

Advice on electricity regulation

Timely electricity connections

Advice from Dr Ron Ben-David, Chairperson, Essential Services Commission

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Advice on Electricity Regulation

This paper sets out my response to your request for advice on the effectiveness of economic regulation to achieve timely electricity connections to new residential property developments. My advice is based on input from a wide range of stakeholders, existing information and analysis undertaken by the Department of Treasury and Finance and the Victorian Planning Authority and expert economic and legal advice. My advice is summarised below.

Box 1: Summary

We have undertaken an extensive stakeholder engagement program to:

- understand the issues potentially causing delays to connecting new developments to electricity networks
- develop and confirm solutions

We found that the regulatory framework itself is not the main driver of delays to connect new developments to electricity networks. But its effectiveness can be improved through targeted measures. The other issues causing delays are varied and include:

- inadequate customer focus by the distribution businesses
- rapid growth in new lots constructed, and resource constraints across the sector
- quality of works
- inefficient auditing practices

We focused on developing solutions that are targeted at the issues and their underlying causes, and that can be implemented quickly to deliver improved outcomes for industry participants. These include measures to:

- improve times taken to connect new developments to the electricity networks
- clarify roles and responsibilities, and encourage better utilisation of existing regulatory processes
- improve communications and foster long term collaborative relationships between distribution businesses and developers

[Continued next page](#)

Box 1 Continued

All key stakeholders have a role in implementing the solutions identified. However, some stakeholders are better placed to lead the implementation of some solutions. We have allocated responsibility for leading the implementation of solutions accordingly. The solutions have been agreed in principle by the development industry.

I have asked the electricity distribution businesses to voluntarily agree to a Service Improvement Commitment (the Commitment). This seeks to deliver a range of initiatives designed to improve matters related to timely connections. All the distribution businesses have confirmed in writing to us that they will lead and support the actions outlined in the Commitment.

The ESC will lead a Governance committee that will oversee the initiatives to achieve timely electricity connections. We will hold the first meeting in late September or early October 2018.

1. Request for advice

In May 2018, you wrote to me and said:

I request your advice on the existing economic regulatory framework in Victoria (in particular, that administered by the Essential Services Commission) and whether the framework, or the way in which it is administered and enforced, could be enhanced to better support the Government's policy objectives for affordable housing. Your advice should have regard to the maintenance of existing safety standards.

I request your final advice by 18 September 2018.

Our analysis has addressed the matters raised in your letter.

1.1 Driver behind request for advice

The Victorian Government policy framework for affordable housing (*Homes for Victorians: Affordability, Access and Choice*) recognises the importance of continuing to secure a supply of affordable housing as the State's population grows.

The Government has been made aware by the housing and land development industries about delays by electricity distribution businesses (distribution businesses) in providing connections to new property developments. These delays potentially inhibit progress in achieving the government's affordable housing objectives.

Stakeholders have informed us that they are particularly concerned with delays to connecting new properties in greenfields developments within Melbourne's growth areas. As such our review has focused on understanding the causes of delay in these developments and identifying appropriate solutions to make connections timelier.

2. Some context

To assess the effectiveness of the regulatory regime, we needed to understand how it works – in theory and in practice – and where and why delays are occurring.

This section describes the Victorian distribution industry structure; where growth is occurring, an indicative cost of delays, the steps in the connection process; where delays are occurring; the regulatory framework; and how Victorian connection arrangements differ from those interstate.

2.1 Electricity distribution businesses

There are five electricity distribution businesses operating in Victoria. They are AusNet Services, Jemena and CitiPower/ Powercor/ United Energy. Each business supplies a unique geographic area:

- AusNet Services supplies the outer South Eastern suburbs of Melbourne and Eastern Victoria.
- Jemena supplies some inner Melbourne suburbs and some North Western suburbs.
- CitiPower supplies some inner Melbourne suburbs.
- Powercor supplies the Western suburbs of Melbourne and the Central and Western areas of Victoria.
- United Energy supplies the Southern suburbs of Melbourne and the Mornington Peninsula.

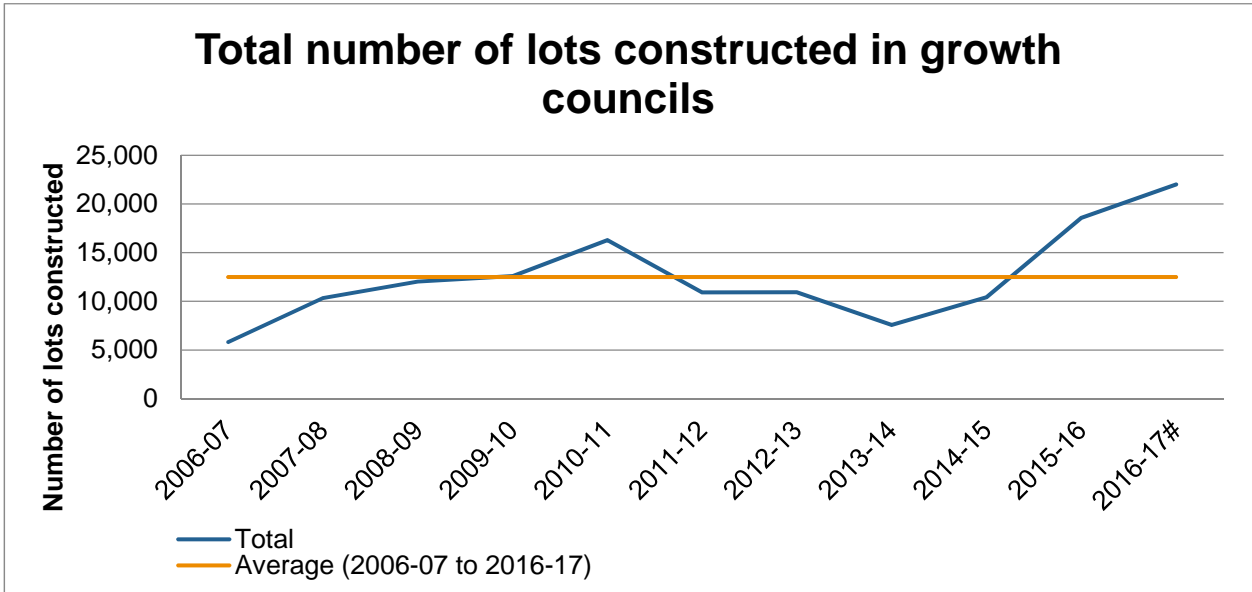
We have attached a map that shows where each distribution business operates in appendix A.

The distribution businesses own and operate powerlines used to connect customers to the electricity network. Their responsibilities include connecting new electricity customers to the network. They are also accountable under the National Electricity Rules for their network's reliability, safety and performance, and face financial consequences for any failures through various incentive schemes. Most greenfield housing development occurs in the Powercor, AusNet Services and Jemena distribution zones.

2.2 Increase in number of lots constructed in growth areas

Since the financial year 2015-16, there has been a significant increase in the number of new housing lots constructed across Melbourne's major growth area councils. Figure 1 below shows the dramatic increase in lots constructed (up to 22,000 in 2016-17) against the long term average of 12,500 lots constructed per year. Melbourne major growth area councils are: Cardinia Shire Council, City of Casey, City of Hume, Shire of Melton, City of Whittlesea and City of Wyndham.

Figure 1: Lots constructed in Melbourne's growth areas 2006-07 to 2016-17



Source: Urban Development Program. # this amount has been annualised by the Urban Development Program. This is because originally the 2016-17 figure covered the period July 2016- November 2017.

Table 1: Lots constructed per growth area council

Council	Distribution business	2013-14	2014-15	2015-16	2016-17 ^a
		No. lots constructed	No. lots constructed	No. lots constructed	No. lots constructed
Cardinia Shire Council	AusNet Services	776	1203	1604	2460
City of Casey	AusNet Services	2175	2258	4314	7940
City of Hume	AusNet Services /Jemena/Powercor	672	1714	3012	5181
Shire of Melton	Jemena/Powercor	890	997	2160	3431
City of Whittlesea	AusNet Services	1492	2085	2568	2852
City of Wyndham	Powercor	1564	2161	4909	7747

^a 2016-17 reflects a 17-month period July 2016 to November 2017 Source: Urban Development Program

Table 1 shows the Cities of Casey and Wyndham had the greatest numbers of new lots constructed over the past two years. AusNet Services provides services in the City of Casey and Powercor in the City of Wyndham.

2.3 The indicative cost of delays – a stakeholders perspective

One of our stakeholders gave an indicative cost of delays in getting new lots onto the market and sold, broken into two key areas:

- costs to the civil contractor, and
- costs to the developer.

Costs to the civil contractor include costs to run onsite amenities and maintain staff to oversight the project. For a typical 100 lot subdivision, the estimated cost was \$10,000 per week. Contractors also run the risk of liquidated damages which could be in the order of \$2,500 per week.

Generally the most significant costs developers face are costs to finance the development. This simple example shows the financing costs for a 100 lot development where the sale price for the land is \$300 000 per lot. A rule of thumb would be that 75 per cent of the lot price is the cost to

develop the lot. In our example that is \$240 000. If the finance rate is 8 per cent per year, then the financing costs would be:

\$240 000 x 8 per cent per year is equal to \$19 200 per lot per year or \$370 per lot per week. The financing costs for the 100 lot development would be \$37 000 per week.

The total cost of delaying the development for one week would be:

\$10 000 + \$2 500 + \$37 000 equals \$49 500

It is important to note that there may be other costs that are difficult to quantify including loss of productivity (for civil contractors) and costs to hold a sales and marketing team for the development over an extended period of time.

These costs have not been verified by the commission, but we acknowledge their materiality.

2.4 Electricity connections

Connecting and energising a home in a new subdivision involves many participants, occurs over several stages and can take about 18 months to 3 years from the time an initial enquiry to connect is made by a developer to an electricity distribution business. The connection process involves distribution businesses, developers, electrical designers, civil contractors, electrical cable installers, councils, builders, electricity retailers and the end use consumer.

We have identified eight stages in the process to connect and energise a new home.¹ Refer to table 2.

Table 2: Stages in the connections process

	Negotiated connection* – construction of assets to connect development to the existing network					Basic or standard connection ^a (lot level interactions)	
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Precinct Structure Plan and Planning Scheme	Service Master Plan (Network Scope Plan)	Network reticulation design	Construction management and delivery	Construction audit	Electrical 'tie-in'	Energisation, Builder temporary supply	Energisation, Customer connection via a retailer

^a Connections are defined under the National Electricity Legislation as negotiated, basic or standard.

¹ The Electricity Distribution Code V9 defines energisation as the act of the insertion of a fuse or the operation of switching equipment which results in there being a non-zero voltage beyond a point of supply.

A developer may make an initial enquiry to the distribution business to connect its development site once the precinct structure plan is approved and incorporated into the planning scheme.² The developer usually applies for a negotiated connection contract because connecting new subdivisions is bespoke in nature. The other key stages are:

- preparation of the service master plan (or network scope plan). These plans show how the new development connects to surrounding developments
- preparation of the network reticulation design. These plans show amongst other things how each lot is connected to the network and the clearances between the electrical infrastructure and other services
- construction of electrical infrastructure³
- construction audit. Once the construction audit passes a statement of compliance can be issued. When this happens titles for the newly constructed lots can be released, and
- electrical 'tie-in'. This stage involves connecting the newly constructed assets to the existing electrified network.

Energisation of the temporary electricity supply (stage 7) or the permanent supply (stage 8) is generally classified as a standard or basic connection (under the National Electricity Rules) because they are routine in nature and require little if any augmentation or extension of the existing network.

These stages are usually initiated by the builder so they can use power tools to build the new home. These connections are known as 'temp in perm' because they are temporary connections for the purpose of building the home but the connection is made from the service pit to meter which is in its permanent location. The final stage occurs when the home owner makes arrangements with their electricity retailer of choice for a permanent connection.

2.5 Where are the delays in the connections process?

Developers claimed that the greatest delays in the negotiated connections process occur at service master plan, construction audit and tie in stages (stages 2, 5 and 6 in figure 2). Builders noted delays in getting a temporary connection to the network. The Energy and Water Ombudsman of Victoria advised that there has been an increase in the number of retailer related connection delays associated with Power of Choice.

² Precinct Structure Plans (PSPs) are high level master plans for whole communities. PSPs layout roads, shopping centres, schools, parks, housing, employment, connections to transport and generally resolve the complex issues of biodiversity, cultural heritage, infrastructure provision and Council charges.

³ The physical connection is between a point on the existing network and the service pit outside the to be constructed lot.

Service Master Plan (stage2)

The service master plan is a plan that shows how the new development connects to the wider network. Preparing this plan is one of the first steps in connecting a new development to the network. AusNet Services and Jemena allow this work to be contestable.⁴ Powercor prepare these plans in-house. Stakeholders claim that Powercor can take up to 3 months longer to prepare these plans, then AusNet Services or Jemena.

Construction audit (stage 5)

Construction audits are one of the final steps in the negotiated connections process. One of the purposes of these audits is to ensure that the assets constructed by developers will not compromise the safety and integrity of the wider network (including services to existing customers) once they are handed over to the distribution businesses on an ongoing basis. After a successful final construction audit, a Statement of Compliance can be issued. Statement of Compliance is necessary to release land titles for the subdivision.

Electrical tie – in (stage 6)

Tie-in is the last step in the negotiated connections process. It occurs after Statement of Compliance is issued. Once the newly constructed assets are tied –in to the electrified network, electricity is able to be supplied to the lot. Developers have claimed that it can take a significant amount of time (up to six months) to get their development tied into the wider network.

Temporary connections in a permanent location (stage 7)

These connections are made so builders can use power tools to build new homes. Temporary connections occur before a permanent connection arrangement is made between the distribution business and the home owner. The Master Builders Association of Victoria explained that its members have experienced considerable delays in getting temporary connections in Gippsland and connection times in all areas have been declining over time and could improve.

Power of Choice

From December 2017, Power of Choice reforms were implemented by the Australian Energy Market Commission. These reforms provide opportunities for consumers to make informed choices about the way they use electricity. This means that older-style meters will be phased out and replaced by smart meters over time. Power of Choice is available in all states except Victoria. But because many retailers operate nationally, system changes to accommodate Power of Choice may

⁴ Contestable works are works that have been arranged and funded by the developer.

have affected the times taken to connect Victorian customers. We understand retailers are addressing these issues.

Overview

Our findings about the causes of delay are consistent with those of the Victorian Planning Authority in relation to where delays may occur in the negotiated connections process. We note there are differences in assertions and data regarding the length of delays at each step, as between developers, the Victorian Planning Authority and distribution businesses. The materiality of unnecessary delays (and distribution businesses ability to improve them) is now accepted by the distribution businesses. Hence we have not attempted to reconcile, the differences at this time.

2.6 Legal framework underpinning electricity connections

We engaged Allens Linklaters to undertake a detailed analysis of the legal framework underpinning electricity connections in Victoria.

In summary Allens Linklaters advised, that two regulatory frameworks apply to negotiated, basic and standard connections; these are the National electricity regulatory framework under the National Electricity Legislation (NEL) and the National Energy Rules (NER)⁵ and, the Victorian electricity regulatory framework established under the Electricity Industry Act (2000) and the Essential Services Commission Act (2001). Both frameworks are established under Victorian law and apply concurrently.⁶

Under Chapter 5A of the National Electricity Rules connections are classified as basic, standard or negotiated. One key difference between basic or standard connections and negotiated connections is that distribution businesses are obliged to publish Australian Energy Regulator (AER)-approved model standing offers for basic connections on their websites, and may elect to have model standing offers for standard connection services.⁷ Negotiated connections are more complex, non-standard, bespoke arrangements, with all terms and conditions negotiated directly between a developer and the distribution business, and captured in a negotiated connection agreement.

Under the Victorian electricity regulatory framework, electricity distribution licences are the primary mechanism used to regulate distribution businesses. Anyone supplying or selling electricity in Victoria must hold an electricity distribution licence granted by the commission, or be exempt from

⁵ The 'national' electricity framework is not enshrined in Commonwealth legislation. Rather, the NEL was initially passed in South Australia under the National Electricity (South Australia) Act 1996 (SA) and was then adopted in each of the participating states by their own legislation. Victoria has implemented Chapter 5A in Schedule 2 of National Electricity Victoria Act (2005).

⁶ National Electricity Victoria Act (2005), section 6.

⁷ Subject to the Australian Energy Regulator's approval.

the requirement to do so.⁸ We may grant distribution licences subject to any conditions we consider appropriate having regard to our objectives under the Electricity Industry Act (2000) and the Essential Services Commission Act (2001).⁹ Distribution licences are issued subject to compliance with a number of instruments including:

- Electricity Distribution Code, and
- Applicable guidelines, including:
 - Guideline 9: Electricity Industry - Regulatory Audits of Distribution and Retail Businesses
 - Guideline 14: Electricity Industry - Provision of services by electricity distributors.

The Electricity Distribution Code regulates (among other things) the supply of electricity by a distributor to its customers, and the connection of a customer's electrical installations to the distribution system.¹⁰

The review highlighted some areas of inconsistency, ambiguity and overlap across the State and National regulatory instruments.

2.7 How Victorian electricity connections differ from other jurisdictions

There are some differences in distribution sector structures, regulation and practices across jurisdictions.

Size and number of distribution businesses

Victoria has had a highly disaggregated distribution sector since the early 1990's, with five distributors covering relatively small geographic areas, and each developing its own arrangements for connection.¹¹ This compares with other states where one main distributor supplies all or most of the entire state, as in Queensland, South Australia and Tasmania; or New South Wales with its three large distributors. This means there is greater scope for commercial and technical divergence across distributors in Victoria than elsewhere. We note, however, that three distribution businesses Powercor, CitiPower and United Energy have the same owner, and are increasingly consolidating their management.

⁸ Electricity Industry Act (2000), section 16.

⁹ Electricity Industry Act (2000), sections 19–20.

¹⁰ Electricity Distribution Code V9, clause 1.1.

¹¹ Those arrangements now arise under the National Electricity Rules Chapter 5A framework, first introduced nationally in August 2012, and adopted in Victoria in 2015 with the *National Electricity (Victoria) Amendment Act 2015* (Vic).

Contestability in connection services

Regulatory frameworks differ in terms of competition allowed in connection services. In Victoria and other states, distribution businesses can make commercial decisions about which parts of their negotiated connection process can be done by third party contractors. In contrast, New South Wales (NSW) legislation¹² allows customers who are required to make a capital contribution to the cost of augmenting electricity networks to choose the service providers who will do the work. NSW has a regulated scheme for accreditation of relevant design and construction service providers.¹³

3. Consultation

I am confident that our proposed solutions are robust and supported by extensive and effective consultation. This consultative process has entailed rigorous testing with stakeholders of issues and their underlying causes, to arrive at targeted, effective and timely solutions.

3.1 Consultation approach

This advice is based on stakeholder feedback that was gathered throughout our engagement program. Our engagement program was run in three phases:

- gathering information
- understanding and testing the issues and developing potential solutions, and
- confirming solutions.

We adopted this approach to:

- give stakeholders multiple opportunities to be involved in the process and provide feedback
- continually build and refine our understanding of the issues, and possible solutions
- ensure the reasons for solutions were understood and accepted by stakeholders, and
- ensure solutions are owned by stakeholders.

During all phases we found stakeholders were willing to meet with us and conveyed a strong sense that the issues needed to be solved as a matter of urgency. Along the way we ensured stakeholders were well informed about the matters for discussion at workshops by giving participants material to read beforehand. We also issued participants with summaries of the workshops to show how their feedback was being used to influence solutions. The findings of the consultation are discussed later.

¹² *Electricity Supply Act 1995 (NSW)*

¹³ NSW Trade and Investment administers an accreditation scheme (established under the Electricity Supply (Safety and Network Management) Regulation 2014) whereby electrical contractors are accredited to offer contestable services.

3.2 Information gathering

From May until late July we met with 28 organisations to gain an understanding of the issues contributing toward delays. We met with the electricity distribution businesses, developers (and their peak bodies), housing industry peak bodies, electrical designers, civil contractors, electrical contractors, regulators and government agencies. A list of the organisations we met with is attached at appendix B.

At this stage we asked stakeholders a range of open ended questions to gain an understanding of:

- the processes involved in connecting a new development to electricity networks
- where the delays were
- what could be causing delays
- what the extent of the problem is and how long has it gone on for, and
- what are some things that can be done to address the issue.

We obtained rich and detailed (mainly qualitative) information from these meetings. However, we decided that some areas required further probing to sharpen our understanding of the issues. We then issued some follow-up questions to stakeholders. Eight organisations responded with additional information. All the information gathered at this stage formed the basis for discussions at the stakeholder workshop described below.

The Urban Development Institute of Australia (UDIA) also made a written submission outlining their concerns with the connections process along with some recommendations to address issues causing delays.

3.3 Understanding and testing the issues and developing potential solutions

We held a stakeholder workshop on 30 July 2018. Fifty nine people attended the workshop and all the key stakeholder groups were represented. A list of the organisations that attended the workshop is at appendix B.

The aims of the workshop were to:

- achieve a common understanding of the perceived issues, and their likely causes
- hear stakeholders' views on possible remedies, ideally ones that do not create unwarranted red tape, and
- agree a set of possible solutions that should be developed further.

Attendees were placed into three groups to explore different issues potentially causing delays to electricity connections. The groups were then asked to develop potential solutions to the issues. After the workshop, we provided all participants with a summary of the findings from the day including an overview of possible solutions that may require further development.

Stakeholders generally felt the workshop was a success and it enabled participants to hear other perspectives. This resulted in a range of possible practical solutions being developed.

Following the workshop, the UDIA met with us to clarify our position on matters raised in the workshop summary. Powercor also met with us to explain how they would progress the solutions developed at the workshop.

3.4 Confirming solutions

On 17 August, we held an industry workshop to confirm the feasibility of solutions proposed at the workshop on 30 July. The workshop was attended by 21 people. Attendees came from peak bodies (UDIA, HIA and Property Council of Australia), electrical and civil contracting firms, development companies, electrical and civil designers and the Victorian Planning Authority.

Before the workshop, we issued participants with a range of possible solutions. Participants reiterated their sense of importance and urgency for enduring changes to distribution businesses' approaches to connections. They generally supported the suite of solutions proposed, provided that the commission actively monitored progress, and was prepared to implement corrective regulatory measures if solutions failed. We provided all participants a summary of the workshop findings.

On 21 August, we met with the distribution businesses to discuss the contents of a *Service Improvement Commitment* (the Commitment). The Commitment reflected matters discussed and agreed with developers earlier. On the whole the distribution businesses agreed with the content of the Commitment subject to some minor drafting edits being made. A copy of the Commitment is provided at appendix E and is discussed below.

4. Issues and causes

This section examines the issues causing delays that were raised by stakeholders. Some issues may be directly related to delays, others more contribute to the difficulties and frustrations of operating in an already complex and challenging environment. To an extent some of the issues are interrelated. For example the rapid increase in lots constructed (to meet demand) affects the availability of resources and potentially the quality of works as developers (contractors) are under pressure to complete works as quickly as possible.

4.1 Incentives

Distribution businesses and developers have strong incentives to gain customers. However, distribution businesses need to consider not only new customers, but how connecting the new development will affect the services experienced by existing and new customers. Distribution businesses need to be confident that the assets built and handed over by developers are fit for purpose and do not compromise the reliability and safety of the network over the longer term.

Some distribution businesses may adopt a more cautious approach when auditing designs and construction work undertaken by developers.

Developers on the other hand have strong incentives to sell new lots as soon as possible to manage their cash flow.

Therefore, distribution businesses and developers may have similar incentives, but different time horizons. The distribution businesses need to consider the longer term performance of their networks and this may cause frustrations (or delays) for developers.

4.2 Inadequate customer focus

Some developers commented that the distribution businesses do not see developers (or builders) as customers:

- The distribution businesses were described as challenging to deal with. Developers noted it can be difficult for them or their contractors to contact someone in the distribution businesses to discuss issues related to their development. Related to this, often information from the distribution business is only provided to the developers' contractors, leaving developers being misinformed or uninformed about progress of their connections.
- Developers also observe that the distribution businesses do not have set timeframes to complete critical steps in the negotiated connections process and times taken to make temporary connections are too long.
- Developers were generally unaware of the regulatory framework underpinning negotiated, basic and standard connections. Further they were unaware of how they can influence the regulatory processes that affect them.
- Likewise, developers were unsure about the dispute resolution process available through the Australian Energy Regulator, or the process to raise persistent complaints.

4.3 Rapid growth in new lots constructed and resource constraints

Developers, builders and distribution businesses all commented that over the past two years there has been a rapid increase in the number of new lots constructed across Melbourne's growth areas. This has put a strain on the availability of suitably qualified people (on the distribution business *and* developer sides) to undertake work related to new connections. We have heard anecdotally, that this is compounded by more people (with appropriate skills) leaving the industry than those entering.

The coincidence of connection volumes increasing and resources decreasing has exposed tension points in the commercial and regulatory framework, and exacerbated delays in connecting new developments to electricity networks. Powercor indicated to us that over the past year the time on

average to complete design work (other than designs completed by Powercor) has increased by 12 weeks and construction work by 10 weeks.

4.4 Auditing practices

Developers claim that Powercor's and AusNet Service's final audit processes are inefficient. Of particular concern is Powercor's:

- 'walk off' policy
- reluctance to allow real time remediation of cosmetic defects, and
- time taken to re audit a site (after a failed audit)

Powercor have a 10 point audit system. Once an audit scores 10 points, the auditor does not continue with the audit. Particular frustration occurs when an audit scores 10 points because it finds minor defects that would not create safety concerns or could be remediated when the auditor is on site. Stakeholders also claim that Powercor prefers to use the same auditor to do a re-audit of the site. This also adds delays to the process as re audit is subject to the availability of the same auditor.

Stakeholders have raised concerns that AusNet Services only accredited one audit firm to do final construction audits on its behalf leading to unnecessary delays. There are concerns with audit quality, consistency and independence. Some stakeholders commented that if that firm isn't engaged to do the earlier lead-up audits, then it is less likely to pass the final audit.

4.5 Quality of work

Many stakeholders commented that the quality of civil work (including electrical infrastructure installation) has declined over the past few years. The decline has meant that audits are less likely to pass. A failed audit often requires some rework and re-auditing. This adds to delays in connecting the development. One of the reasons given for the decline in quality is that demand for land is so strong. Therefore, developers (contractors) are under pressure to complete work as quickly as possible so as to be able to sell the land and move to the next development. Concerns have also been raised about whether personnel working on the site have appropriate training and qualifications.

4.5 Technical standards

The design and installation of electrical infrastructure is done in accordance with technical standards. We found that there was general recognition across distribution businesses, developers and contractors that the way technical standards are managed could be improved. Some particular concerns raised by stakeholders were:

- some standards are ambiguous; this allows different interpretations of standards by distribution businesses, designers and auditors
- some standards are not readily accessible
- there are opportunities to harmonise some standards across distribution businesses, and
- sometimes there is poor communication of relevant standards or changes to standards.

4.7 Contestability

Stakeholders expressed concern that allowing distribution businesses to choose which steps in the connection process are, or are not, contestable is allowing monopoly behaviour and associated inefficiencies. Particular steps highlighted were design plans and approvals and audits, as part of negotiated connections.

In practice, Victorian distribution businesses can and do allow elements of the connections process to be contestable, that is, developers can appoint their own contractors to do the work. Practices vary across the distribution businesses, but design stages and construction stages are usually contestable.

Stakeholders commented that the main benefit of increasing the scope of work that could be made contestable is that it increases the pool of resources that are able to undertake the work. However, stakeholders also recognised that notwithstanding contestability, distribution businesses should retain the final say on acceptance of assets transferred at completion, to ensure network safety and reliability. Also, distribution businesses have clear incentives to design networks with appropriate consideration to optimal long term asset performance, and the long term interests of consumers.

4.8 Regulatory framework

Through our discussions with stakeholders and our consultant's review of the regulatory framework underpinning electricity connections we found that:

- developers and their contractors do not have a good understanding of the regulatory framework, and
- there may be some gaps, overlaps and inconsistencies in the regulatory framework.

We found that developers and contractors:

- lack a clear understanding of the distribution businesses' policies and practices, or how they can influence them, and

- do not fully understand or utilise existing rights and obligations under the current regulatory framework, for example:
 - developers do not utilise contractual and regulatory dispute resolution processes to arrive at a fair and reasonable allocation of risk as between developer and the distribution business (including in relation to avoidable distribution business delays)
 - developers and industry bodies do not participate actively in regulatory decisions that affect connections (notably, components of the AER's distribution 2021 price review)

The key connection-related regulatory processes are set out in appendix C.

Gaps, overlaps and inconsistencies

Our legal analysis found some issues that warrant further investigation and clarification. For example:

- Energy distribution licences state an offer to connect should be made within 20 days of receiving a connection services request yet Chapter 5A of the NER says the offer should be made 65 days (negotiated connection) or 10 days (basic or standard connection) after the full connection application is received.
- It is unclear whether the Electricity Distribution Code's definition of customer includes developers and builders requiring a temporary connection.
- It is unclear whether the Service Installation Rules' definition of a customer includes developers.¹⁴
- The Electricity Distribution Code provides minimum requirements in relation to the process of, and timeframes for, connection and energisation. Chapter 5A of the National Electricity Rules, on the other hand, does not provide specific timeframes, and instead requires distributors to use best endeavours and comply with the terms of its negotiated contract with customers when carrying out connection works.
- Guideline 14 (Vic) allows construction services to be contestable. Yet we know the distribution businesses also allow design services to be contestable.
- Guideline 14 (Vic) allows the distribution businesses to run a tender process for construction services. Yet we are aware the distribution businesses allow developers to appoint their own contractors.

¹⁴ These rules have been prepared by all 5 electricity distribution businesses operating in Victoria and apply to the supply and metering aspects of any connection to the Victorian electricity supply networks.

4.9 Public lighting

Stakeholders expressed concerns about inefficient and unclear processes and requirements, leading to unnecessary delays in public lighting approvals.

There are issues with accountability and sequencing. For example, stakeholders have advised that distribution businesses will only approve the electrical reticulation plans after councils approve public lighting plans, but that councils can require the distribution business approval first.

There are issues with timelines. Though we heard that it should only take councils approximately 2 hours to check some plans, internal council prioritisation practices can result in a lead time for approval of between 1 to 4 weeks. This then delays the approval of network reticulation plans.

We also heard from stakeholders that, although safety is the stated driver for public lighting processes, many process steps have nothing to do with safety. Stakeholders indicated that there may be room for greater flexibility in public lighting design, without compromising safety.

5. Conclusions

We have concluded that the regulatory framework is not the main driver of delays to connect new developments to electricity networks. In fact, it is important to add that stakeholders didn't raise concerns with the time taken by distribution businesses to respond to enquiries and applications and issue offers to connect. These components of the connections process are subject to regulated timeframes under Chapter 5A of the National Electricity Rules. While the economic regulatory framework is broadly effective, its effectiveness can certainly be improved through a number of targeted measures.

Issues such as lack of customer focus, auditing practices, standards management and contestability could be improved by regulatory oversight including as monitoring and reporting.

Other issues such as resource constraints and public lighting are also important, but are beyond the scope of economic regulation, and therefore best dealt with elsewhere.

We discuss our proposed way forward in the next section.

6. Solutions

Government has conveyed to us a sense of urgency to address these issues. As such we have focused on developing practical solutions that can be implemented relatively quickly first. Our approach has been outcome focused. We expect that the solutions proposed will achieve the following:

- improve times taken to connect new developments to the electricity networks
- clarify roles and responsibilities, and

- improve communications and foster long term collaborative relationships between distribution businesses and developers.

All key stakeholders play a role in implementing some of the solutions that have been identified. We have allocated solutions to the party best placed to lead implementation. The solutions developed have been agreed in principle by the development industry. Appendix D shows how different solutions have been allocated across stakeholders.

6.1 Service Improvement Commitment

I have asked the distribution businesses to voluntarily agree to a Service Improvement Commitment (the Commitment) that seeks to achieve the following:

- improving the customer service focus of distributors
- minimising avoidable delays in connecting greenfield developments to the existing distribution networks
- improving the way technical standards are managed
- improving the ways audits are performed
- promoting efficient competition in connection services (or component steps), and
- encouraging initiatives to increase resourcing related to new connections.

The Commitment includes performance reporting. Many stakeholders have commented that ongoing public reporting is necessary to keep the focus on improvement. The results of performance reporting will also inform potential areas for reform in our upcoming review of the Electricity Distribution Code. The Commitment is contained in appendix E.

AusNet Services, Jemena and CitiPower/ Powercor/ United Energy confirmed in writing to us that they will lead and support the actions outlined in the Commitment.

6.2 Regulatory support

The Commission has a role in leading the implementation of a number of solutions. These include:

- creating a portal on our website where developers (and their contractors) or distribution businesses can log the details of persistent complaints. This would not be a dispute resolution mechanism but a data gathering mechanism
- enhancing monitoring of temporary connection times
- reviewing Codes and Guidelines administered by the commission to ensure that they apply as intended to builders seeking temporary connections and developers seeking negotiated connections

- reviewing Codes and Guidelines administered by the commission to ensure that they are consistent:
 - with one another
 - the National Energy Legislation
 - current practices
- reviewing Guaranteed Service Level payment events to ensure that they are targeted and relevant
- working with the Australian Energy Regulator (AER) to create a ‘road map’ that shows what each regulators’ responsibilities. This will provide greater clarity to developers (and other stakeholders) regarding the complex framework of national and state regulatory instruments, and
- providing information to developers and builders on how they can participate in upcoming regulatory processes such as the Electricity Distribution Code review.

The Australian Energy Regulator (AER) has a role in encouraging developer participation in the current electricity distribution price review process, especially:

- service classifications: providing developers a once-in-5-year say on how each Victorian distribution business’s connections services are described, classified by the AER, and therefore priced for by distribution businesses for the period 2021-25
- distribution businesses’ connection policies. That set out amongst other the elements of the connections process that are contestable, and
- distribution businesses’ model standing offers for basic and standard connection services, that meet developer needs.

The AER may also consider including on its website an express reference to its dispute resolution process under Part G of Chapter 5A of the National Electricity Rules, by which a real estate developer can dispute the unfair terms and conditions of a negotiated connection contract.

6.3 Victorian Government support

We consider that the Victorian Planning Authority could be best placed to lead a review into streamlining public lighting approvals as a part of its *Streamlining for growth program*.¹⁵

The Victorian Government could facilitate its affordable housing and planning objectives, by supporting training initiatives that support adequate resourcing, and fostering better cross-agency

¹⁵ Victorian Planning Authority media release 10 August 2018: <https://vpa.vic.gov.au/streamlining-for-growth-making-it-quicker-and-easier-to-plan-for-jobs-and-homes/>

coordination. Our review suggests there is scope for improvements through the following measures:

- review **training processes** and funding to identify any impediments or opportunities to improve outcomes (such as training initiatives and subsidies for qualified contractors and auditors), and
- improve **cross agency co-ordination** (for example, in relation to public lighting, shared road and utility trenches, trees), to establish up-to-date efficient processes across government agencies and industry participants (local government, road agencies, utility service providers)

One distribution business suggested these initiatives for consideration:

- designer minimum qualifications, for example, an Advance Diploma in Electrical Engineering.
- contractor training programs, given that many contractor personnel on site are from a civil construction background and may not be knowledgeable of power industry standards and requirements. A training and competency program could be developed for installing electrical assets including conduits, pits and marker tape.
- industry reviews, to share feedback between industry associations, distribution businesses and training providers.

6.4 Development industry

As a key stakeholder in the connections process, we consider that the best outcomes for customers will be achieved if the development industry is actively involved in implementing the measures discussed above. This includes participating in:

- distribution business led committees designed to improve the connections processes
- the commission-led governance committee that will have oversight over the initiatives to achieve timely electricity connections
- relevant regulatory processes, for example the upcoming electricity businesses price review run by the Australian Energy Regulator or the commission's review of the Electricity Distribution Code, and
- providing information to the commission through the complaints register. Links will be on the distribution businesses' websites and on the commission's website

7. Governance arrangements

We will lead a Governance committee that will oversee the initiatives to achieve timely electricity connections. Its key objectives are:

- giving direction where necessary to achieve elements of the Service Improvement Commitment, and

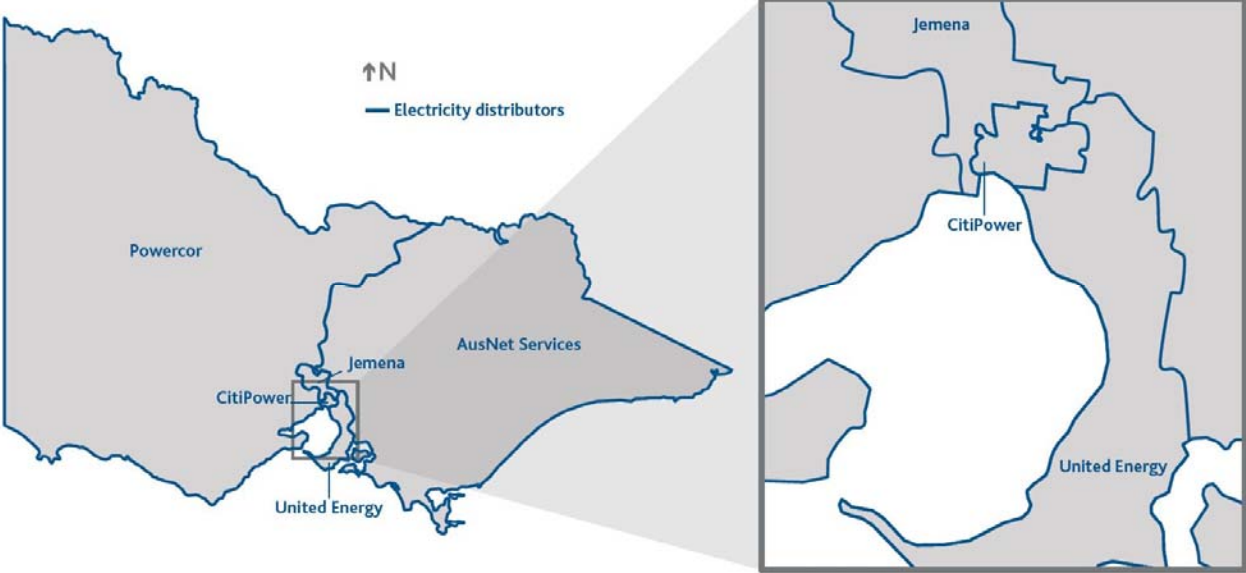
- reporting to government and stakeholders on progress toward achieving elements of the Service Improvement Commitment and actions assigned to other parties

We expect that one of the first matters for discussion will be the governance and reporting arrangements concerned with the Commitment.

We will issue a terms of reference for the committee ahead of the first meeting.

We will hold the first meeting in late September or early October 2018.

Appendix A: Distribution business supply areas



Appendix B: Engagement program

The listings below show the organisations we consulted with at each stage of the engagement program.

Information gathering

Association of Land Development Engineers	Plan B Group
AusNet Services	Power Plant
Australian Energy Regulator	Powercor/CitiPower/United Energy
Balcon Group	Property Council of Australia
Blue Frog Design	Red Tape Commissioner
Department of Environment, Land, Water & Planning	Satterley
Department of Treasury & Finance	Stockland
Energy Safe Victoria	Underground Cable Systems
Housing Industry Association	Urban Development Institute of Australia
Jemena	Victorian Electrical Distribution Networks
Master Builders Association of Victoria	Victorian Planning Authority
Maurice Stabb	Villawood Properties
Mirvac	Winslow Constructors
Newland Constructions	

Understanding and testing the issues and developing potential solutions

AusNet Services	Newland Constructions
Australian Energy Regulator	Plan B Group
Balcon Group	Powercor/CitiPower/United Energy
Beveridge Williams	Power Plant
Blue Frog Design	Property Council of Australia
Department of Environment, Land, Water & Planning	Stockland
Department of Treasury & Finance	Urban Development Institute of Australia
Energy Safe Victoria	Underground Cable Systems
Enso Homes	Urban Design & Management
Fraser Property	VicRoads
Housing Industry Association	Victorian Planning Authority
Jemena	Villawood Properties
Master Builders Association of Victoria	Whittlesea City Council
Maurice Stabb	Winslow Constructors

Confirming solutions

Association of Land Development Engineers	Powercor/CitiPower/United Energy
AusNet Services	Power Plant
Blue Frog Design	Property Council of Australia
Housing Industry Association	Urban Development Institute of Australia
Jemena	Underground Cable Systems
Maurice Stabb	Urban Design & Management
Newland Constructions	Villawood Properties
Plan B Group	Winslow Constructors

Appendix C: Existing connection-related Australian Energy Regulator (AER) regulatory processes

5 yearly electricity distribution price reviews

The Australian Energy Regulator (AER) will review all Victorian distribution businesses prices (and associated terms and conditions) for the period 2021-25 under Chapter 6 of the National Electricity Rules.

Each Victorian distribution businesses' review includes the following component decisions by the AER.

Service classification decision

There is an opportunity for stakeholders to have their once-in-5-year say on how each Victorian distribution business's connections services are described, classified by the AER, and therefore charged for by distribution businesses for the period from 2021-25.

Distribution services will be locked in through the AER's current consultation on an Electricity Distribution Services Classification Guideline, and with AER Framework and Approach Papers for each individual Victorian distribution business scheduled to be published as drafts in August, for final decisions in November 2018.

Developers could ask distributors (and the AER) for component steps in the negotiated connection process (e.g. audits) to be separately classified, to constrain potential monopoly pricing.

Connection policies for each distribution businesses

Each Victorian distribution business must submit its proposed connection policy to the AER for approval, as part of their regulatory proposals on 31 July 2019. These policies will set out the circumstances in which connection charges are payable and the basis for determining the amount of these charges, for the next 5 year regulatory period from 2021-25.

A connection policy may stipulate which services are to be contestable. Once approved by the AER, a connection policy is binding on the distributor.

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Connection policies for each distribution businesses (continued)

Current distribution business connection policies are available on each distribution business's website. There appears to be room for improvement, and the potential for increased focus by the AER in reviewing these policies. Developers (and/or the Urban Development Institute of Australia and/or the Property Council of Australia) could advocate for connection policies to address systemic issues across the industry, or for particular issues with an individual distribution businesses to be addressed.

Model standing offers for standard connection services

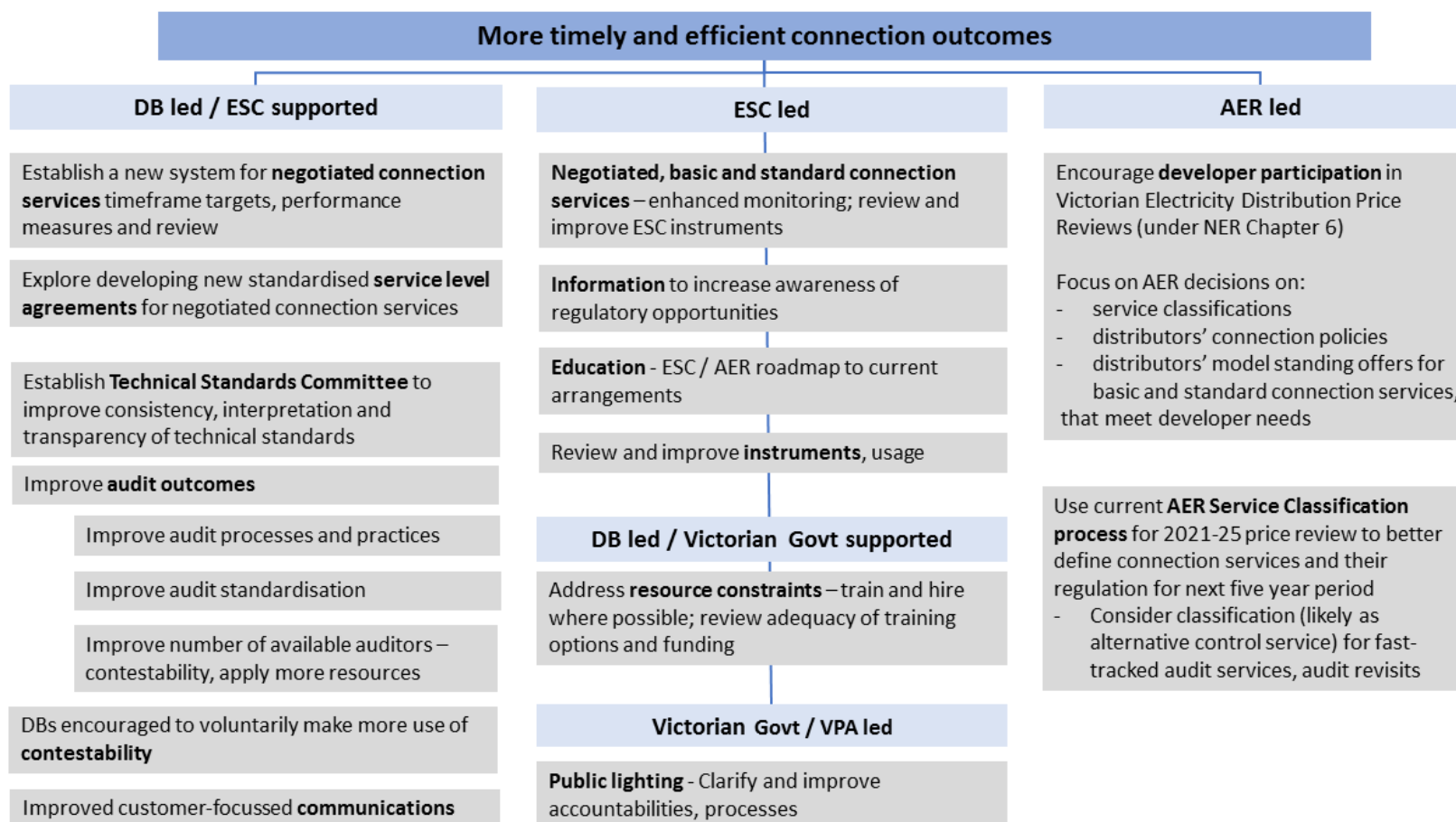
Each distribution business may elect to develop a model standing offers for a 'standard connection service' being a connection service (other than a basic connection service) for a particular class or sub-class of connection applicant (defined in the Rules to include real estate developers), for which a model standing offer has been approved by the AER.

Dispute resolution

Available in accordance with:

- a negotiated connection agreement that is in force for example explicit commercial and/or technical dispute resolution provisions may be negotiated by the developer and distribution business, and set out in the binding terms and conditions,
- a distribution business's dispute resolution process available at any stage in the connection process
- Part G of Chapter 5A of the NER, which allows a real estate developer to approach to AER to resolve a dispute in relation to the proposed or actual terms and conditions of a negotiated connection contract.

Appendix D: Solutions Map



This diagram shows the parties responsible for leading the implementation of different solutions.

Appendix E: Service Improvement Commitment

The table below highlights the outcomes being sought, and the nature of commitments from the distribution businesses to address each issue in detail. The commitments may vary across distribution businesses, depending on measures and practices already in place. The commitment should address how and when the distribution business will implement (or has already implemented) the proposed measures, and commit to regular reporting on progress to the Governance committee.

Table E1: Matters for inclusion in the service improvement commitment

Outcome sought	Commitment from distribution business
<p>1. Improving developers and contractors understanding of the distribution business' policies and practices, or how they can influence them.</p>	<p>Each distribution business will improve communications and customer focus by:</p> <ul style="list-style-type: none"> • ensuring website material is consistent with practices. • clearly explaining each party's roles and responsibilities under the regulatory framework. • identifying opportunities for stakeholders to participate in relevant regulatory decisions. (For example, Australian Energy Regulator connection service classification decisions for distributors and distributor connection policies) • developing ways to communicate in a "two way" manner with developers about progress and reasons for delays in connecting new developments to the electricity supply. <p>Establishing a consultative panel (committee) including developers to discuss and resolve matters related to electricity connections. This committee could be dissolved once confirmation is made that issues described above have been addressed.</p>

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Table E1 continued

Outcome sought	Commitment from distribution business
<p>2. Minimising avoidable delays in connecting greenfield developments to existing distribution networks.</p> <p>Related to this:</p> <ul style="list-style-type: none"> • making the processes and reasons for delays transparent • establishing a clear process for developers to raise persistent complaints, or for addressing them 	<p>Each distribution business will draw on existing processes, and any improvement initiatives already underway, and results of stakeholder engagement to undertake the following measures:</p> <ul style="list-style-type: none"> • setting target timeframes for specified stages of the negotiated connection process • developing meaningful KPIs for each timeframe target. For example 95% of a defined action to be completed within the target timeframe. <p>Publishing a regular performance report setting out:</p> <ul style="list-style-type: none"> • performance against the KPI • commentary on reasons if the KPIs are not met, and any corrective actions necessary. <p>The performance report will also include matters related to audit performance described under item 4.</p> <p>Presenting performance reports to stakeholders and engaging with them to identify areas of change or for improvement.</p> <p>Performance reports should be prepared every six months.</p> <p>Establishing an ongoing review cycle for updating targets and KPIs.</p> <p>Exploring the development of a service level agreement (SLA).</p> <ul style="list-style-type: none"> • The SLA should be developed in consultation with stakeholders. • The SLA should be referenced or incorporated in Victorian distributors' connection policies as part of the 2021-25 network price determinations.

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Table E1 continued

Outcome sought	Commitment from distribution business
<p>2. Minimising avoidable delays in connecting greenfield developments to existing distribution networks (continued).</p>	<p>Publishing the steps to escalate a complaint in relation to new connections on the distribution business’s website. This will include placing a link on the distributor’s website to a complaints register to be established by the Commission. The register will log complaints raised by stakeholders in relation to the connections process.</p>
<p>3. Improving how technical standards are managed and communicated. Including:</p> <ul style="list-style-type: none"> • making standards across distributors consistent allowing for justifiable differences. • ensuring consistent interpretation of standards by different distribution businesses and auditors • improving certainty and transparency about which standards are applicable • ensuring timely consultation about changes to standards or their implementation. 	<p>The distribution businesses will lead the development of a new Technical Standards Committee whose indicative membership will include: the distribution businesses, developers, councils, electrical designers, civil constructors, electrical cable installers, Energy Safe Victoria and the Victorian Planning Authority.</p> <p>Technical Standards Committee will be responsible for (but not limited to):</p> <ul style="list-style-type: none"> • harmonising standards where possible • providing a forum for raising issues and sharing information • issuing practice/policy guidance notes establishing principles to follow, identifying best practice or suggesting actions. <p>The Standards Committee will draw on practical experiences (including insights from the Victorian Planning Authority, and Commission reviews) to prioritise its work.</p> <p>The Standards Committee will invite the Commission to attend committee meetings as an observer.</p> <p>The Standard Committee may choose to base its structure and governance arrangements on an organisation like the Melbourne Retail Water Agencies</p>

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Table E1 continued

Outcome sought	Commitment from distribution business
<p>4. Review and improve audit process and practices. This includes ensuring:</p> <ul style="list-style-type: none"> • audit processes are efficient, transparent, fair, predictable, and protected from inappropriate influence. • appropriate pricing of audit services. 	<p>Each distribution business will develop a program to improve its audit process and practices. Some suggestions for improving the audit process including:</p> <ul style="list-style-type: none"> • finishing audits even if it would be a fail • maximising opportunities for real time remediation of defects • auditing interim milestones and providing feedback to developers so as they can fix any defects before the final audit • including times for audit and re-audits within a service level agreement (discussed above) • adopting common audit process across all distribution businesses • increasing the number of auditors available (potentially through contestability). <p>Each distribution business will publish an audit performance for feedback every six months. The report may include data on the number of audits undertaken, the number of audits passed or failed, the number of reaudits and the reasons audits fail. This report will form part of the performance report described under item 2.</p> <p>Each distribution business will seek appropriate service descriptions and classifications for audit services as part of the AER Service Classification process for the 2021-25 Victorian electricity distribution price review (for example ,each will consider 'fast-tracked audit services', and 'audit revisits', as possible alternative control services).</p>

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Table E1 continued

Outcome sought	Commitment from distribution business
<p>5. Promoting efficient competition in connection services (or component parts)</p>	<p>In the next six months each distribution business will review the contestability of components of their connection services.</p> <p>This will occur where contestability can deliver timeliness, cost savings and enhanced user experiences, without compromising distribution network reliability, safety and performance.</p> <p>Each distributor to use the AER Service Classification process at the beginning of each price review (NER Chapter 6) for the AER to seek appropriate service descriptions and service classifications to facilitate competition.</p> <p>Each distribution business will prepare a report on the matters discussed above under item 5. The report is due by 28 February 2019.</p>
<p>6. Resource constraints - increased number of developments and associated pressure on qualified industry resources</p>	<p>Each distribution business will prepare a report outlining its initiatives to increase resourcing related to new connections. The first report is due by 30 November 2018. Annual reports will then be prepared for the next 3 years.</p>