



2016–2020 Price Reset

Appendix D Expenditure factors and criteria

April 2015

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Table of Contents

1	BACKGROUND	3
2	THE AER’S DECISION MAKING FRAMEWORK.....	3
2.1	The Rules framework.....	4
2.2	Objectives of the regulatory framework	5
2.3	Principles of assessment.....	6
3	THE EXPENDITURE OBJECTIVES	7
3.1	Interpreting the expenditure objectives	7
3.2	Functions provided by us.....	10
3.3	Meeting the capital expenditure objectives.....	10
3.4	Meeting the operating expenditure objectives.....	12
4	THE EXPENDITURE CRITERIA AND FACTORS.....	13
4.1	Interpreting the expenditure criteria and factors	13
4.2	Expenditure criteria	13
4.3	Expenditure factors	14
5	OVERALL DESCRIPTION OF CAPITAL EXPENDITURE	19

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

1 Background

The *National Electricity Rules (Rules)* require the Australian Energy Regulator (**AER**) to make a decision as to whether to accept, reject or substitute the Business' forecast capital and operating expenditure for standard control services. To enable the AER to make its decision, our regulatory proposal must include the total forecast expenditure for the 2016-2020 regulatory control period which is considered necessary to meet the capital and operating expenditure objectives.

The forecast expenditure must also comply with the requirements of any relevant Regulatory Information Notice (**RIN**). On 2 February 2015, the AER issued a RIN for our 2016-2020 price reset where it sought information on:

- why the total forecast capital and operating expenditure is required for the Business to achieve each of the objectives in clauses 6.5.6 (a) and 6.5.7(a) of the Rules;
- how the Business' total forecast capital and operating expenditure reasonably reflects each of the criteria in clauses 6.5.6(c) and 6.5.7(c) of the Rules;
- how the Business' total forecast capital and operating expenditure accounts for the factors in clauses 6.5.6(e) and 6.5.7(e) of the Rules; and
- a description of each category of capital expenditure including key drivers and how categories of expenditure can be distinguished.

The purpose of appendix D is to provide evidence on why we consider our forecast expenditure should be accepted by the AER with reference to the objectives, criteria and factors as set out in the Rules. In preparing appendix D, we have also sought to address the relevant RIN requirements including the key drivers of capital expenditure and how it can be distinguished between categories.

This appendix consists of four sections:

- an outline of the AER's decision making framework;
- how we consider the total expenditure forecasts are required to achieve the expenditure objectives under clause 6.5.6(a) and 6.5.7(a) of the Rules;
- how we consider the total expenditure forecasts reasonably reflect each of the expenditure criteria have regard to the expenditure factors; and
- a description of the capital expenditure category key drivers and how the categories can be distinguished.

2 The AER's decision making framework

The Rules require the AER to make a number of constituent decisions as part of its distribution determination. Clauses 6.12.1(3) and 6.12.1(4) relate to the AER's decisions in relation to forecast expenditure. The AER either:

- acting in accordance with clauses 6.5.6(c) and 6.5.7(c), accepts the total of the forecast expenditure for the regulatory control period that is included in the regulatory proposal; or
- acting in accordance with clauses 6.5.6(d) and 6.5.7(d), does not accept the total of the forecast expenditure for the regulatory control period that is included in the regulatory proposal, in which case the AER must set out its reasons for that decision and an estimate of the total of our required expenditure for the regulatory control period that the AER is satisfied reasonably reflects the expenditure criteria, taking into account the expenditure factors.

Powercor

2016–2020 Price Reset

Expenditure factors and criteria

In making its decision, the AER is guided by the objectives, criteria and factors in the Rules. In doing so, it must also consider the overall principles of assessment that have been described by the Rule maker, the Australian Energy Market Commission (**AEMC**), in recent Rule determinations. Each of these areas is discussed below.

2.1 The Rules framework

The Rules require us to propose total forecast expenditure that we consider is necessary to deliver the outcomes that are set out in the Rules. These outcomes are specified in clauses 6.5.6(a) and 6.5.7(a) of the Rules and are termed the expenditure objectives.

Clauses 6.5.6(a) and 6.5.7(a) require us to include in our regulatory proposal the total forecast expenditure for the 2016-2020 regulatory control period which we consider is required to achieve each of the expenditure objectives. These objectives are:

- meet or manage the expected demand for standard control services over that period (**Objective 1**);
- comply with all applicable regulatory obligations or requirements associated with the provision of standard control services (**Objective 2**);
- to the extent that there is no applicable regulatory obligation or requirement in relation to (**Objective 3**):
 - the quality, reliability or security of supply of standard control services; or
 - the reliability or security of the distribution system through the supply of standard control services,to the relevant extent:
 - maintain the quality, reliability and security of supply of standard control services; and
 - maintain the reliability and security of the distribution system through the supply of standard control services; and
- maintain the safety of the distribution system through the supply of standard control services (**Objective 4**).

The AER is required to make a decision on the total forecast expenditure proposed by us. The Rules provide that the AER must accept the forecast expenditure included in our regulatory proposal if it is satisfied the proposed total forecast expenditure reasonably reflects the expenditure criteria. These expenditure criteria are:

- the efficient costs of achieving the capital (operating) expenditure objectives;
- the costs that a prudent operator would require to achieve the capital (operating) expenditure objectives; and
- a realistic expectation of the demand forecast and cost inputs required to achieve the capital (operating) expenditure objectives.

In deciding whether the AER is satisfied our proposed total forecast expenditure reasonably reflects each of the expenditure criteria, the AER must have regard to the expenditure factors which are:

- the most recent annual benchmarking report that has been published under rule 6.27 and the benchmark operating expenditure that would be incurred by an efficient Distribution Network Service Provider (**DNSP**) over the relevant regulatory control period;

Powercor

2016–2020 Price Reset

Expenditure factors and criteria

- the actual and expected capital (operating) expenditure of the DNSP during any preceding regulatory control periods;
- the extent to which the capital (operating) expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the DNSP in the course of its engagement with electricity consumers;
- the relative prices of operating and capital inputs;
- the substitution possibilities between operating and capital expenditure;
- whether the capital (operating) expenditure forecast is consistent with any incentive scheme or schemes that apply to the DNSP under clauses 6.5.8A (6.5.8) or 6.6.2 to 6.6.4;
- the extent the capital (operating) expenditure forecast is referable to arrangements with a person other than the DNSP that, in the opinion of the AER, does not reflect arm's length terms;
- whether the capital (operating) expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b);
- the extent the DNSP has considered, and made provision for, efficient and prudent non-network alternatives;
- any relevant final project assessment report (as defined in clause 5.10.2) published under clause 5.17.4(o), (p) or (s); and
- any other factor the AER considers relevant and which the AER has notified the DNSP in writing, prior to the submission of its revised regulatory proposal under clause 6.10.3, is an expenditure factor.

2.2 Objectives of the regulatory framework

The consultations undertaken by the AEMC in the National Electricity Market (**NEM**) provide an understanding of the overall objective of the Rules governing the AER's assessment of expenditure forecasts. When developing the 2006 Rules for transmission, the AEMC noted that its review was guided by the NEM objective in Section 7 of the *National Electricity Law* (**NEL**). The AEMC noted that:

The Commission's Review has been guided by the NEM objective of promoting an efficient, reliable and safe electricity system.

The Australian Competition Tribunal (**ACT**) emphasised the economic objective underlying the regulatory framework. The ACT considered that the Revenue and Pricing Principles in the NEL provide further guidance on the objective:

The national electricity objective provides the overarching economic objective for regulation under the NEL: the promotion of efficient investment and efficient operation and use of, electricity services for the long term interests of consumers. Consumers will benefit in the long run if resources are used efficiently, that is if resources are allocated to the delivery of goods and services in accordance with consumer preferences at least cost. As reflected in the revenue and pricing principles, this in turn requires prices to reflect the long run cost of supply and to support efficient investment, providing investors with a return which covers the opportunity cost of capital required to deliver the services.

In undertaking consultations, the AEMC has published determinations which provide further guidance on the objective of the assessment of expenditure forecasts.

Powercor

2016–2020 Price Reset

Expenditure factors and criteria

In developing the decision criteria for expenditure forecasts the Commission sought to ensure that the assessment of forecasts encourages efficiency through least cost operations and timely and prudent investment in capital.¹

Based on these views, the overall objective of the Rules governing the AER's decision on expenditure forecasts is to ensure that forecast expenditure is set at a level that will achieve a reliable and safe supply of standard control services at an efficient cost in the long term.

2.3 Principles of assessment

As part of a 2012 Rule change², the AEMC provided further clarification of the process that the AER should follow when making its decision on expenditure forecasts. The AEMC emphasised the following key principles that should underlie the assessment process:

- the assessment process must start with the regulatory proposal - the regulatory proposal is necessarily the procedural starting point for the AER to determine an expenditure allowance. The DNSP has the most experience in how a network should be run, as well as holding all of the data on past performance of its network, and is therefore in the best position to make judgments about what expenditure will be required in the future. Indeed, the DNSP's regulatory proposal will in most cases be the most significant input into the AER's decision;
- the AER must accept a proposal that is 'reasonable' - the criteria require that the AER must accept a proposal if it is reasonable. The AEMC noted that the AER is not 'at large' in being able to reject the DNSP's proposal and replace it with its own. The obligation to accept a reasonable regulatory proposal reflects the obligation that all public decision makers have to base their decisions on sound reasoning with all relevant information required to be taken into account;
- consider the probative value of materials - to the extent the AER places probative value on the DNSP's regulatory proposal, which is likely given the DNSP's knowledge of its own network, then the AER should justify its conclusions by reference to it, in the same way it should regarding any other submission of probative value;
- the AER's assessment techniques in making its analysis are not limited - the DNSP's regulatory proposal will, in most cases, be the most significant input into the AER's decision. Importantly, though, it should be only one of a number of inputs. Other stakeholders may also be able to provide relevant information, as will any consultants engaged by the AER. In addition, the AER can conduct its own analysis, including using objective evidence drawn from history, and the performance and experience of comparable DNSPs. The techniques the AER may use to conduct this analysis are not limited, and in particular are not confined to the approach taken by the DNSP in its regulatory proposal; and
- the test of 'reasonable' must equally apply to the substitute amount - while the AER must form a view as to whether a DNSP's proposal is reasonable, this is not a separate exercise from determining an appropriate substitute in the event the AER decides the regulatory proposal is not reasonable. Both the consideration of 'reasonable' and the determination of the substitute must be in respect of the total for each of capital and operating expenditure. The AER, whenever it determines a substitute for a DNSP's regulatory proposal, is not constrained by the expenditure criteria from choosing the best substitute it can determine.

¹ AEMC, Rule determination: National Electricity Amendment (Economic regulation of transmission services) Rule 2006, number 18, 16 November 2006, p43.

² See discussion in AEMC, Draft Determination: Economic Regulation of Network Service providers, Rule 2012, 23 August, p102-104.

Powercor

2016–2020 Price Reset

Expenditure factors and criteria

The AEMC's considerations demonstrate that the regime requires the AER to contemplate the material put before it by us, and assess the probative value of this information relative to other material such as submissions and analysis undertaken by, or for, the AER. Based on this assessment of materials, the AER must accept the regulatory proposal if it is reasonable and of a sound basis. The AER's substitute value, if it is not satisfied with the regulatory proposal, must also be based on the same principles, once again with reference to the material before it. This has also been emphasised in decisions by the ACT in merits review when it concurred with statements made by DNSPs:

EnergyAustralia is correct to submit that it is not the AER's role to simply make a decision it considers best. It is also correct for it to say that the AER should be very slow to reject a DNSP's proposal backed by detailed, relevant independent expert advice because the AER, on an uninformed basis, takes a different view.³

3 The expenditure objectives

3.1 Interpreting the expenditure objectives

The Rules require our regulatory proposal to include the total forecast expenditure for the 2016-2020 regulatory control period which it considers is required in order to achieve the expenditure objectives. In seeking to demonstrate compliance with the expenditure objectives, we have been guided by:

- the AEMC's determinations on a Rule change on DNSP Expenditure Objectives that resulted in amendments to the expenditure objectives in 2013⁴; and
- discussion by the AER on its interpretation of the objectives that were in place prior to the 2013 determination.

The expenditure objectives were amended by the AEMC as part of its 2013 Rule change on Network Service Provider (**NSP**) expenditure objectives. In making its decision, the AEMC provided insight into how it considered the amended objectives should be interpreted by DNSPs when developing their regulatory proposals:

- expenditure objectives should be considered as a whole - the AEMC noted that when applied, the expenditure objectives should be considered as a whole and not in isolation. The AEMC considered this was relevant to the consideration of support costs. The AEMC did not agree that the Rule will lead to the AER automatically excluding consideration of support costs that are incurred necessarily in the delivery of specific objectives, such as IT and transport costs;
- regulatory obligations must be met - the AEMC noted that where there is a regulatory obligation or requirement associated with reliability, security, quality of supply or safety of regulated services, then the expenditure in the NSP's regulatory proposal for the relevant aspect of performance must be based on the regulatory obligation or requirement;
- must maintain performance, where no specified regulation in place - the AEMC considers that where there are no regulatory obligations or requirements in relation to reliability, security, quality or safety then the issue of how the existing objectives work together does not arise. This is because there is only one relevant objective for a particular aspect of performance which is covered by the existing expenditure objectives 3 and 4 relating to maintaining performance.

³ Australian Competition Tribunal, *Application by EnergyAustralia and others [2009] ACompT8*, 12 November 2009, paragraph 186.

⁴ AEMC, *Network Service Provider Expenditure Objectives, Rule Determination*, 19 September 2013, Sydney.

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

That is, in the absence of standards being set by the jurisdiction, the objective will be to maintain previous performance; and

- meeting safety is a broad concept - a broader definition of safety could include issues that are not directly related to the operation of transmission or distribution networks, i.e. public safety issues, and may include many such things as substation fencing; power line to ground clearances; environment issues such as the management of transformer oil leaks and audible noise abatement; and occupational health and safety (OHS) issues.

The AER has interpreted the expenditure objectives in recent determinations. In its recent decision for Aurora⁵, the AER set out an interpretation for each of the objectives. These interpretations are detailed in Table 1:

Table 1 Interpretation of expenditure objectives

Expenditure objective	AER interpretation
Meet or manage the expected demand for standard control services over that period	<p>The network must be able to deliver electricity to its customers, and must build, operate and maintain its network to manage expected changes in the demand for electricity. A DNSP therefore requires demand driven capex and opex so that its network can deliver a reliable supply of electricity when:</p> <ul style="list-style-type: none"> • the demand for electricity is at its peak. In this respect the AER was also clear that demand management expenditure was related to this objective; • new customers connect to the network; and • the overall consumption of electricity increases.
Comply with all applicable regulatory obligations or requirements associated with the provision of standard control services	<p>DNSPs operating in the NEM must comply with a number of statutory obligations at the national and state level including:</p> <ul style="list-style-type: none"> • jurisdictional licence compliance; • the requirements of the NEL and NER; • safety legislation; • electricity supply industry legislation and guidelines; • all relevant state and federal environmental, planning and cultural heritage legislation; and • all statutory workplace health and safety requirements.
Maintain the quality, reliability and security of supply standard control services	<p>A DNSP’s network must supply reliable and secure electricity. As the network ages, or demand for electricity increases, a DNSP may not be able to deliver electricity distribution services as required by the NER unless the DNSP appropriately maintains its network. Many of the requirements in this objective overlap with regulatory obligations applying to a DNSP. For example, a DNSP may be subject to power quality and reliability requirements under electricity supply industry legislation.</p>

⁵ AER, *Final Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17*, April 2012, pp 10-18.

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Expenditure objective	AER interpretation
	The AER notes that a DNSP’s proposal on STPIS is heavily related to this objective.
Maintaining reliability, safety and security of the system	<p>A distribution system must also be reliable, safe and secure. Elements of this objective overlap with the requirement to maintain quality, reliability and security of supply. But in particular, this objective is to ensure a DNSP’s network does not pose safety risks to either its personnel or the public. Many of the requirements in this objective therefore overlap with regulatory obligations. Among other things, network reliability, safety and security may be affected by:</p> <ul style="list-style-type: none"> • older or poorer condition assets; • unsafe assets; and • environmental factors.

Source: Powercor

In summary, we have interpreted the discussion above to mean:

- expenditure objectives should be considered as a whole, rather than in isolation. In particular, support expenditure in IT, property and fleet are vital for ensuring we can meet our objectives;
- where there are reliability, quality, security or safety standards in place, we must ensure that forecast expenditure is directed at meeting those standards for each year of the regulatory control period;
- where there are no standards in place for reliability, quality, security or safety, we must ensure that the forecast expenditure is to maintain performance; and
- safety is a broad concept and includes safety of the workforce, general public and the environment.

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

3.2 Functions provided by us

To meet the expenditure objectives, we require various processes, capabilities and systems to undertake various activities to produce the required outcomes. These systems, capabilities and activities include:

- network systems and assets to meet/manage the expected demand for standard control services;
- capabilities and systems to monitor the quality, reliability and security of supply of standard control services;
- capabilities, personnel and systems to identify business and system maintenance requirements and to carry out these maintenance requirements;
- capabilities, personnel and systems to identify and comply with all applicable regulatory obligations, including obligations that fall outside the NEL definition of regulatory obligations or requirements;
- capabilities, systems and personnel to manage customer inquiries, customer connections and customer interface including billing; and
- capabilities, systems and personnel to effectively carry out its role under the *Corporations Act 2001* including financial reporting, corporate governance and internal audit.

Therefore, the expenditure objectives effectively define the activities we need to undertake and specify the capabilities, systems and personnel that we require. Consequentially, achieving the expenditure objectives give rise to expenditure which is either capital or operating in nature.

3.3 Meeting the capital expenditure objectives

The purpose of this section is to demonstrate how our proposed forecast capital expenditure is required to achieve the capital expenditure objectives.

Our proposed forecast capital expenditure is based on a number of capital expenditure categories. It should be noted that:

- a single capital category may meet multiple capital expenditure objectives. For example, reliability and quality maintained expenditure is related to meeting regulatory obligations, maintaining reliability of the network, and maintaining safety;
- all capital expenditure categories are related to complying with regulatory obligations as a DNSP or *Corporations Act 2001* e.g. our policies, procedures and strategies deliver on the requirements set out in the *Victorian Electricity Distribution Code*; and
- support investment provides the necessary functions to achieve network objectives. For example, non-network property capital expenditure is required to ensure that the offices and depots are fit for purpose in housing our staff. Non-network investments also relate directly to complying with regulatory obligations (capital expenditure objective 2).

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Table 2 Capital expenditure objectives

Capital category	Capital expenditure objective
Augmentation	<p>Will enable us to augment our network in order to ensure we have sufficient capacity to avoid:</p> <ul style="list-style-type: none"> • asset utilisation rates exceeding the upper bounds of good engineering practice, in order to ensure the safety, reliability and security of supply of the distribution network; and • the need to increase the repair and maintenance of heavily loaded assets. <p>(Capital expenditure objectives 1, 2, 3 and 4)</p>
Connections and customer driven works	<p>Will enable us to meet customer demand for new and upgraded connection services. These forecasts will be influenced by economic conditions, development demographics, including major projects arising from mining, pipelines, generation and agricultural development.</p> <p>(Capital expenditure objectives 1, 2)</p>
Replacement	<p>Will enable us to maintain our network performance within acceptable risk levels, as well as replace assets that have failed. Reliability and quality maintained expenditure is necessary because, with time, network assets age and deteriorate and, if they are not replaced, they may fail or may operate at a sub-standard level. This may result in a reduced level of service reliability and quality.</p> <p>(Capital expenditure objectives 2, 3 and 4)</p> <p>Will enable us to be compliant with applicable environmental, electrical safety, regulatory and other Victorian and national legislation, in particular, the requirements of Energy Safe Victoria, the Victorian Environmental Protection Authority and Parks Victoria.</p> <p>(Capital expenditure objectives 2)</p>
Victorian Bushfires Royal Commission (VBRC)	<p>Will enable us to be compliant with applicable legislation and regulatory obligations, in particular the requirements of Energy Safe Victoria.</p> <p>(Capital expenditure objectives 2)</p>
Non-network capital expenditure: Supervisory cable and data acquisition (SCADA) and network control	<p>Will enable us to provide 24 hour monitoring and control of our zone substation and sub-transmission substation assets and other distribution assets (including feeders). This capital expenditure will strengthen network</p>

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Capital category	Capital expenditure objective
	<p>performance, improve data security, increase data visibility and provide more accurate and timely information to customers on fault rectification.</p> <p>(Capital expenditure objectives 1, 2, 3 and 4)</p>
<p>Non-network capital expenditure: IT and communications, motor vehicles, property and other</p>	<p>Will enable us to invest in information technology, motor vehicles, office furniture and property that, whilst not directly related to the distribution network, are essential to ensuring our distribution network, and its distribution services, meet relevant quality, reliability, safety and security of supply standards.</p> <p>(Capital expenditure objective 1, 2, 3 and 4)</p>

Source: Powercor

3.4 Meeting the operating expenditure objectives

The purpose of this section is to demonstrate how we believe the forecast operating expenditure is required in order to achieve the operating expenditure objectives.

We have included in our regulatory proposal a total forecast operating expenditure for the 2016-2020 regulatory control period that we consider is required to carry out the necessary activities so as to achieve each of the operating expenditure objectives listed in clause 6.5.6(a) of the Rules. This total forecast operating expenditure is made up of a number of cost categories. These cost categories represent the costs of undertaking a set of interrelated activities and to operate the various systems necessary to achieve each of the operating expenditure objectives.

We believe our operating expenditure forecast for the next regulatory control period will deliver the operating expenditure objectives because:

- we are currently meeting these objectives and our forecast operating expenditure has been developed using a ‘revealed cost’ approach by applying justified rate of change and step changes to the 2014 operating expenditure base year. This means that the forecast is based on our currently efficient operating expenditure, with necessary adjustments being made for the forecast rate of change, and changes to the scope of existing work;
- the nature of the activities that we will undertake through our operating expenditure program are targeted at specifically delivering the operating expenditure objectives. These activities are based on the practices that are currently being applied in the 2014 base year and will only change in the next regulatory control period in order to accommodate the forecast rate of change and changes to the scope of work;
- we have robust plans, policies, procedures and strategies to support the delivery of our operating expenditure program. These are based on those that are currently being applied in the 2014 base year and will only change in the next regulatory control period in order to accommodate the forecast rate of change and changes to the scope of work; and
- we are physically able to deliver the work for the operating expenditure program by acquiring and deploying necessary labour and materials. The operating expenditure forecasts will be delivered in a similar manner to that which is currently being applied in the 2014 base year, with

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

changes only being made in the next regulatory control period in order to accommodate the forecast rate of change and changes to the scope of work.

4 The expenditure criteria and factors

4.1 Interpreting the expenditure criteria and factors

The AER must accept our forecast of required expenditure if it is satisfied that the total of the forecast expenditure reasonably reflects each of the expenditure criteria. In making this decision on whether it is satisfied, it must have regard to the expenditure factors.

4.2 Expenditure criteria

We consider that our forecast capital and operating expenditure (in total and by capital or operating expenditure category) is consistent with the capital and operating expenditure criteria outlined in clause 6.5.6 (c) and 6.5.7(c) of the Rules, as it reflects:

- the efficient costs of achieving the capital and operating expenditure objectives;
- the costs that a prudent operator in our circumstances would require to achieve the capital and operating expenditure objectives; and
- a realistic expectation of the demand forecast and cost inputs required to achieve the capital and operating expenditure objectives.

We believe our capital and operating expenditure reflects the expenditure criteria because we have developed our forecasts by applying a prudent approach to developing our expenditure forecasts. This approach includes:

- having regard to historic expenditure levels. Chapters 9 and 10 of this regulatory proposal explain the variance between actual and forecast capital and operating expenditure, by expenditure category, between the current and next regulatory control periods;
- using, where relevant, forecasts of maximum demand, energy consumption and customer numbers, as discussed in Chapter 8 of this regulatory proposal;
- consideration of applicable regulatory requirements, in relevant sections of this regulatory proposal;
- applying the internal plans, policies, procedures and strategies that are listed and explained in RIN template 7.1, and are discussed for each expenditure category in chapters 9 to 10 of this regulatory proposal;
- application of the revised reliability targets in the next regulatory control period, consistent with Australian Energy Market Operator's (AEMO's) Value of Customer Reliability (VCR) study;
- application of the planning standards in the next regulatory control period that are explained in Chapter 9 of this regulatory proposal;
- drawing on relevant consultants' reports, which are listed in the attachments to this regulatory proposal. The application of these reports is discussed in chapters 9 and 10 of this regulatory proposal;
- applying the efficient unit costs and expenditure escalations discussed in Chapter 9 of this regulatory proposal;
- undertaking regulatory investment tests, where relevant; and

Powercor

2016–2020 Price Reset

Expenditure factors and criteria

- having regard, where relevant, to non-network alternatives.

When considering our expenditure forecasts, it is particularly important to recognise the circumstances under which we operate. Details of our operating environment are discussed in Chapter 4 of our regulatory proposal.

4.3 Expenditure factors

The capital and operating expenditure factors in clauses 6.5.6(e) and 6.5.7(e) of the Rules are the matters that the AER must have regard to in assessing whether forecast capital and operating expenditure forecasts reasonably reflect the capital and operating expenditure criteria in clauses 6.5.6(c) and 6.5.7(c) of the Rules. As discussed above, we consider that our capital and operating expenditure forecasts in this regulatory proposal (in total and by capital and operating expenditure category) fully reflect the capital and operating expenditure criteria.

Table 3 below describes how we believe we have meet each of the expenditure factors under clause 6.5.6(e) and 6.5.7(e).

Table 3 Meeting the expenditure factors

Capital expenditure factor	Expenditure objective
Clause 6.5.6(e)(4) and 6.5.7(e)(4) The most recent annual benchmarking report that has been published under rule 6.27 and the benchmark capital expenditure that would be incurred by an efficient Distribution Network Service Provider over the relevant regulatory control period	We have addressed our relative performance compared to the AER's <i>2014 Annual Benchmarking Report</i> in chapter 5 of our regulatory proposal.
Clause 6.5.6(e)(5) and 6.5.7(e)(5) The actual and expected capital (operating) expenditure of the Distribution Network Service provider during any preceding regulatory control period	Chapters 9 and 10 of our regulatory proposal details our actual and estimated capital and operating expenditure in the current regulatory control period. Chapters 9 and 10 of our regulatory proposal explain the variances between actual and forecast capital and operating expenditure by expenditure category, in the current and next regulatory control period.
Clause 6.5.6(e)(5A) and 6.5.7(e)(5A) The extent to which the capital (operating) expenditure forecasts includes expenditure to address the concerns of electricity consumers as identified by the Distribution Network Service provider in the course of its engagement with electricity consumers	Chapter 6 sets out our stakeholder engagement activities undertaken in the preparation of this regulatory proposal and how the outcomes of that consultation have been factored into the preparation of capital and operating expenditure forecasts.
Clause 6.5.6(e)(6) and 6.5.7(e)(6) The relative prices of operating and	We have not developed our operating expenditure forecasts by multiplying input costs and quantities. Rather we have prepared our operating expenditure forecasts

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Capital expenditure factor	Expenditure objective
capital inputs	<p>based on a ‘revealed costs’ methodology, which assumes that the nominated base year, 2014, is representative of our future costs. The unit costs inherent in the operating expenditure forecast are therefore based on those historically achieved in 2014. The profile of operating expenditure in the current regulatory control period supports the view that the unit costs underlying the forecast operating expenditure are efficient. This is discussed further in chapter 10.</p> <p>We note that the unit costs which underpin the capital expenditure forecasts have been developed on the basis of the current average costs of undertaking similar capital works in the current regulatory control period. Costs of program related capital works are recorded against specific function codes and are divided by the quantity of physical units of work undertaken. As a consequence, these unit costs represent an aggregation of materials and other costs, such as labour, that are required to complete the works. These rates do not include overheads or escalators that are separately applied.</p> <p>Chapter 7 of this regulatory proposal also provides information about the nature, and basis for, the labour, material, contractor and other cost escalators that have been applied in preparing the capital and operating expenditure forecasts. Expert consultants were engaged to forecast the real growth in the costs of each of these sub categories. The escalators determined by the expert consultants were directly applied in the development of the capital and operating expenditure forecasts.</p>
<p>Clause 6.5.6(e)(7) and 6.5.7(e)(7)</p> <p>The substitution possibilities between operating and capital expenditure</p>	<p>There are three aspects of capital and operating expenditure forecasts that present substitution possibilities, being:</p> <ul style="list-style-type: none"> • aging assets; • investment in new systems, processes, plant and equipment; and • purchase or lease of new equipment or facilities. <p>As assets age, their condition deteriorates and maintenance costs increase, as does their risk of failure. Furthermore, the failure of aged assets presents its own risks. We must evaluate whether it is more prudent and efficient to replace these assets, thereby incurring capital expenditure, or whether additional operating expenditure should be incurred to manage the risk associated with the</p>

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Capital expenditure factor	Expenditure objective
	<p>assets.</p> <p>We have undertaken an assessment of the age and condition of our electricity distribution network assets. On the basis of this assessment, we have developed capital and operating expenditure forecasts that represent the optimal mix of capital asset replacement, and enhanced condition monitoring, by which to balance costs and risks.</p> <p>As our commercial and operational requirements evolve, and newer technologies become available, we must evaluate whether it is prudent and efficient to invest capital expenditure in new systems, processes, plant and equipment, thereby reducing operating expenditure.</p> <p>We have adopted the general principle that capital and operating expenditure requirements for the primary purpose of seeking potential productivity improvements should not be included in its regulatory proposal.</p> <p>As requirements arise that necessitate the purchase or lease of new equipment, we must evaluate whether it is prudent and efficient to make a capital investment in the purchase of new equipment, or whether the option of leasing the new equipment (and thereby incurring higher operating expenditure) is more prudent and efficient.</p> <p>Our financial management processes require a financial evaluation (based on discounted cash flow analysis) to be performed whenever expenditure is proposed relating to the provision of standard control services, and there are competing options available with respect to financing. As a result of these analyses, we have determined to purchase the vast majority of our vehicles, heavy equipment, property, and IT assets. The exceptions where we have elected to lease equipment typically relate to short-term requirements, or where suitable purchase options are unavailable.</p> <p>Our plans, policies, procedures and strategies have regard for the interactions, and substitution possibilities, between our capital and operating expenditure programs and they are inherent in the efficient base year costs. Examples of these interactions and substitution possibilities include:</p> <ul style="list-style-type: none"> • the asset inspection program in the replacement capital expenditure forecast identifies whether defective assets need to be replaced by undertaking capital expenditure or alternatively whether they require condition based maintenance. Furthermore,

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Capital expenditure factor	Expenditure objective
	<p>replacing defective assets reduces the need for future maintenance as new assets are less likely to fail in service;</p> <ul style="list-style-type: none"> • augmentation capital expenditure results in the reinforcement of the distribution system and requires the newly installed assets to be operated and maintained in accordance with our asset management policies. If inadequate augmentation work is undertaken then existing assets are more likely to fail as demand grows, which may increase the need for emergency maintenance expenditure; and • non-network capital expenditure, such as on IT, SCADA and network control, motor vehicles, property and general equipment, are necessary enablers of the operating expenditure program and are needed to support the safe and efficient delivery of distribution services. Once they are purchased, motor vehicles and property require ongoing operating and maintenance costs.
<p>Clause 6.5.6(e)(8) and 6.5.7(e)(8)</p> <p>Whether the capital expenditure forecast is consistent with any incentive scheme or schemes that apply to the Distribution Network Service Provider under clause (6.5.8) 6.5.8A or 6.6.2 to 6.6.4</p>	<p>The proposed capital and operating expenditure forecasts are based on delivering network reliability and quality of supply, consistent with the consumer preferences identified through the AEMO VCR study. Thus, we consider it consistent with the Service Target Performance Incentive Scheme (STPIS).</p> <p>We note the AER has not proposed an embedded generation connection scheme or a small scale incentive scheme.</p> <p>The proposed capital and operating expenditure is consistent with the Capital Efficiency Sharing Scheme and Efficiency Benefits Sharing Scheme as proposed by the AER as the proposed expenditure in this regulatory proposal is efficient and prudent, as required by the expenditure criteria. Any additional unforeseen productivity or efficiency gains that potentially arise during the regulatory control period would therefore be shared with consumers in accordance with the properties of the incentive schemes.</p> <p>Under the Demand Management Incentive Scheme (DMIS) we are provided an allowance for investigating innovative technologies that have the potential to defer capital and/or operating expenditure. We have not identified any overlap between the DMIS allowance and our proposed capital or operating expenditure forecasts.</p>

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Capital expenditure factor	Expenditure objective
<p>Clause 6.5.7(e)(9)</p> <p>The extent the capital expenditure forecast is referable to arrangements with a person other than the Distribution Network Service Provider that, in the opinion of the AER, do not reflect arm’s length terms</p>	<p>We outsource some of our functions including:</p> <ul style="list-style-type: none"> • field services work-these are provided by Powercor Network Services under a <i>Network Services Agreement</i>; and • back-office services, which includes its corporate services, customer services, and IT support services-these are provided by CHED Services under a <i>Corporate Services Agreement</i>. <p>We engaged KPMG to establish the commercial benchmark for the margins applied in the <i>Network Services Agreement</i> and the <i>Corporate Services Agreement</i>. Based on the KPMG report, the margins applied are consistent with comparable market rates.</p> <p>The efficiency of our service provision model is also borne out in the actual efficient capital and operating expenditure performance of us over the period 2006-2014. Further details on our benchmarking performance are available in chapter 5.</p>
<p>Clause 6.5.7(e)(9A)</p> <p>Whether the capital expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b)</p>	<p>In preparing our regulatory proposal, we have identified some projects that would constitute a contingent project within the meaning of clause 6.6A.1(b) of the Rules. These are further discussed in chapter 14.</p>
<p>Clause 6.5.7(e)(10)</p> <p>The extent the Distribution Network Service Provider has considered, and made provision for, efficient and prudent non-network alternatives</p>	<p>We have not made an explicit provision in our capital expenditure forecasts for non-network alternatives, although we have had regard for non-network alternatives in the development of our capital expenditure forecasts.</p> <p>We have published our Demand Side Engagement Strategy which sets out our framework and processes for assessing non-network solutions to address a current or future constraint in the network.</p> <p>Consistent with this strategy, we will continue to examine the relative merits of network, and non-network, alternatives in making our expenditure decisions. Non-network alternatives will be pursued where they provide the best solution in the circumstances to address the identified need.</p>

Powercor
2016–2020 Price Reset
Expenditure factors and criteria

Capital expenditure factor	Expenditure objective
<p>Clause 6.5.7(e)(11)</p> <p>Any relevant final project assessment report (as defined in clause 5.10.2) published under clause 5.17.4(o), (p), or (s)</p>	<p>We have included, in the attachments to the regulatory proposal, all final project assessment reports completed at the time of preparation of this regulatory proposal.</p>
<p>Clause 6.5.7(e)(12)</p> <p>Any other factor the AER considers relevant and which the AER has notified the Distribution Network Service Provider in writing, prior to the submission of its revised regulatory proposal under clause 6.10.3 is a capital expenditure factor</p>	<p>The AER has not advised us of any further expenditure factors at the time of preparing this regulatory proposal.</p>

Source: Powercor

5 Overall description of capital expenditure

Paragraph 5.5 of the RIN requires an overall description of each category of forecast capital expenditure, including key drivers and how the different categories of expenditure are distinguished.

Our forecast capital expenditure for the 2016-2020 regulatory control period is the total of the forecast capital expenditure categories being: augmentation; connections and customer driven works; replacement; Victorian Bushfire Royal Commission as well as non-network expenditure including SCADA and network control; information technology and communications, motor vehicles, property, and other.

Chapter 9 of our regulatory proposal includes descriptions of the key drivers and distinguishing features of, each of the capital expenditure categories. Chapter 9 of our regulatory proposal also sets out the methodology for forecasting expenditure for each of the capital expenditure categories, including an explanation as to why the methodology used is appropriate.