remakes its decision, the remade decision will expire on 30 June 2019, consistent with the original decision.

Supporting new technology	New technologies such as solar PV, wind farms and battery storage pose a number of challenges, and opportunities, for Evoenergy in the forthcoming regulatory period. As mentioned above, Evoenergy proposes to address these technical challenges by investing in systems that will allow effective management of two-way power flows. The expected adoption of new technology, together with demand management opportunities, has allowed the deferral of capex on zone substations, which is reflected in Evoenergy's regulatory proposal. However, it is important to note that the demand implications associated with these factors remain uncertain. Evoenergy has also commenced a number of activities that will better allow it to support new technologies, including facilitating connection with embedded generators, pilot projects in new estates to assess the implications of high penetration of rooftop PV systems, trials of battery storage systems and trials for electric vehicle charging stations.
Pricing that is cost reflective and stable	Evoenergy's regulatory proposal seeks to recover no more than the efficient cost incurred in providing distribution and transmission services. Evoenergy estimates that its regulatory proposal will increase the average consumer's retail bill by less than one per cent per year, before the impacts of other factors affecting retail bills such as inflation and the price of wholesale electricity. In the context of the Proposed TSS, Evoenergy will continue towards the long-term vision of more cost-reflective tariffs in line with advances in metering technology. The focus of the second Proposed TSS is refining the commercial tariff structure to increase cost reflectivity, thereby sharpening price signals to encourage more efficient use of the network. The TSS also proposes refinements to the recently introduced peak demand tariffs for residential and small business consumers, and simplification of the overall tariff structure.

Evoenergy's regulatory proposal and Proposed TSS submission is set out as follows.

- An **overview** of the regulatory proposal and TSS (this document) which introduces and summarises the elements required by the Rules and provides references to detailed explanations contained in attachments.
- Seventeen subject matter **attachments** which address in detail specific subjects addressing and demonstrating Rule compliance. Appendix A to this overview shows the relationship between the attachments and the broad Rule requirements.
- A set of **appendixes** that contain detailed supporting information for this overview and the attachments, including a modelling appendix which contains the models and spreadsheets used in calculating the figures reported in the regulatory proposal.
- A response to the Regulatory Information Notice (RIN) issued by the AER on 20 October 2017.

The regulatory proposal is also accompanied by a separate **consumer overview** paper that includes an explanation of the regulatory proposal to electricity consumers in plain language, details of consumer engagement undertaken, risks and benefits for

consumers, and an explanation of differences between Evoenergy's revenue proposal and current period revenues.[4]

The remainder of this overview provides background information on Evoenergy, its electricity network and achievements over the 2014–19 regulatory period. The key factors shaping the regulatory proposal are discussed and then each of the key elements of the regulatory proposal and TSS are summarised.

2. About Evoenergy

On 1 January 2018, in accordance with the AER's revised Ring-fencing Guideline, ActewAGL Distribution's energy networks business changed its name to Evoenergy. The electricity networks business operates the poles, wires, cables, substations and other infrastructure that deliver electricity safely and reliably to homes and businesses.

The new name reflects the evolution that is taking place in the energy industry and Evoenergy's ambition to evolve with the industry to ensure that it continues to offer its customers the safe, reliable and sustainable energy solutions they want and need.

Evoenergy is part of the ActewAGL Distribution partnership owned equally by Icon Water Limited and Jemena Ltd via subsidiary companies. The ownership structure of the group is illustrated in Figure 1. Evoenergy and the ActewAGL Distribution partnership are operated separately from ActewAGL Retail partnership and are ring-fenced such that ActewAGL Distribution and Evoenergy must engage with ActewAGL Retail on the same basis as other electricity retailers operating in the Australian Capital Territory (ACT).

ActewAGL Distribution owns one distribution system that is covered by this regulatory proposal and Proposed TSS.[5]

Figure 1 ActewAGL group ownership structure

1. Evoenergy is the operating name of the energy network division of ActewAGL Distribution

3. Evoenergy's electricity network

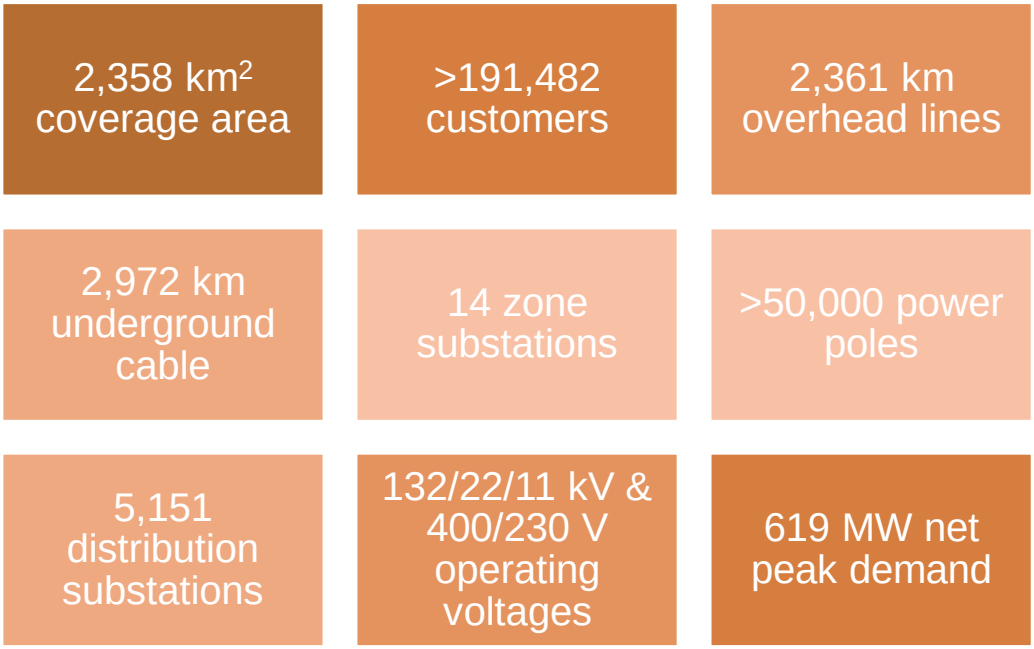
Evoenergy's electricity distribution network supplies electricity to over 191,000 customers in the ACT. Evoenergy's network performs the vital role of energy supply to the nation's capital and thus many important national institutions. Evoenergy's ACT network is

[4] Overview paper as specified in the Rules, clauses 6.8.2(c1) and (c1a).

[5] Rules, clauses 6.8.2(e) and (f).

consistently one of the most reliable in the National Energy Market (NEM). Figure 2 presents Evoenergy's key network statistics.

Figure 2 Evoenergy key network statistics



The ACT is supplied with electricity from the NSW transmission grid though three bulk supply substations located at Canberra, Williamsdale and Queanbeyan. These bulk supply substations and their incoming 330 kV and 132 kV transmission lines are owned and operated by TransGrid. The 132 kV transmission lines from the Canberra and Williamsdale substations are owned by Evoenergy, as are the two 66 kV lines from the Queanbeyan bulk supply substation. The Evoenergy 132 kV transmission lines also provide a transmission support function to TransGrid lines which supply parts of south-eastern New South Wales.

Evoenergy operates 14 zone substations and two switching stations. The zone substations reduce voltage to a level at which distribution feeders operate. The Fyshwick Zone Substation is supplied by the Queanbeyan bulk supply substation, while the others are supplied from the Canberra and Williamsdale bulk supply substations.

Evoenergy's distribution network includes underground and overhead conductors and more than 5,000 distribution substations that are required to further reduce the voltage to the level at which the electrical energy is distributed through overhead or underground low voltage (LV) lines.

A map of Evoenergy's network is presented in Figure 3.

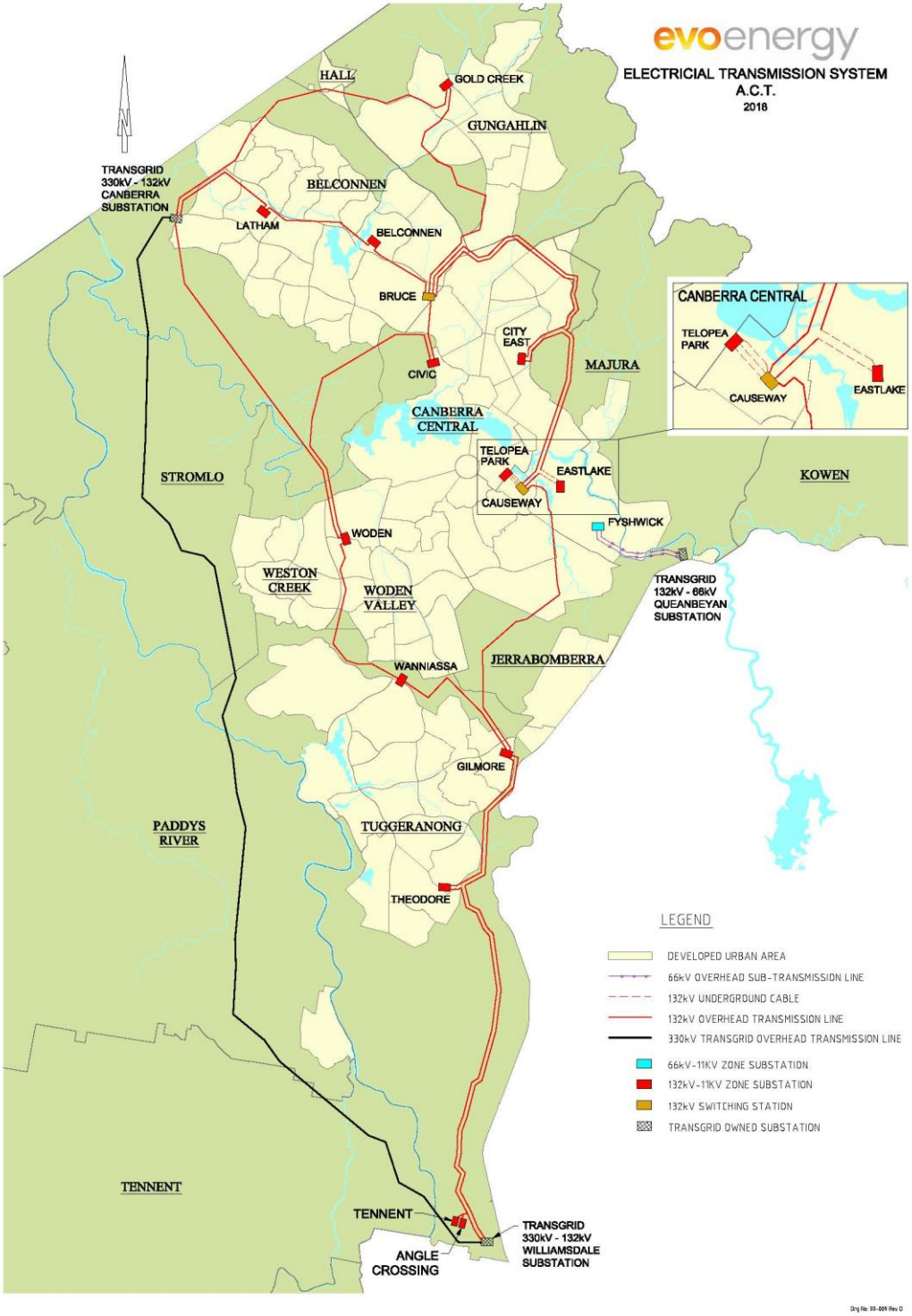
The ACT electricity distribution network has a number of features that set it apart from the networks of other DNSPs in the NEM.

- A distinctive feature is the location of LV distribution poles in backyards. This was a planning requirement in the ACT to reduce the visual disruption of on-street electricity reticulation in residential neighbourhoods. However, due to access difficulties, this impacts Evoenergy's management and replacement of these assets.

- The identification and planning of Canberra as 'the bush capital' results in a relatively high concentration of urban vegetation within and on the fringes of urban areas. This increases the task of keeping vegetation clear of electrical conductors to maintain their reliability and safe operation.
- Until the late 1980s, all reticulation in the ACT was through overhead lines. Since then, all greenfield developments have been serviced with underground reticulation in accordance with requirements set out in the ACT Government's Territory Plan. Underground lines now account for more than half the total line length in Evoenergy's network. While underground lines generally require less maintenance than overhead lines, faults can be more difficult to locate and are generally more expensive to fix.

Evoenergy is committed to managing its network in the most prudent and efficient manner to meet the requirements of its customers. Consistent with this commitment, Evoenergy's asset management system and governance processes aim to deliver sustainable asset management services at the lowest cost consistent with the maximum acceptable risk to service levels. Evoenergy has been working toward attaining certification with the International Standards Organisation for Asset Management (ISO 55001), which is now considered the benchmark for asset management maturity. In November 2017, Evoenergy attained certification, indicating that it is prudent and cost effective with its renewal and refurbishment activity and with its routine and corrective maintenance programs. Attachment 1 (Asset management and governance) sets out further details of Evoenergy's approach to asset management and governance.

Figure 3 Map of the Evoenergy network



4. Achievements in the current period

Over the current regulatory period, Evoenergy has responded to changing circumstances under the regulatory framework as well as to broader changes in the industry to maintain downward pressure on costs and innovate for the benefit of all ACT consumers. This is evidenced by the 21.7 per cent reduction in operating expenditure achieved over the current period, compared with the previous regulatory period, as a result of extensive organisational restructuring and efficiency savings. At the same time, Evoenergy has operated its network to maintain quality, reliability and security of supply for its customers. The medium to long term impacts of reduced operating expenditure on safety and reliability are not yet clear and Evoenergy will be continuing to monitor the impact of these changes.

A key focus over the current regulatory period has been to optimise investments in network augmentation and asset replacement to ensure these are efficient, prudent and well-targeted.

Evoenergy's key areas of achievement over the current regulatory period are summarised in Table 2.

Table 2 Evoenergy's key achievements over the current regulatory period

Area	Achievements
Reliability	Despite a reduction in reliability performance over the current regulatory period, Evoenergy continues to perform favourably against other Australian DNSPs. In 2016/17, with an average of 39.5 minutes of unplanned outages experienced per customer and 0.70 unplanned outages per customer, Evoenergy's network is one of the most reliable in Australia.
Asset management	In November 2017, Evoenergy attained certification with the International Standards Organisation standard for Asset Management ISO 55001, which is considered the benchmark for asset management maturity.
Cost efficiency improvement	Over the current regulatory period, Evoenergy has achieved significant cost efficiency improvements that have allowed it to deliver balanced outcomes in terms of price and quality of service for its customers. To the extent that the AER's benchmarking can be afforded any material weight, it's latest annual benchmarking report suggests that Evoenergy has shifted over the past few years from a bottom-level performer to become a mid-level performer in terms of opex productivity, moving up the table from 11th to 7th place due to very strong productivity growth.

Area	Achievements
Operation and maintenance	Evoenergy's actual and expected opex for 2014–19 is projected to be 21.7 per cent lower than opex in the previous regulatory control period. In the four years since the transitional year, Evoenergy's opex has been below the allowance in the AER's 2015 opex final decision. This has been achieved through: • an extensive restructuring of the workforce (a 20 per cent reduction between 2013/14 and 2016/17); • re-engineering and asset management optimisation to reduce the program of works; • savings in vegetation management using new light detection and ranging (LIDAR) technology; • implementation of an Advanced Distribution Management System for network planning, Velocity for metering data and billing, Citiworks for works management, and RIVA for asset management and decision support; and • a reduction in overtime and staff training.
Capex performance	Evoenergy's actual capex has closely tracked the AER allowance at the aggregate level and the business expects to underspend compared to the allowance by $9.8 million. Examples of capital projects completed include: • replacement of the Ijong 11 kV electricity feeder in the northern Canberra CBD; • replacement of ageing assets in the suburbs of Scullin, Chapman, Garran, Kambah and Rivett; • construction of the East Lake Zone Substation to meet expected growth in demand from Fyshwick, Canberra Airport and South Canberra; • conversion of overhead 132 kV transmission line to underground cables 1 km either side of Belconnen Zone Substation to provide for proposed residential development; • installation of optical fibre ground wire in the transmission network between East Lake and City East Zone Substations, and the Civic Zone Substation and Bruce Switching Station; and • connection of Williamsdale Solar Farm and Mugga Lane Solar Farm to the distribution network.
Network charges	Evoenergy has the lowest network charges component of retail electricity prices in the NEM (according to the Australian Energy Market Commission's (AEMC's) 2017 Residential Electricity Price Trends).
Tariff Structure Statement	In February 2017, the AER approved Evoenergy's TSS and approved the move to demand tariffs for residential and small business customers, referring to Evoenergy as the 'most advanced distributor in the national electricity market in reforming its tariff structures, having gradually introduced several time-of-use (TOU) charging options for both residential and commercial customers over the last several years'. About 55 per cent of the total load in the ACT is now subject to TOU or controlled load charges, and more than 25,000 residential customers are now on the residential TOU tariff that Evoenergy introduced as the default network tariff for new customers in October 2010.

5. Factors shaping the regulatory proposal

The key factors that have shaped Evoenergy's regulatory proposal are:

- regulatory and legal obligations;
- consumer preferences and expectations;
- industry transformation; and
- demand forecasts.

These factors have driven the development of Evoenergy's forecast capex and opex program for the 2019–24 regulatory control period. They have also shaped Evoenergy's proposed rate of return and its approach to calculating the annual revenue requirement and price path for Standard Control Services (SCS) and Alternative Control Services (ACS). This section discusses each of these factors and how they have been taken into account in Evoenergy's regulatory proposal.

It is also important to note that Evoenergy's regulatory proposal has been prepared in the absence of a remade decision for the 2014–19 regulatory control period. This has created significant uncertainty for a number of aspects of the 2019–24 regulatory proposal. Most importantly, the AER has yet to finalise its approach to the return-on-debt component of the rate of return and the AER has provided no guidance on how it intends to address the deficiencies identified by the Australian Competition Tribunal (upheld by the full Federal Court) in relation to the AER's benchmarking approach to determining Evoenergy's opex allowance. The lack of a remade decision also creates uncertainty about the appropriate starting revenue for the calculation of X-factors and the values that should be included for incentive schemes. As a result, Evoenergy has had to make a number of assumptions on key aspects of the regulatory proposal which will need to be updated following the AER's remade decision.

5.1 Regulatory and legal obligations

Evoenergy's regulatory proposal reflects both national and ACT-specific regulatory and legal obligations.

5.1.1 National obligations

Evoenergy operates within the legislative and regulatory framework of the Australian NEM. The key energy market legislation that has guided Evoenergy's regulatory proposal is the National Electricity Law (NEL) and the National Electricity Rules (Rules).[6]

The objective of the NEL is: [7]

> *to promote the efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:*

[6] As a DNSP in the NEM, Evoenergy is also required to comply with policies and procedures developed by the Australian Energy Market Operator (AEMO), including the Electricity Metering Code, business-to-business obligations and procedures, metrology procedures, and other rules and directions.

[7] NEL section 7.

a) price, quality, safety, reliability and security of supply of electricity; and

b) the reliability, safety and security of the national electricity system.

The NEL also contains revenue and pricing principles which set out the costs that a network service provider should be allowed to recover in its prices for direct control network services and the incentives that should be provided.

The Rules govern the operation of the NEM. Chapter 6 of the Rules deals with the economic regulation of distribution services and hence contains the key rules that Evoenergy has followed in preparing its regulatory proposal. Specifically, Evoenergy has:

- adopted the building block approach set out in the Rules to determine the annual revenue requirement for SCS;
- largely accepted the constituent decisions of the AER in relation to the issues addressed in the framework and approach, the most significant of which is a change to the form of control from an average revenue cap (revenue yield control) to a revenue cap, and the application of transmission pricing to the parts of the Evoenergy network that perform transmission functions;
- taken into consideration the guidelines published by the AER in accordance with the Rules, including the Shared Asset Guidelines, the Capital Expenditure Incentive Guidelines, the Rate of Return Guidelines, the Expenditure Forecast Assessment Guidelines and the Cost Allocation Guidelines;
- adopted the AER's preferred methodology for forecasting opex, as set out in the Expenditure Forecast Assessment Guidelines,[8] to ensure this expenditure reasonably reflects each of the opex criteria in the Rules when assessed against the opex factors;
- determined forecast capex in accordance with the capex criteria in the Rules and has followed the Expenditure Forecast Assessment Guidelines to address the capex factors; and
- used the AER's roll-forward model (RFM) for calculating the opening regulatory asset base and post-tax revenue model (PTRM) for estimating the annual revenue requirement, including the key assumptions and methodologies incorporated into these models such as forecast inflation and straight-line depreciation.

Evoenergy's regulatory proposal also reflects recent regulatory changes in relation to AEMC's Power of Choice review, ring-fencing, and replacement expenditure planning arrangements, as described in the next three sections.

5.1.1.1 POWER OF CHOICE

In November 2015, the AEMC issued a rule change determination that set out changes to the Rules in relation to the provision of metering services. The changes, which commenced on 1 December 2017, were made as part of a wider set of Power of Choice initiatives to support demand-side participation in the NEM. The rule change is aimed at providing improved access to advanced metering services to give consumers opportunities to better understand and take control of how they use electricity and the

[8] See also ActewAGL Distribution 2017, Expenditure Forecasting Methodology.

costs associated with their usage decisions. Evoenergy has incurred significant costs in complying with these requirements.

5.1.1.2 RING-FENCING GUIDELINES

In November 2016, the AER issued Ring-fencing Guidelines in accordance with the Rules framework for implementing a national approach to electricity ring-fencing. The Ring-fencing Guidelines are aimed at addressing the risk of DNSPs cross subsidising contestable services with revenue earned from the provision of regulated distribution services and the risk of DNSPs discriminating in contestable markets in favour of their own business units providing contestable distribution services. The Ring-fencing Guidelines include requirements in relation to legal separation, accounting separation, cost allocation, general non-discrimination obligations and specific obligations in relation to offices, staff, branding and promotions, as well as information access and disclosure. The work and associated cost of compliance, which had to occur by no later than 1 January 2018, have been significant.

5.1.1.3 INVESTMENT PLANNING RULE CHANGE

In July 2017, the AEMC issued a rule change determination that amended the existing planning and investment framework with the aim of creating a set of requirements that apply equally to network replacement and augmentation investments. The principal changes are that this Rule extends the distribution and transmission regulatory investment tests to network replacement expenditure decisions and also introduces new information reporting requirements in the Annual Planning Report.

5.1.2 ACT obligations

In addition to the national legislative and regulatory framework, Evoenergy's regulatory proposal also reflects a number of ACT-specific legislative requirements, as described below.

- The *Utilities Act 2000* (ACT) which sets out requirements in terms of licencing, industry codes, technical regulation, access to utility services, network operations and protection of networks.
- ACT planning requirements with respect to LV electricity reticulation which requires that, unless underground, LV reticulation must run along the rear boundaries of properties, rather than on street verges as is normally the case in other jurisdictions. The consequence of this requirement is significantly higher construction, operational and maintenance costs compared with a street reticulated network.
- Strict planning principles and policies from the two planning and development agencies in the ACT (the National Capital Authority and the ACT Environment, Planning and Sustainable Development Directorate) which impact Evoenergy's costs. In particular, policies relating to suburban trees and strict rules with respect to the placement of street furniture and the sub-transmission network increase Evoenergy's cost of supply.
- Evoenergy is subject to a comprehensive set of regulatory requirements with respect to reliability, power quality, security of supply, and safety risks. The *Electrical Safety Act 1971* (ACT) and the *Work Health and Safety Act 2011* (ACT), along with associated regulations, set out Evoenergy's legal and regulatory obligations in relation to electrical safety and workplace safety. The Electricity Distribution Supply Standards Code sets out Evoenergy's regulatory obligation in relation to quality and reliability.

- Two recent changes under the *Utilities (Technical Regulation) Amendment Act 2017* (ACT) have extended Evoenergy's legal obligations with respect to vegetation management. The first change[9] extends Evoenergy's responsibility with respect to vegetation clearance from aerial lines to all non-leased land in the ACT (that is, all land that is not occupied by a residential or commercial property). Given the extensive unoccupied open spaces in the ACT, this obligation is substantial. The second change[10] extends Evoenergy's responsibility for the inspection of electrical infrastructure to rural leased land and outside the network boundary. The costs associated with both these new obligations are included in Evoenergy's opex forecasts.
- The ACT Government has also made a commitment to 100 per cent renewable energy by 2020 and carbon neutrality by 2050.[11] These commitments, together with rapid consumer up-take of new technologies, are driving transformation of the electricity market which has important implications for the management of the distribution network and thus Evoenergy's regulatory proposal, as discussed in more detail in section 7.1.

5.2 Consumer preferences and expectations

Consumer engagement has played an important role in developing Evoenergy's regulatory proposal. Evoenergy has engaged with consumers via a number of methods and over an extended period of time to provide insight into the opportunities and challenges associated with Evoenergy's next five year plan. The engagement process has involved consumer publications, presentations to and feedback from its Energy Consumer Reference Council, consumer workshops, written submissions from stakeholder groups, online surveys and social media promotion. Attachment 2 (Consumer engagement) provides details of Evoenergy's consumer engagement. The key themes of consumer feedback and how this has been factored into Evoenergy's regulatory proposal are summarised in Table 3.

Table 3 Consumer feedback and the regulatory proposal

Key theme of consumer feedback	How this been addressed in the regulatory proposal
Throughout consultation, Evoenergy consumers emphasised the importance they place on meaningful involvement in the regulatory submission process (including the TSS).	Evoenergy recognises the need for its consumers to contribute to the regulatory process. It has sought to engage with consumers using a number of methods with the objectives of: • conveying to them a greater understating of the electricity sector and the regulatory process; and • seeking their preferences on the issues that are most important to them. In this way, Evoenergy believes consumers will be more engaged and can provide more informed and valuable contributions to the regulatory process.

[9] Section 41D(1)(a).

[10] Section 41I.

[11] See https://www.environment.act.gov.au/energy/cleaner-energy/renewable-energy-target-legislation-reporting.

Key theme of consumer feedback	How this been addressed in the regulatory proposal
Reliability and security of supply	
Maintaining reliability and security of supply is important, particularly during the adoption of new technology.	Evoenergy's regulatory proposal reflects the capex and opex required to maintain the quality and reliability of the ACT power supply. Key areas of expenditure include the refurbishment or replacement of ageing assets to meet safety and reliability standards, increasing network capacity to accommodate major urban developments, and installing a second connection point to the NSW transmission network to meet the ACT Government's system security requirements. Evoenergy is also proposing expenditure on systems to support the adoption of new technologies.
Cost/reliability trade-off	
The cost/reliability trade-off approach with respect to opex currently adopted by Evoenergy is supported by consumers.	Evoenergy's regulatory proposal largely maintains the current risk-based maintenance strategies, an approach supported by nearly half of residential consumers surveyed with the remainder of respondents split roughly equally between the reactive and proactive approaches. With respect to capex, Evoenergy has sought to find the right balance between cost optimisation and reliability of supply by optimising its capex program using a top-down assessment methodology. This approach has resulted in $46 million in opportunities to reduce expenditure while maintaining the same risk profile.
Supporting new supply technology	
Consumers recognise that technology has the potential to be an important enabler for the electricity network and should play a role in the future of Evoenergy, with the potential to provide innovative solutions and cost-effective outcomes.	The rapid adoption of new technologies poses a number of challenges and opportunities for Evoenergy. Additional expenditure on systems is required to manage two-way power flows in the network, while expenditure in relation to network capacity may be reduced or deferred. Evoenergy is also undertaking a number of pilot studies and trials that will allow it to better support new technologies.
Network pricing	
Evoenergy's customers support cost-reflective tariffs as they provide a price signal to encourage consumers to consider changing their electricity consumption. Consumers have indicated their preparedness to modify their energy consumption to make cost savings. The majority of consumers surveyed were willing to modify their energy consumption if offered a saving on their network bill.	Evoenergy proposes to continue on its journey towards cost-reflective network tariffs during the 2019–24 regulatory control period. It does not propose to implement tariffs or tariff changes where it is not certain that consumer behaviour has a direct impact on network costs.

Key theme of consumer feedback	How this been addressed in the regulatory proposal
Support for consumers during the transition to more cost-reflective tariffs is important. It is important that price signals are supported by consumer information and education to allow consumers to take advantage of potential savings.	Evoenergy will continue to engage with consumers and retailers once the proposed TSS is lodged, through to the implementation of tariff changes.
Consumers identified price predictability and certainty as important.	Evoenergy will continue to ensure that consumer impacts are considered when setting network prices.

5.3 Industry transformation

Historically, distribution networks have been constructed for one-way energy flows from large centralised generators to transmission systems and through the distribution network to consumers. More recently, however, Australia's electricity network has experienced rapid change with more consumers adopting DER with the ability to generate, store and trade their own energy. New forms of generation, including PV and wind farms, battery storage, and embedded generators, are becoming cheaper and better and, as a consequence, more widespread and viable on a small scale.[12]

The Australian Energy Market Operator (AEMO) forecasts that:

- consumption met by grid-supplied electricity will remain flat for the next 20 years despite projected 30 per cent growth in population and assumed average growth in the Australian economy;
- strong growth will continue for the uptake of rooftop PV capacity, with an increase from around 5.0 gigawatts (GW) today to 19.7 GW by 2036–37; and
- battery storage installations will reach 5.6 GW by 2036–37, up from a capacity close to zero today; AEMO expects a proportion of new storage to be aggregated and used for price hedging by retailers and provision of ancillary services, further increasing the value streams from innovation and accelerating the rate of uptake.[13]

Evoenergy forecasts for the ACT that:

- the proportion of dwellings with solar generation will increase from 11 per cent with capacity of 50 MW to approximately 27 per cent with capacity of 135 MW by 2031; and

[12] The transformation of the energy industry has been the focus of a number of recent reports including: ENA & CSIRO 2017, Electricity Network Transformation Roadmap: Final Report; AEMC 2017, Electricity Network Economic Regulatory Framework Review; AEMC 2016, Distribution Market Model, Approach Paper; and AEMO 2015, Emerging Technologies Information Paper.

[13] AEMO 2017, Electricity Forecasting Insights for the National Electricity Market: 3; and https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Electricity-Forecasting-Insights/Key-component-consumption-forecasts/PV-and-storage.

- the number of dwellings with battery storage will increase from approximately 300 with 1.3 MW capacity to 16,000 with 130 MW capacity, and about 8 per cent penetration by 2031.

Consistent with these trends, a joint report published in 2017 by Energy Networks Australia and CSIRO suggested that the unprecedented scale of transformation in the electricity system would see up to 45 per cent of all electricity generated by consumers in 2050, presenting a significant range of technical, economic and regulatory challenges.[14]

These changes will require Evoenergy to transform from a traditional electricity distributor to overseeing a system of intelligent networks and controllable DER and loads. As it does so, it must also adjust its capex program to avoid large capacity increases that may not be needed in the future. For the 2019–24 regulatory period, Evoenergy has sought to minimise its capex program by identifying opportunities for increasing network utilisation, implementing demand management solutions and adopting a comprehensive risk-based planning framework.

Evoenergy also expects technological change to drive additional capex to accommodate the management of two-way flows and DER. In particular, Evoenergy forecasts an increase in network intelligence and control investment with a view to optimising power flows and changes in network utilisation. Evoenergy has already experienced quality of supply issues (fluctuating voltages) due to rooftop PV and grid-scale distributed generation (solar farms). These issues will need to be addressed as penetration increases and new technologies come on line.

The impact of industry transformation on Evoenergy's capex program is discussed further in section 7.1.

5.4 Demand forecasts

Demand forecasts are vital inputs to Evoenergy's capex forecasts, especially for augmentation expenditure projects and programs.

Peak demand forecasts for each zone substation have been developed using a bottom-up forecasting approach. Evoenergy has adopted and implemented AEMO's maximum demand forecast methodology which uses the Monash Electricity Forecasting Model (MEFM). Known new customer block loads are added to the zone substation forecasts. To cross check the results of the bottom-up modelling, a top-down approach is used to forecast system peak demand to check that the aggregated zone substation forecasts are consistent with the overall level and trend expected for the ACT region. The MEFM incorporates small-scale and medium-scale solar PV generation, rooftop PV, battery storage, electric vehicles and energy efficiency.

The resulting demand forecasts show that network capacity will be driven by winter rather than summer peak demand. Contributing to this result is the assumed increase in the rate of installation of solar PV during the next regulatory period. Production from solar PVs in summer usually coincides with peak network demand driven by air-conditioning load. During the next regulatory period, it is forecast that some of the growth in summer peak demand will be supplied by behind-the-meter PV installations.

Evoenergy has also forecast customer numbers and energy sales, which are inputs into a number of other calculations including connections capex, opex, the TSS and the Service Target Performance Incentive Scheme (STPIS). However, it is important to note

[14] ENA & CSIRO 2017, Electricity Network Transformation Roadmap: Final Report.

that under the revenue cap form of control that will apply to Evoenergy in the 2019–24 regulatory period, the level of revenue that Evoenergy is permitted to recover does not change if actuals differ from forecasts (as is the case under the average revenue form of control currently in place).

Demand forecasts are discussed in detail in Attachment 3 (Energy, customer numbers and peak demand forecasts).

6. Classification proposal

As part of its regulatory proposal, Evoenergy is required to provide a classification proposal that shows how its distribution services, in its opinion, should be classified. If its proposed classification differs from the AER's likely classification, Evoenergy must include reasons for the difference.

Evoenergy accepts the broad classification of services set out by the AER in its Framework and Approach paper. This includes classifying common distribution services as Standard Control Services, Type 5/6 metering services as ACS, and all other services as unregulated. Evoenergy also accepts the AER's decision that there will be no Negotiated Services in the 2019–24 regulatory control period. Evoenergy proposes to introduce some new service charges as ancillary services, which relate to services currently carried out as quoted services, with considerable regularity. Attachment 14 (Alternative Control Services) provides more detail on these proposed new charges. Evoenergy notes that some clarification is required on the classification of non-standard connection services, which is discussed in Attachment 4 (Classification proposal).

7. Building block proposal

Evoenergy's regulatory proposal is required under the Rules to include a building block proposal for Direct Control Services classified under the proposal as SCS.[15]

The Rules require the AER to make a decision on whether to approve or refuse to approve the annual revenue requirement set out in the building block proposal and the commencement and length of the regulatory control period as proposed in the building block proposal.[16] Evoenergy's building block proposal must therefore contain information on: [17]

- the commencement and length of the regulatory control period;
- forecast capex;
- forecast opex;
- the regulatory asset base and depreciation schedules;
- the proposed return on equity, return on debt and allowed rate of return;

[15] Rules, clause 6.8.2(c)(2).

[16] Rules, clause 6.12.1(2).

[17] Rules, clause 6.3 and schedule 6.1.

- the cost of corporate income tax and the proposed value of imputation credits;
- the application of incentive schemes specified in the Framework and Approach paper;
- calculation of revenues for the purposes of the control mechanism;
- completed RFM and PTRM; and
- a proposed contingent project.

The building block proposal may also contain a proposal as to events that should be defined as pass through events.[18]

Evoenergy proposes a commencement date of 1 July 2019, immediately following the expected conclusion of the current 2014–19 period, and a length of five years for the regulatory control period (the minimum length),[19] ending 30 June 2024.

The building block proposal has been prepared as required in accordance with the AER's PTRM.[20] Evoenergy has provided a completed RFM and PTRM for distribution and transmission services which are provided in the modelling appendix.

Evoenergy proposes a total unsmoothed revenue requirement of $951 million (nominal) for the 2019–24 regulatory control period, incurred in each year of the period as set out in Table 4. This amount is needed to recover the efficient costs Evoenergy reasonably expects to incur in providing SCS.

Table 4 Unsmoothed total revenue requirement

$ million nominal	2019/20	2020/21	2021/22	2022/23	2023/24
Return on capital	61.99	63.52	65.11	67.31	68.58
Return of capital	41.46	45.11	49.00	54.05	58.25
Operating expenditure	61.26	64.06	67.10	70.19	73.25
Revenue adjustments	0.73	0.32	0.33	0.34	0.35
Net tax allowance	6.90	7.30	7.69	8.31	8.61
Annual revenue requirement (unsmoothed)	**172.33**	**180.32**	**189.23**	**200.21**	**209.03**

Note: totals may not add due to rounding

Evoenergy does not seek a determination by the AER on a contingent project.

Each of the other building block proposal matters is addressed below, supported by relevant attachments and appendices where necessary.

[18] Rules, clause 6.5.10(a).

[19] Rules, clause 6.3.2(b).

[20] Rules, clause 6.3.1(c)(1).

7.1 Forecast capital expenditure

Evoenergy's capex plan for the 2019–24 regulatory period reflects the need to address the rapidly changing electricity market, manage an ageing asset base to meet safety and reliability standards, accommodate major urban developments and meet increasing requirements from the ACT Government in relation to planning and system security regulations.

Evoenergy intends that the proposed capex program for the 2019–24 regulatory period will deliver benefits to consumers through activities in the following three areas.

7.1.1 Meeting consumer expectations and adapting to industry changes

- Ensuring that Evoenergy's network meets consumer expectations and service standard obligations in the face of increasing power quality and reliability challenges posed by an increasing uptake of DER.
- Developing a risk-based, top-down framework to allow the assessment of non-network alternatives (e.g. demand-side management, embedded generation) against network augmentation. This includes a net present value approach where all options are fully investigated and evaluated before initiating any major capital augmentation project. Augmentation projects with a capital cost exceeding $5 million will be subject to the Regulatory Investment Test for Distribution prior to proceeding.
- Investing in information and communications technology and analytics to transition the business towards the themes of digital transformation and meet industry changes. Evoenergy's proposed expenditure also includes replacement of aged corporate and operational systems to provide a stable technology platform and enable regulatory compliance.

7.1.2 Ensuring the effective operation of Evoenergy's network

- Developing a combined top-down and bottom-up risk-based methodology to forecast asset replacement programs. Expenditure is optimised across asset classes within the replacement and renewals expenditure (repex) portfolio, ensuring that Evoenergy's proposal reflects the efficient costs of achieving an acceptable risk level where reliability standards are adequately met and safety levels maintained.
- Adopting a comprehensive risk-based planning framework which will deliver value for money to consumers by continuing to improve the way it manages Evoenergy's assets and delivers capital works projects. The risk-based framework provides transparency and accountability in the way Evoenergy manages its assets and their operating costs.
- Improving reliability and quality through expenditure on a targeted roll-out of distribution network monitoring to areas of the network impacted by DER in order to manage quality of supply, support network planning and deployment of non-network solutions.
- Replacing secondary systems programs including upgrade of specific protection, supervisory control and data acquisition and communications systems to ensure compliance with current Rules standards and to meet power quality issues as impacted by DER.

7.1.3 Efficiently managing growth and promoting greater asset use

- Constructing a lower cost option of a mobile zone substation at Molonglo to meet demand from new residential suburbs in the Molonglo Valley District, which is being developed by the ACT Government's Suburban Land Agency at a proposed rate of approximately 1,000 dwelling per year, plus shopping centres, schools and community facilities.
- Completing the Second Supply to the ACT Project in association with TransGrid, to fully meet the security of supply requirements of the ACT Government's Electricity Transmission Supply Code.
- Constructing various feeder projects to form a low-cost option to meet shortfalls identified in high-growth metropolitan areas with increasing peak demand and provide greater use of existing zone substations.

Table 5 outlines Evoenergy's actual and proposed capex for the 2014–19 and 2019–24 regulatory periods and compares these to the AER's approved capex allowance for the 2014–19 period from the AER's 2015 determination. It shows that actual capex is $9.8 million below the AER's allowance and forecast capex is $8.8 million below the AER's allowance.

Table 5 Actual and forecast capex

$ million (2018/19)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
AER allowance 2014–19	79.5	66.2	70.7	61.6	60.5	338.6
Evoenergy actual 2014–19[1]	76.9	62.7	55.4	67.7	66.1	328.8
Evoenergy forecast 2019–24	62.4	65.3	75.9	65.6	60.6	329.8
Variance allowance to actual	(2.6)	(3.6)	(15.3)	6.1	5.7	(9.8)
Variance allowance to forecast	(17.2)	(1.0)	5.2	4.0	0.1	(8.8)

[1] Actual to 2016/17 and forecast for 2017/18 and 2018/19

It is important to note that this was achieved during a period of intense organisational reform in asset management, capital governance and program delivery processes as a result of the large reduction in Evoenergy's opex allowance in the AER 2015 final decision. Furthermore, the expenditure reflects the costs involved in preparing the network for the emergence of distributed energy resources. Evoenergy's actual expenditure for the 2014–19 period has also accommodated increased non-discretionary compliance costs due to Power of Choice regulatory changes.

Table 6 shows Evoenergy's actual and forecast capex versus the AER allowance by category.

Table 6 Actual and forecast capex versus AER allowance by category

$ million (2018/19)	2014–19 Allowance	2014–19 Actual	2019–24 Forecast	Variance (Actual vs AER)	Variance (Forecast vs AER)
Augmentation	51.7	33.3	47.2	(18.5)	(4.5)
Connections	85.4	90.6	85.9	5.2	0.5
Replacement	115.1	80.1	91.6	(35.0)	(23.5)
Reliability and quality improvements	7.3	6.7	6.2	(0.6)	(1.1)
Non-network	63.0	89.8	58.3	26.7	(4.7)
Capitalised overheads	57.5	68.2	75.6	10.7	18.1
Less capital contributions	(33.4)	(39.6)	(34.2)	(6.2)	(0.7)
Less disposals/materials escalation adjustment	(8.2)	(0.4)	(1.1)	7.8	7.1
Net capex	338.6	328.8	329.8	(9.8)	(8.8)

Consistent with expected efficiencies from applying the top-down and bottom-up approach to its capex forecasts, Evoenergy has significantly reduced augex and repex compared with the AER's 2015 final determination. However, there has been an offsetting increase in capitalised overheads and non-network spending. Total actual and forecast expenditure are both at similar levels to the AER's allowed capex.

The increases in non-network and capitalised overheads reflects a reprioritisation of business needs towards overhauling IT infrastructure. This has been to maintain reductions in opex made during the current period and to prepare the business for significant industry changes in the electricity market, as discussed above.

As a result of this expenditure, there has been a relative increase in the proportion of short-lived IT and communication systems assets, which in turn has increased Evoenergy's forecast depreciation expenses (see section 7.7).

Attachment 5 (Capital expenditure) provides details of Evoenergy's capex proposal.

7.2 Forecast operating expenditure

Evoenergy has achieved significant opex savings during the current period through organisational restructuring, adoption of new technology, process improvement and optimisation of asset management practices. In the 2019–24 regulatory period, Evoenergy will consolidate the efficiencies achieved to date and continue to evolve with the changing industry environment.

Evoenergy has adopted a base-step-trend approach, in accordance with the AER's Expenditure Forecast Assessment Guideline, to determine its forecast opex allowance for the 2019–24 regulatory control period. This method involves:

- taking as a base, actual opex for a year which reflects efficient and recurrent costs;

- adjusting this base year to account for future step changes in circumstances and operating environment; and
- trending the adjusted base year forward to account for changes in output and cost inputs over the 2019–24 regulatory period.

Evoenergy has used 2017/18 as the base year as this is considered to be the most efficient starting point to forecast opex over the 2019–24 regulatory period. As the penultimate year of the current regulatory period, the use of 2017/18 as the base year is also consistent with the AER's standard approach for forecasting opex.

Evoenergy has considered a range of evidence in assessing the efficiency of the base year, including the following information.

- Revealed opex in the base year follows significant cost savings achieved since the beginning of the 2014–19 regulatory control period.
- Base year opex is in line with the levels assessed as efficient by the AER in its 2015 final decision.
- The AER's 2017 annual benchmarking report, which presents opex multilateral partial factor productivity results, shows that Evoenergy ranks as the 5th highest performer with an index of 1.27, only slightly below South Australia Power Networks and TasNetworks, which ranked 3rd and 4th respectively.
- Top-down benchmarking based on an update of the AER's stochastic frontier analysis and consideration of other model specifications and data combinations suggest that Evoenergy's base year opex reasonably reflects the opex criteria.
- Bottom-up benchmarking using category analysis (RIN) data suggests that Evoenergy's costs across key direct and indirect cost categories are efficient.

Evoenergy has applied an approach consistent with that used by the AER in recent decisions to trend its base year opex, resulting in a forecast average annual growth to base opex of 2.1 per cent over the next regulatory control period.

The forecast includes two step changes: one driven by changes to vegetation clearance responsibilities in the ACT and the other being an efficient trade-off between capex and opex for demand management in a new urban development area.

Table 7 shows the opex forecasts for 2019–24. The base-step-trend opex forecast is 10 per cent above the level of opex approved by the AER's 2015 decision for the 2014–19 regulatory period. Figure 4 shows the key drivers of this increase.

Table 7 Opex forecasts

$ million real 2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	Total
Distribution opex	51.2	52.2	53.4	54.4	55.4	266.7
Transmission opex	8.1	8.2	8.4	8.6	8.8	42.2
Total opex	**59.3**	**60.5**	**61.8**	**63.1**	**64.2**	**308.9**

Figure 4 Opex bridge between 2015 AER final decision and Evoenergy's 2019–24 opex forecast, $ million real 2018/19

Attachment 6 (Operating expenditure) provides further details on Evoenergy's opex proposal.

7.3 Regulatory asset base and depreciation

Evoenergy has calculated its regulatory asset base (RAB) in accordance with the AER's RFM and PTRM methodology, together with the capex forecasts discussed above. Evoenergy has also adopted the straight-line depreciation methodology as set within the PTRM. The asset lives used to calculate depreciation are consistent with those used in the AER's 2015 Final Decision.

The resulting RAB for each year of the 2019–24 regulatory period is presented in Table 8.

Table 8 Opening regulatory asset base

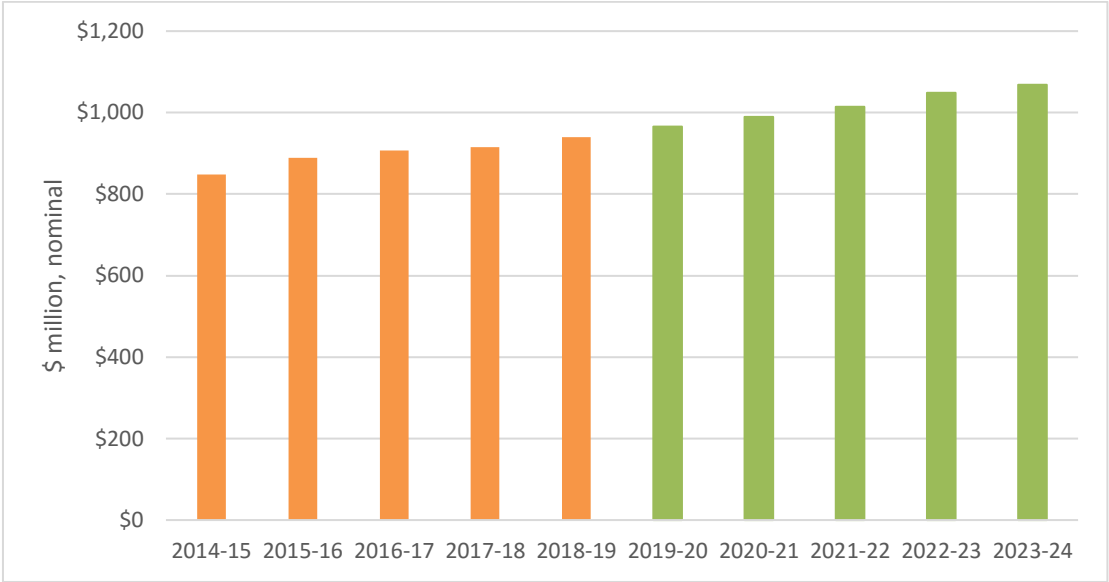
$ million nominal	2019/20	2020/21	2021/22	2022/23	2023/24
Distribution	791.43	815.39	843.39	870.19	892.50
Transmission	174.24	174.16	170.90	178.43	175.83
Total	**965.67**	**989.54**	**1014.30**	**1048.62**	**1068.32**

A comparison of the opening RAB values for the 2014–19 and 2019–24 regulatory periods are shown below in Figure 5.[21] Over the 2014–19 period, the nominal RAB

[21] The RAB for the 2014–19 regulatory control period is calculated based on actual capex and actual inflation. The AER's forecast RAB over the same period was higher with the difference largely due to the difference between actual and forecast inflation.

increased in total by 13.9 per cent[22] or an average of 2.8 per cent per year. Over the 2019–24 period, the nominal RAB is forecast to increase by a total of 11.8 per cent[23] or an average 2.4 per cent per year, slightly below forecast inflation (2.5 per cent).

Figure 5 Opening regulatory asset base



Attachment 7 (Regulatory asset base) provides further details on Evoenergy's calculation of the RAB and depreciation.

7.4 Return on capital

To estimate the rate of return on capital, Evoenergy has adopted the AER's 2013 Rate of Return Guideline as follows.

- For the return on equity, Evoenergy has adopted the AER's foundation model, the Sharpe-Lintner capital asset pricing model (SL-CAPM). To estimate the individual parameters required to populate the SL-CAPM, Evoenergy engaged Frontier Economics to provide an expert opinion on a reasonable, current estimate of the equity beta and market risk premium (MRP) by applying updated evidence to the approach set out in the 2013 Guideline.
- For the return on debt, a 10-year trailing average approach has been adopted using the AER's preferred data sources. The AER's gradual transition implementation has also been adopted as a placeholder and will be updated when the approach for the 2015 remade decision is definitively resolved. Given the averaging periods for 2018/19 and 2019/20 have not yet occurred, the 2017/18 rate is held constant for these years to calculate the return on debt.

The overall rate of return is currently estimated to be 6.42 per cent (nominal vanilla) as at 31 October 2017. The final rate of return set by the AER will update the risk free rate and

[22] Calculated as the difference between the opening RAB in 2014/15 and the closing RAB in 2018/19.

[23] Calculated as the difference between the opening RAB in 2019/20 and the closing RAB in 2023/24.

return on debt for the final averaging periods. Each of the weighted average cost of capital (WACC) parameters is shown in Table 9.

Table 9 Rate of return parameters, estimated at 31 October 2017

Parameter	Gradual transition	Approach
Risk free rate	2.78%	AER 2013 Guidelines: 10-year CGS 20 averaged over consecutive business days
Return on debt	5.57%	AER 2013 Guidelines: 10-year trailing average with gradual transition
Equity beta	0.7	AER 2013 Guidelines
MRP	7.0%	Estimated by Frontier in accordance with the AER 2013 Guidelines
Gearing	60.0%	AER 2013 Guidelines
Return on equity	7.7%	AER 2013 Guidelines SL-CAPM
Nominal vanilla WACC	**6.42%**	

Attachment 8 (Rate of return, imputation credits and forecast inflation) provides further details on Evoenergy's approach to calculating the rate of return.

7.5 Corporate income tax

To calculate tax expenses, a tax asset base (TAB) is calculated using the AER's RFM and PTRM. The TAB is used together with other inputs in the PTRM to calculate total tax expenses.

The Rules (clause 6.5.3) require that total tax expenses are reduced by the value of imputation credits. Consistent with Evoenergy's approach to the rate of return parameters, it has adopted the AER's preferred value of 0.4.

The resulting net tax expenses calculated in the PTRM are presented in Table 10.

Table 10 Net tax expenses

$ million nominal	2019/20	2020/21	2021/22	2022/23	2023/24
Distribution	5.97	6.33	6.66	7.18	7.42
Transmission	0.92	0.97	1.03	1.13	1.19
Total	**6.90**	**7.30**	**7.69**	**8.31**	**8.61**

Attachment 9 (Corporate income tax) provides further details on Evoenergy's approach to estimating corporate tax expenses.

7.6 Incentive schemes

Evoenergy is generally supportive of the AER's approach in its final framework and approach to apply the four incentive schemes—namely the Capital Expenditure Sharing Scheme (CESS), Efficiency Benefit Sharing Scheme (EBSS), Demand Management Incentive Scheme (DMIS) and the Service Target Performance Incentive Scheme (STPIS), as well as the Demand Management Investment Allowance (DMIA) mechanism—to the 2019–24 regulatory control period.

Evoenergy proposes to apply version 2 of EBSS with some opex category exclusions and version 1 of CESS to capex net of capital contributions and asset disposals. A total CESS carry-over of $0.4 million has been calculated based on the Capital Expenditure Incentive Guideline. Given no EBSS applied in the 2014–19 regulatory period, Evoenergy has not included any carry-over value for the EBSS.

In the absence of the amended Distribution STPIS at the time of the regulatory submission, Evoenergy supports the AER's intention to apply the 2009 Distribution STPIS, but with a lower 2.5 per cent revenue at risk and performance reliability targets based on the most current short rural and urban feeder classification.

Evoenergy supports the continued application of DMIA with a larger annual innovation allowance and proposes for DMIS that the cap to the incentive payments applies over the length of the regulatory period, rather than on an annual basis.

Attachment 10 (Incentive schemes) provides further detail on Evoenergy's approach to incentive schemes.

7.7 Control mechanisms

The AER's Framework and Approach determined that a revenue cap form of control will apply to Evoenergy's distribution services for the 2019–24 regulatory control period, which is a departure from the current average revenue cap form of control applied to Evoenergy's distribution services. Evoenergy does not propose any changes to the revenue cap formulae proposed by the AER in the Framework and Approach. To demonstrate compliance with the AER's revenue cap control mechanism, Evoenergy proposes to report on revenue amounts and make adjustments to its annual pricing proposal for over and under recovery.

For designated pricing proposal charges, Evoenergy is satisfied with the current approach and does not foresee any difficulties with this continuing in the 2019–24 regulatory control period.

For jurisdictional scheme amounts, Evoenergy currently administers the collection of revenue associated with four ACT jurisdictional schemes, the cost of which is not included in the opex allowance but recovered as separate charges. Applicable jurisdictional schemes in the ACT are:

- feed-in tariffs (small and medium scale);
- feed-in tariffs (large scale);
- Utilities Network Facilities Tax; and
- Energy Industry Levy.

For the 2019–24 regulatory control period, Evoenergy proposes no change to the manner in which it reports on jurisdictional scheme amounts and makes adjustments to its annual pricing proposal for over and under recovery. However, Evoenergy proposes a

change to determining the forecast amount of revenue to be recovered through jurisdictional schemes to reflect recent legislative changes for determining feed-in tariff amounts.

Attachment 11 (Control mechanisms) provides further detail on Evoenergy's control mechanisms.

7.8 Revenue requirement and bill impacts

The unsmoothed annual revenue requirement for Evoenergy is comprised of the building blocks set out in the Rules, namely:

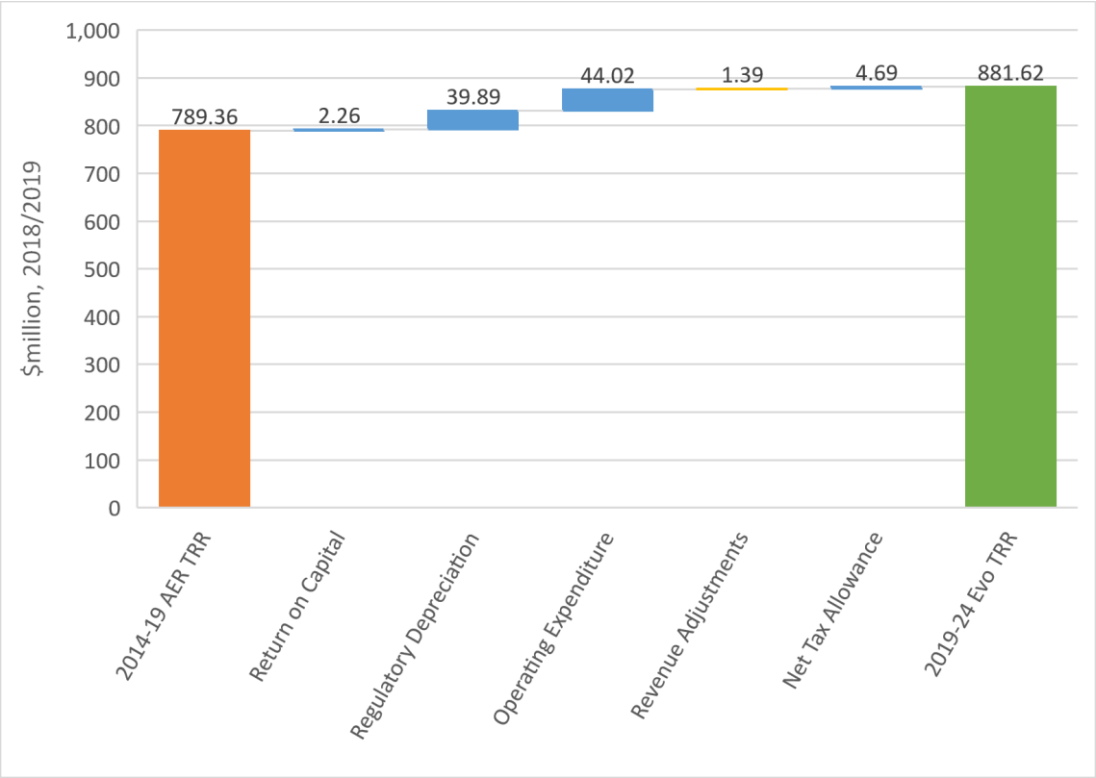
- the return on capital which is calculated as the RAB multiplied by the rate of return;
- the return of capital (regulatory depreciation) which is comprised of straight-line depreciation as calculated in the PTRM, less the indexation adjustment to avoid double-counting inflation;
- opex;
- revenue adjustments, including those associated with incentive schemes and shared assets; and
- the net tax allowance which is the cost of corporate income tax adjusted for imputation credits.

The proposed total revenue requirement (distribution and transmission) for the 2019–24 regulatory period is 12 per cent higher than the allowed total revenue requirement in the AER's 2015 Final Decision ($2018/19), although it is important to note that the AER is yet to remake this decision in accordance with the Federal Court orders. The key factors driving the increase in the total revenue requirement are:

- the increase in opex driven largely by the costs associated with meeting the increased vegetation management obligations and growth in output and real prices over the 2019–24 regulatory period (see Attachment 6);
- the increase in depreciation expenses as a result of higher capex on short-lived assets (see Attachment 5); and
- to a lesser extent, an increase in the net tax allowance and rate of return (see Attachments 8 and 9).

The contribution of each of these factors to the change in the total revenue requirement between the AER's final decision for the 2014–19 regulatory period and the proposed revenue requirement for the 2019–24 regulatory period is shown in Figure 6.

Figure 6 Comparison of total revenue requirement 2014–19 to 2019–24



The annual revenue requirement is smoothed over the 2019–24 regulatory period using the X-factors. Evoenergy has set the X-factors to be equal in each year of the regulatory period, ensuring that in the last year of the regulatory period the difference between smoothed and unsmoothed revenues is no more than 3.0 per cent. In Evoenergy's view, this approach meets the requirements of the Rules, taking into account the AER's position on the reasonable level of divergence, and minimises the year-on-year variability across the regulatory control period.

The annual revenue requirement, smoothed revenue requirement and X-factors for the 2019–24 regulatory period are presented in Table 11 for distribution and Table 12 for transmission.

The X-factors imply a real revenue increase of 3.08 per cent for distribution and 2.92 per cent for transmission. It is important to note that the level of the X-factors is determined by the starting revenue, which corresponds to the last year of the current regulatory period, 2018/19. Given the AER has not yet remade its decision for the current regulatory period, the starting revenue is an estimate. For the purposes of the regulatory proposal, it is assumed that Evoenergy would run a CPI-based undertaking in 2018/19. However, if the AER remakes its decision for the current regulatory period in time for 2018/19 pricing,

then the starting revenue will differ from this level and will impact the value of the X-factors.[24]

Table 11 Building blocks and revenue: distribution

$ million nominal	2019/20	2020/21	2021/22	2022/23	2023/24
Return on capital	50.80	52.34	54.14	55.86	57.29
Return of capital (regulatory depreciation)	35.06	38.06	41.25	45.43	48.86
Operating expenditure	52.89	55.30	57.92	60.57	63.20
Revenue adjustments	0.66	0.32	0.33	0.34	0.35
Net tax allowance	5.97	6.33	6.66	7.18	7.42
Annual revenue requirement (unsmoothed)	145.38	152.36	160.30	169.38	177.12
Annual revenue requirement (smoothed)	143.78	151.92	160.52	169.61	179.21
X-factors	-3.08%	-3.08%	-3.08%	-3.08%	-3.08%

Table 12 Building blocks and revenue: transmission

$ million nominal	2019/20	2020/21	2021/22	2022/23	2023/24
Return on capital	11.19	11.18	10.97	11.45	11.29
Return of capital (regulatory depreciation)	6.40	7.05	7.75	8.62	9.39
Operating expenditure	8.37	8.76	9.18	9.62	10.05
Revenue adjustments	0.07	0.00	0.00	0.00	0.00
Net tax allowance	0.92	0.97	1.03	1.13	1.19
Annual revenue requirement (unsmoothed)	26.95	27.97	28.93	30.83	31.91
Annual revenue requirement (smoothed)	26.30	27.75	29.27	30.88	32.57
X-factors	-2.92%	-2.92%	-2.92%	-2.92%	-2.92%

The expected retail bill impact associated with the proposed annual smoothed revenue requirement can be estimated by adjusting the distribution and transmission components of the bill, while holding all other elements of the bill constant in real terms. In reality, it is

[24] Further, when the AER remakes its decision for the current regulatory period, it is open to the AER to allocate the resulting remittal value in part or in full to the 2019–24 regulatory period. Given the AER has not yet remade its decision for the current regulatory period, no value has been included for this in the 2019–24 regulatory period.

likely that other elements of the bill will also vary over the 2019–24 regulatory period and thus will impact final prices. However, this analysis is focused on isolating the impact of the proposed distribution and transmission elements of the bill.

Evoenergy has adopted the same usage volumes for the average residential and non-residential customer as used by the Independent Competition and Regulatory Commission (ICRC) in its final report on retail electricity prices from 1 July 2017.[25] ActewAGL's standard retail pricing for 2017/18 is applied to these usage volumes to arrive at a starting point for calculating bill impacts in future years. Each year, the distribution and transmission component of the bill is replaced with the value from the PTRM (converted into a charge per MWh). All other elements of the customer bill are held constant in real terms.[26]

As shown in Table 13, the estimated real bill impacts associated with Evoenergy's regulatory proposal are minimal, increasing the bill of an average customer by less than 1.0 per cent per year over the 2019–24 regulatory period (1.7 per cent in nominal terms).

Table 13 Estimated real indicative retail bill impacts for ACT customers associated with Evoenergy's regulatory proposal

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Average residential annual electricity bill, $ (2018/19)	1,935	1,954	1,973	1,985	2,000	2,016
Annual change, $ (2018/19)		18	19	12	16	15
Annual change, %		0.94	0.98	0.62	0.79	0.76
Average non-residential annual electricity bill, $ (2018/19)[3]	6,703	6,766	6,832	6,874	6,928	6,981
Annual change, $ (2018/19)		63	66	42	54	53
Annual change, %		0.94	0.98	0.62	0.79	0.76

Attachment 12 (Annual revenue requirement) provides further details on Evoenergy's calculation of the revenue requirement, X-factors and bill impacts.

8. Pass through events

Pass through events are a mechanism within the Rules by which Evoenergy can manage specified classes of risk. The Rules recognise through the pass through provisions that DNSPs can be exposed to risks beyond their control with a material impact on costs, and therefore, on their ability to provide SCS. The pass through mechanism enables Evoenergy to recover (or 'pass through') the costs of defined, unforeseeable, high-cost events that are not built into a distribution determination.

[25] ICRC 2017: 57.

[26] It is important to note that this analysis does not attempt to estimate all components of the network use of system (NUOS) charge. It is limited to estimating the bill impacts associated with Evoenergy's distribution and transmission (dual function asset) charges.

Evoenergy proposes four nominated pass through events for the 2019–24 regulatory period:

- a terrorism event;
- a natural disaster event;
- an insurance cap event; and
- an insurer credit risk event.

These events are not covered by any category of pass through event specified in clauses 6.6.1(a1)(1) to (4) of the Rules, and can be clearly identified at the time of the making of the determination. Evoenergy's proposed definitions of these events are either identical to or correspond closely with analogous nominated pass through events in the AER's recent regulatory decisions. The AER has itself concluded that these recent decisions have brought a greater degree of consistency to pass throughs in its various electricity determinations and gas access arrangements.

Evoenergy has a range of measures in place to mitigate the cost impact of these events occurring, and has not identified insurance against these events that is available on reasonable commercial terms.

Attachment 13 (Pass through events) provides further details about why each of Evoenergy's proposed nominated pass through events should apply in the 2019–24 regulatory period, including how each of these proposed events is consistent with the nominated pass through event considerations in the Rules.

9. Alternative Control Services

Evoenergy proposes to adopt the AER's classification of services, as set out in its Framework and Approach paper, of:

- Type 5 and Type 6 metering services as ACS;
- the removal of Type 7 metering from ACS and re-assignment to SCS; and
- ancillary services as ACS.

Evoenergy also accepts the AER's determination in its Framework and Approach paper that the form of control mechanism for ACS will be price caps on individual services. In line with Clause 6.2.5(d) of the Rules, Evoenergy proposes that a cost build-up approach as the basis for the control mechanism for ancillary services and a limited building block approach for metering services.

Attachment 14 (Alternative Control Services) sets out Evoenergy's approach to determining charges for ACS.

10. Negotiating framework for Negotiated Services

The Rules (clause 6.7.5(a)) require a DNSP to prepare a document (the negotiating framework) setting out the procedure to be followed during negotiations between the DNSP and any person (the Service Applicant or applicant) who wishes to receive a

negotiated distribution service from the provider, as to the terms and conditions of access for the provision of the service. Clause 6.8.2(c)(5) stipulates that the regulatory proposal must include a negotiating framework for services classified as negotiated distribution services. Evoenergy understands that the negotiating framework must be submitted as part of the proposal even if the proposal does not include services classified as negotiated distribution services.

In its Framework and Approach paper,[27] the AER did not classify any of Evoenergy's services as Negotiated Services. In this proposal,[28] Evoenergy does not propose changes in classification of services contained in the Framework and Approach paper[29] with respect to Negotiated Services.

Evoenergy prepared the proposed negotiating framework for the period from 1 July 2019 to 30 June 2024 in compliance with clause 6.7.5(a) and submits it as part of this regulatory proposal in compliance with clause 6.8.2(c)(5). The proposed framework is in Appendix 15.1 to Attachment 15. Evoenergy considers that the framework is consistent with the requirements of clause 6.7.5(c) of the Rules.

11. Connection policy

The proposed connection policy for the 2019–24 period includes amendments to the existing Connection Policy. The proposed policy reflects changes in rules and business environment. Evoenergy does not propose any major changes to connection policy approach, new concepts, or new types of charges compared with the existing policy. Therefore, Evoenergy considers that the proposed policy is consistent with the requirements of the Rules and the Connection Charge Guidelines.

The proposed connection policy for the 2019–24 regulatory period includes the following changes.

- Changes relating to Power of Choice metering changes to clarify that the connection service provided by the distributor do not include installation of meters and that all new meter installations are to be provided through the customer's retailer in a contestable market. The list of ancillary services is amended to exclude installation of meters and to include new ancillary services resulting from metering contestability.
- Removal of service classifications to eliminate potential for ambiguity or inconsistency between the AER's classification decisions and the connection policy.
- Removal of the dollar values for capital contribution towards shared network assets because those charges are included in the indicative pricing schedule submitted with this regulatory proposal[30] and are also to be included in the Schedule of Electricity Network Charges published annually by Evoenergy. Evoenergy considers that a single schedule of charges improves clarity for customers.

Attachment 16 (Connection policy) provides further details on Evoenergy's proposed connection policy.

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[27] AER 2017, Framework and Approach for ActewAGL, July 2017, p. 11.

[28] Attachment 4 Classification proposal, section 4.5.

[29] AER 2017, Framework and Approach for ActewAGL, July 2017, p. 11.

[30] As part of the Tariff Structure Statement.

12. Tariff Structure Statement

Part of the regulatory submission is a Tariff Structure Statement (TSS) which provides consumers and other stakeholders with clear and accessible information about current network tariffs, and how those tariffs may change in the future. This is Evoenergy's second TSS. Once approved by the AER, the TSS will remain in place for the entire regulatory period (i.e. from 1 July 2019 until 30 June 2024), unless an event occurs that is beyond the reasonable control of the distribution business and could not reasonably have been foreseen, and the AER approves a change. The concept of the TSS was initiated by the AEMC's 2012 Power of Choice review. The associated reforms require network businesses to develop a TSS that clearly shows how the pricing principles have been applied to develop cost-reflective price structures. In this context, cost-reflective pricing is about ensuring that network electricity charges to consumers reflect the economic cost of providing electricity network services to the consumer (both for usage and capacity).

In the first TSS (applicable in 2017/18 and 2018/19), Evoenergy introduced new cost-reflective demand tariffs for residential and low voltage (LV) commercial consumers. This proposal was approved by the AER[31], and these tariffs were implemented on 1 December 2017, coinciding with the introduction of smart meters.[32] While the focus of the first TSS was reforming the tariff structure for residential and small business customers, this second Proposed TSS is focused on large LV and high voltage (HV) commercial customers. To continue Evoenergy's journey towards its long-term vision of more cost-reflective tariffs, the focus of the second Proposed TSS is refining the existing commercial tariff structure to increase cost reflectivity and thereby sharpen price signals to encourage more efficient use of the network. This includes the following proposed changes.

1. Refining the tariff structure for large LV commercial and HV commercial consumers by changing the anytime maximum demand charges to peak period demand charges.
2. Refining the residential and LV commercial peak demand tariffs which are the default tariffs for consumers whose premises are fitted with Type 4 meters.
3. Closing one of the off-peak tariffs to new LV commercial connections from 1 July 2019 as it currently sends a contradictory message to commercial customers about the commercial peak window (which currently coincides with the off-peak window in this controlled load tariff).
4. Simplifying the tariff structure by offering one version of each tariff from 1July 2019, rather than the current approach of offering two versions (one with a metering capital charge applied to the access charge and another without it applied). Metering charges will be added separately when customers are billed, depending on the circumstances of each customer.

Attachment 17 (Proposed Tariff Structure Statement) discusses Evoenergy's TSS in further detail.

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[31] Australian Energy Regulator, Final Decision, Tariff Structure Statement, ActewAGL, February 2017.

[32] AEMC, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015, 26 November 2015.

13. Confidential information

The information contained in this overview document and attachments is public information. However, where the benefit of publishing some confidential information may be outweighed by the potential harm, we have marked some of the information in this proposal as confidential. Our specific confidentiality request and claims, which are made in accordance with the AER's Confidentiality Guideline, are summarised in the Confidentiality Template (RIN appendix 12).

Appendix A – Relationship between Rule requirements and attachments

Subject area	Rule requirement	Constituent Decision	Overview section reference	Attachment reference
Overview paper	6.8.2(c1) 6.8.2(c1a)		Consumer overview 'Our 2019–24 Plan'	
Single distribution system	6.8.2(e)		2. About Evoenergy	
Separate regulation	6.8.2(f)		2. About Evoenergy	
Asset management and governance processes	6.5.7 6.5.6		2. About Evoenergy	Attachment 1 Asset management and governance
Consumer engagement	6.5.6(e)(5A) 6.5.7(e)(5A)		5.2 Consumer preferences and expectations	Attachment 2 Consumer engagement 17 Proposed Tariff Structure Statement
Demand for services	6.5.7 6.5.6		5.4 Demand forecasts	Attachment 3 Energy, customer numbers and peak demand forecasts
Classification proposal	6.8.2(c)(1)	6.12.1(1)	6 Classification proposal	Attachment 4 Classification proposal
Building block proposal	6.8.2(c)(2)		7 Building block proposal	
• **Proposed commencement and length of the regulatory control period**	S6.1.3(13)	6.12.1(2)(ii)	7 Building block proposal	
• **Key assumptions that underlie the expenditure forecasts and certification of the reasonableness of the key assumptions by the directors**	S6.1.1(4) – (5) S6.1.2(5) – (6)			RIN Appendix 3 – Key assumptions and certification
• **Forecast capital expenditure**	S6.1.1	6.12.1(3)	7.1 Forecast capital expenditure	Attachment 5 Capital expenditure Attachment 1 Asset management and governance
• **Determination of a contingent project**	S6.1.3(14)	6.12.1(4A)	7 Building block proposal	
• **Forecast operating expenditure**	S6.1.2	6.12.1(4)	7.2 Forecast operating expenditure	Attachment 6 Operating expenditure
• **Explanation of Interactions between the forecast capex and forecast opex programs**	S6.1.3(1)			Attachment 5 Capital expenditure Attachment 6 Operating expenditure

Subject area	Rule requirement	Constituent Decision	Overview section reference	Attachment reference
				Attachment 1 Asset management and governance
• **Calculation of the RAB for each year of the period**	S6.1.3(7)	6.12.1(6)	7.3 Regulatory asset base and depreciation	Attachment 7 Regulatory asset base
• **Calculation of the proposed return on equity, return on debt and allowed rate of return, for each regulatory year of the regulatory control period, including any departure from the methodologies set out in the Rate of Return Guidelines and the reasons for that departure;**	S6.1.3(9)	6.12.1(5)	7.4 Return on capital	Attachment 8 Rate of return, imputation credits and forecast inflation
• **Formula proposed to be applied in accordance with clause 6.5.2(l) if the return on debt is to be determined using the methodology referred to in clause 6.5.2(i)(2)**	S6.1.3(9A)	6.12.1(5A)	7.4 Return on capital	Attachment 8 Rate of return, imputation credits and forecast inflation
• **Estimate of the cost of corporate income tax for each regulatory year of the regulatory control period**	S6.1.3(11)	6.12.1(7)	7.5 Corporate income tax	Attachment 9 Corporate income tax
• **Proposed value of imputation credits as referred to in clause 6.5.3**	S6.1.3(9B)	6.12.1(5B)	7.5 Corporate income tax	Attachment 8 Rate of return, imputation credits and forecast inflation
• **Depreciation schedules nominated for the purposes of clause 6.5.5**	S6.1.3(12)	6.12.1(8)	7.3 Regulatory asset base and depreciation	Attachment 7 Regulatory asset base
• **Revenues for the purposes of the control mechanism including X-factors and demonstration**	S6.1.3(6) 6.26 [for DFA]	6.12.1(2)(i) 6.12.1(11) 6.12.1(13)	7.8 Revenue requirement and bill impacts	Attachment 12 Annual revenue requirement Attachment 11 Control mechanisms
• **Application of incentive schemes**	S6.1.3(3) S6.1.3(3A) S6.1.3(4) S6.1.3(5)	6.12.1(9)	7.6 Incentive schemes	Attachment 10 Incentive schemes
• **Recovery of jurisdictional scheme amounts for each regulatory year of the regulatory control period**		6.12.1(20)		Attachment 11 Control mechanisms
• **Recovery of designated pricing proposal charges for each regulatory year of the regulatory control period**		6.12.1(19)		Attachment 11 Control mechanisms

Subject area	Rule requirement	Constituent Decision	Overview section reference	Attachment reference
• **PTRM completed to show its application to the DNSP and the completed RFM**	S6.1.3(10)			Modelling appendix
• **Proposal as to events that should be defined as pass through events under clause 6.6.1(a1)(5)**	6.5.10	6.12.1(14)	8. Pass through events	Attachment 13 Pass through events
Application of control mechanism for alternative control services	6.8.2(c)(3)	6.12.1(12) 6.12.1(13)	9. Alternative Control Services	Attachment 14 Alternative Control Services
Proposed negotiating framework Negotiated Services and negotiated distribution service criteria	6.8.2(c)(5)	6.12.1(15) 6.12.1(16)	10. Negotiating framework for Negotiated Services	Attachment 15 Arrangements for negotiation
Proposed connection policy	6.8.2(c)(5A)	6.12.1(21)	11. Connection policy	Attachment 16. Connection policy
Information required by Expenditure Forecast Assessment Guidelines	6.8.2(c2)			Attachment 5 Capital expenditure Attachment 6 Operating expenditure
Information required by a regulatory information instrument	6.8.2(d) 6.3.1(c)(2)			RIN appendixes
Proposed Tariff Structure Statement	6.8.2(d1) 6.8.2(d2) 6.18.1A		12. Tariff Structure Statement	Attachment 17 Proposed Tariff Structure Statement
TSS compliance with pricing principles	6.8.2(c)(7)	6.12.1(14A)		Attachment 17. Proposed Tariff Structure Statement
Policies and procedures for assigning retail customers to tariff classes, or reassigning retail customers from one tariff class to another		6.12.1(17)		Attachment 17 Proposed Tariff Structure Statement
Proposed pricing methodology for transmission standard control services	6.26	6.12.1(17A)		Attachment 11 Control mechanisms
Whether depreciation for establishing the regulatory asset base as at the commencement of the following regulatory control period is to be based on actual or forecast capital expenditure	S6.2.2B	6.12.1(18)		Attachment 7 Regulatory asset base
Shared assets	6.4.4 Shared asset guidelines			Attachment 12 Annual revenue requirement
Confidential information	6.8.2(c)(6) Confidentiality guideline		13 Confidential information	RIN appendix 12 - Confidentiality template

Shortened forms

Term	Meaning
ACS	Alternative Control Services
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CESS	Capital Expenditure Sharing Scheme
CGS	Commonwealth Government Securities
CPI	Consumer Price Index
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DER	distributed energy resources
DMIA	Demand Management Innovation Allowance
DMIS	Demand Management Incentive Scheme
DNSP	Distribution Network Service Provider
EBSS	Efficiency Benefit Sharing Scheme
ENA	Energy Networks Australia
GW	gigawatt
HV	high voltage
ICRC	Independent Competition and Regulatory Commission
km	kilometre
kV	kilovolt
LV	low voltage
MEFM	Monash Electricity Forecasting Model
MRP	market risk premium
MWh	megawatt hour
NEM	National Energy Market
NSW	New South Wales
NUOS	network use of system
opex	operating expenditure
PTRM	post-tax revenue model
PV	photovoltaics
RAB	regulatory asset base
repex	renewals expenditure

Term	Meaning
RFM	roll-forward model
RIN	Regulatory Information Notice
Rules	National Electricity Rules
SCS	Standard Control Services
SL-CAPM	Sharpe-Lintner capital asset pricing model
STPIS	Service Target Performance Incentive Scheme
TAB	tax asset base
TOU	time of use
TSS	Tariff Structure Statement
WACC	weighted average cost of capital