Principles for access

Developing principles for network connection

13 March 2024

Objective and process

- Sapere was asked to develop a set of principles the inform the development of an access regime for load connections as an amendment to Part 6.
- We interviewed 7 Charge Point Operators (CPOs) to understand the range of business models, as well as to develop a set of issues they faced in respect of access to the network.
- Based on these issues, and our own experience with Part 6 and wider network access arrangements, we developed a set of principles that should inform the development of distribution access arrangements for load connections.
- While the underlying issues are currently acute for CPOs, expect many of them are true of all load types.

EDB business context

- EDB experience to date with load connections has largely been one-off connections, or multiple connections (e.g., housing developments) which are relatively homogeneous.
- For the majority of these connections (especially 100A or greater):
  - The customer will have a fixed, pre-selected **location** in the network.
  - The **cost** of the customer's facility being connected will be an order of magnitude larger than the connection cost
  - The planning and construction **timeframes** for the customer's facility will be at least months, and possibly years
  - The customers will have relatively static **demand requirements**, in the medium term.
- The processes surrounding new connections will have been formed, and continued to adapt, to these characteristics of new connections.
- According to EA data, over the past 5 years, the number of national SME and commercial connections has increased by around 400-700 per month. This probably understates the true number (due to ICP decommissioning).

The CPO business context

- However, the nature of the underlying CPO business is unique:
  - Most CPOs are looking to invest in multiple locations around the country, and often simultaneously or within a very short space of time. Each location requires a bilateral discussion with an EDB;
  - These CPs have flexibility in location, but also must ultimately target spots that are convenient for EV users;
  - Up-front electricity connection and ongoing UoS and retail charges are the majority of a CPOs fixed and variable costs;
  - Demand at many locations is expected to grow through time (as EV uptake increases) – up-front decisions made about capacity must allow for an uncertain range of scenarios of future requirements[1];
  - The demand from a CP at any point in time is flexible and can be remotely controlled and/or automated; within limits, a CPO can scale its service to fit thresholds of network capacity, make cost-service tradeoffs, and even provide network services (e.g., VS)
- CPOs are not alone (amongst commercial load types) in having each of the attributes above. But, while some other load types share one or two of the above attributes, it is hard to conceive of another load type that has most or all of them.
- This 'unique' situation of CPOs will last for a number of years, as EV uptake continues and the public charging network (i) catches up to a globally comparable level and (ii) stays ahead of EV uptake.

1. Government policy (10,000 chargers in 6 years) will reinforce this future growth trajectory: the pace of rollout expected (140 per month) is well beyond current state (~21 per month)

A material difference with CPOs

- The following are examples of issues that have been identified in respect of connection:

TRANSACTION COSTS

i. Inconsistencies between EDB's processes and approaches (although this only manifests if connecting to multiple EDBs);

ii. Hard to efficiently search for opportunities, or make price/service tradeoffs

iii. Long timeframes/leadtimes and uncertainties;

EFFICIENT PRICING

iv. lack of competitive pressure or regulation on connection costs[2] and

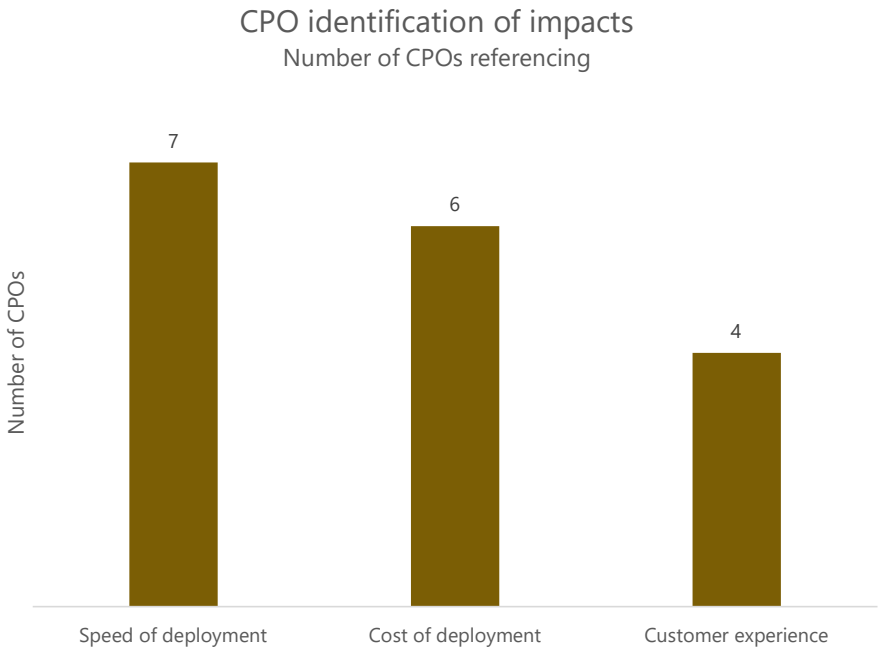
v. high ongoing costs.

- These individual issues are likely faced by any medium-large business looking to connect (or expand their existing connection) to the distribution network.
- While these transaction and business costs may be relatively modest for a typical load connection, for CPOs:
  - They are often seeking a number of connections in a short space of time: the multiplicity of bilateral interactions with multiple EDBs **thus are incurring the transaction costs numerous times**.
  - The costs of connection and ongoing UoS charges are a large proportion of their cost-of-service, **amplifying the impact of any inefficiency in pricing on the viability of public charging**

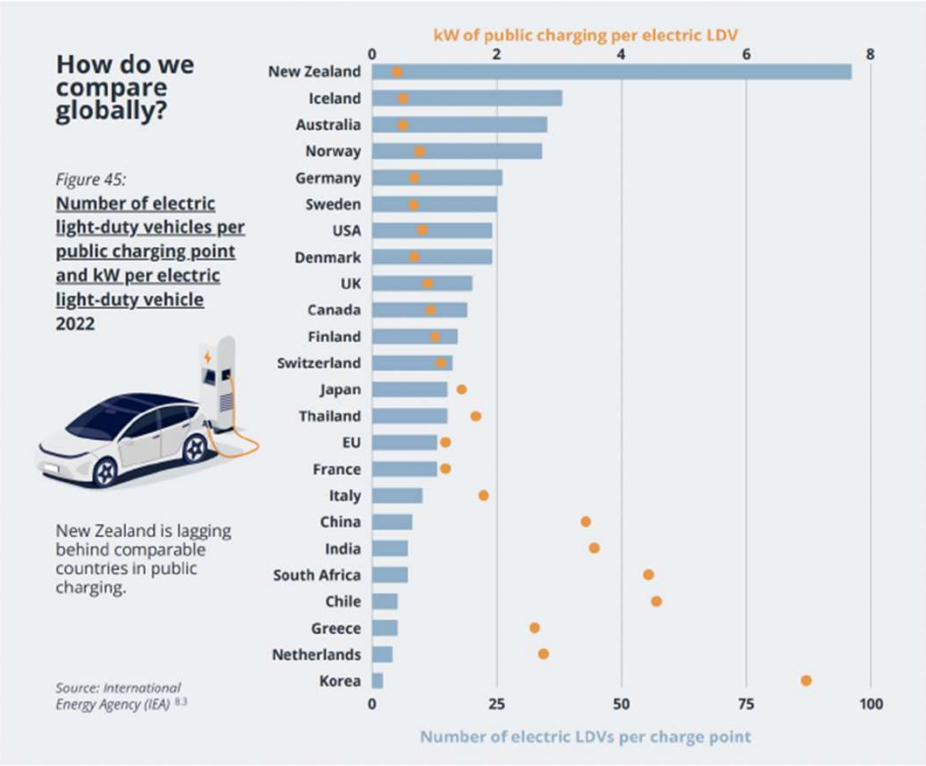
2. We note that traffic management is a considerable cost for CPOs installing public chargers on state highways as a result of Waka Kotahi requirements. This is causing a misalignment of CP installations compared to population base. This is outside the scope of Part 6.

Impacts on CPO businesses

- In our interviews, CPOs freely commented on the impacts that transaction costs and inefficient pricing had on their businesses
- Out of 7 CPOs interviewed:
  - All noted speed of deployment was slowed by connection issues
  - All but one noted connection issues increased the cost of deployment
  - 4 noted that it resulted in degradations to customer experience (e.g., a 'postcode lottery' of deployment, favouring lower-cost regions)
- These issues could plausibly impact CPOs ongoing access to capital for deployment
- There are net public benefit implications, especially if e.g., postcode lottery causes a feedback loop on EV uptake.



Outcomes



- Against international benchmarks, the pace of deployment of CPs is very low and far behind the pace CPOs believe are required to keep pace with consumer demand
- With the current issues around connection, **CPOs are able to deliver around 20 charge points per month**.
- The current Government's target of 10,000 public EV chargers by 2030 **requires an average pace of 140 per month**.

Important outcomes for CPOs

- The "CPO-ness" of these issues is, therefore, less about any individual aspect of the connection process, and more about the cumulative effect of these inefficiencies on a single business.
- Many of the identified issues need addressing for all load types, and could be pursued through Part 6, but to materially improve the efficiency of *public EV charging investment*, the following outcomes are critical:
  - **Efficient search:** Ability to efficiently search for, and evaluate, location options, and make price/service tradeoffs
  - **National consistency:** As much as possible, timeframes, standards, protocols, methodologies and policies should be nationally consistent.
  - **National contestability:** Standardisation also underpins national competition in delivery services (contractors).
- There is a risk that changes/improvements to connections processes focus on the 'traditional' one-off load connections, who only make one connection decision rather than achieving national consistency, contestability and efficient search (referred to as 'CPO critical').
- This is an important opportunity to update the role of Part 6 to the current environment.

Related regulatory changes and workstreams

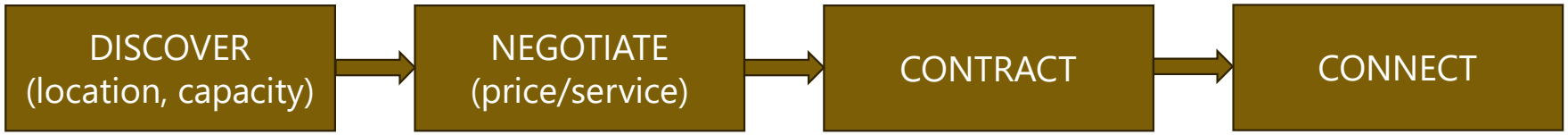
- The Commerce Commission's final decision in its Targeted Information Disclosure Review (2024) partly addresses some of the **discovery** principles, and marginally improves the ability to compare standardised **pricing** components between EDBs
- We also flag that dealing with first-mover disadvantage (**negotiation and contract**), whilst considered by the existing Part 6, needs to be consistently addressed across pricing and Part 4 of the Commerce Act as well.
- Several aspects of **pricing** are likely to fall under the scope of the Authority's reform of distribution pricing, but they underscore key issues around national standardisation and we have included principles for completeness.
- Issues around **contestability** (e.g., availability of sub-contractors) may be broader than Part 6 (e.g., Commerce Act), noting the existing Part 6

Principles for Part 6 access regime

What should an access regime cover?

- The **purpose of the regime** – this is critical to interpreting provisions where language may not be clear
- Key aspects of the connecting party's 'customer journey':
  - The ability for an access seeker to undertake **efficient discovery** of information about the network (e.g., 6.3 of existing Part 6)
  - The process by which the access seeker can **efficiently negotiate price and service** with the network owner, including making price/service tradeoffs, based on the network owner's connection and operation standards
  - The process by which the access seeker can **secure and deliver its chosen access arrangements** via contract on reasonable terms (e.g., existing 6.4 and 6.5)
- It should also cover how the regulator intends to **monitor performance of the regime** generally, including how network owners are performing against requirements of the regime
- Must support the Authority's statutory objective – competition, reliability and efficiency
- Technology agnosticism – doesn't favour or dis-favour any technology

Principles for a future CPO 'connection journey'



Access to efficient digital search infrastructure

Ability for connections to evaluate the value of flexibility

Mandatory maximum response times for EDBs

Nationally consistent processes, contract forms and pricing.

Nationally consistent connection standards and requirements relevant to categories of connection types and voltages.

Nationally consistent FMD framework.

Effective avenue to appeal.

Performance monitoring of connection timelines and costs, benchmarked against national standards;

Principles focus on the end point

- The principles outlined below describe a future state where all principles are simultaneously being delivered.
- Failing to deliver an individual principle could undermine the whole access framework, resulting in second-best outcomes.
- We acknowledge that EDB's ability to meet all the principles today are compromised by current reality (e.g., LV visibility, leading to the need for data loggers)
- However, we are strongly of the view that **it is better to calibrate an access arrangement to a desired future state, and potentially grant exemptions**, than to calibrate it to the lowest common denominator.

Should an access regime cover pricing?

- Open question as to whether an access regime should cover pricing
- Network pricing is being considered under a separate Authority workstream
- From a CPO (and, we expect, most load customers' perspective) **pricing and access are inextricably linked**
- We have developed principles for pricing: some relate to access issues (e.g., efficient discovery), others are more substantively about pricing methodologies and practices, which we are raising through other regulatory workstreams.

Purpose of a Part 6 access regime

- Will require amendment to current Part 6 purpose:

> "The purpose of this Part is to enable **distributed generation** to be connected to a distribution network or to a consumer installation that is connected to a distribution network, if being connected is consistent with connection and operation standards."

- Add in 'customer connection' or 'load connection'
- Purpose should be refined to not just enable it to be connected, but <u>efficiently</u> connected

Principles for access/connection

Discovery (existing 6.3)

#	Issues	Consequence	Principle	
D1	Information about network **capacity** or **price** is not easily or digitally accessible. CPOs are often charged data logging fees due to lack of LV visibility	It is difficult for loads who have location flexibility to conduct an **efficient search** for locations that have higher capacity before committing to a connection investigation.	EDBs need to provide digital search infrastructure including spatial network spare capacity down to LV level. Difficulty with discovering price to be dealt with through Authority's distribution pricing workstream **RELATED: ComCom TIDR 2024**	**All loads, but CPO critical**

Negotiation principles – price/service tradoffs

#	Issues	Consequence	Principle	
N1	Many connection applications only permit one level of service (capacity) to be investigated	Loads are unable to efficiently optimise their flexibility in demand to reduce connection costs - exploring multiple potential network capacities and price implications requires multiple connection applications.	Network connection applications to provide ability for loads to assess value of flexibility by testing a range of capacities and upgrades	**CPO critical**

Negotiation and Contract - does size matter?

- The current Part 6 arrangements have different requirements on small DG (<10kW) applications vs larger applications
- CP sizes can be characterised as:
  - Small connections (<25kW)
  - Cat1 connections (<160A[3], LV network)
  - Larger connections (>160A, LV network or 11kV)
- We are aware that connections <25kW may already have a quicker approval process in some EDBs.
- Beyond that, the relationship between size of connection, network voltage and difficulty with connection is not simple - in some ways small connections are more challenging due to the EDB's lack of visibility on the low-voltage network.
- Can't predict on the basis of size whether a network upgrade will be required, but generally likely to be easier to connect at 11kV because of network visibility.
- This makes it challenging to have differential Part 6 requirements based on size

Our proposed 'standard connection requirements'

- We propose that CPOs (and potentially other standardised equipment, e.g., energy storage devices) establish "Standard Connection Requirements"
- These requirements relate to the nature of the charging equipment being installed, e.g.
  - Cat1 >25kW must be 3-phase; Cat2 and above must be balanced 3-phase
  - Simple protection requirements
  - Meets harmonics, voltage and other equipment standards etc
- Where a CPO seeks a connection on this basis, it should be able to be 'fast tracked' by an EDB – go straight to final approval (20 business days) and connection delivered within 3 months.
- **Partial Capacity approval**: An EDB would be allowed to respond to a fast-track application with a 'partial offer' of capacity – same timeframes
- **Exceptions:** Should an EDB assert that the application cant be met in fast-track timeframes, reasons would be required, and such exceptions would be monitored by the regulator.

Negotiation and Contract Principles

#	Issues	Consequence	Principle	
N2	Information provision and response times from EDBs can be slow.	Execution of load connections are slowed down, amplified when multiple interactions are required.	Mandatory maximum response times should be established for EDBs. Where EDBs use contractors, response times apply equally to contractors. Aligned with DG for bespoke connections. Fast track process for applications that meet homogenous connection types **Standard Connection Requirements: 20 business days** for final approval or partial offer, **three months for delivery**. Partial offer for capacity that can be delivered in three months.	**All loads**
N3	Connection processes (timeliness, contract, or pricing) are not consistent across EDBs	Loads connecting in multiple regions have to adapt to multiple processes, contracts and pricing structures, making it difficult to operate efficiently	Nationally consistent timelines, equipment standards, processes, contract forms and pricing, including ability for connecting party to register their **Standard Connection Requirements;** and regulatory monitoring of performance	**CPO specific, or 'flexible' loads**

Negotiation and Contract Principles (cont)

#	Issues	Consequence	Principle	
N4	Uncertainty about final outcome (capacity and price) until late in the process.	Can result in wasted effort if final outcome results in degradation of customer experience or the location being abandoned.	Standard processes and contract forms. These must clearly delineate the point where capacity and price move from indicative to binding.	
N5	There is no ability to appeal or challenge EDBs in respect of outcomes of connection investigations (timelines, pricing).	The negotiation and contract form is unbalanced, hence connecting parties must either accept the terms or walk away.	There must be an effective avenue to make a claim of unreasonable use of monopoly bargaining power; this should include standard contract forms with dispute processes combined with ability to allege a breach where appropriate.	**All loads**

All loads

Negotiation and Contract (3)

#	Issues	Consequence	Principle
N6	Unable to reserve a capacity slot for the purpose of achieving FID, or ensure future fast expansion. First mover disadvantage: Connecting customer funds a larger than necessary capacity expansion, but has no rights to that capacity	Higher connection cost: Either connecting party pays for more capacity than they need, or capacity is incremented inefficiently.	Nationally standardised FMD framework. EDB should not charge first mover beyond their requested capacity requirements (between incremental and standalone). Further: - Once approved, give first mover access to capacity for **12 months** to allow them to achieve FID - Limit banking/hoarding of capacity rights to block out second mover, but - After 12 month period has expired, allow **20 business days** first right of refusal to unexercised applications. Framework needs to be consistent across the new Part 6, the Authority's distribution pricing principles and the Commerce Commission input methodologies.

All loads

Contestability

#	Issues	Consequence	Principle	
C1	Some EDBs only allow their nominated contractors to assess and complete connection work.	This *may* confer monopoly power on contractor, limits contestability and removes the ability for connecting parties to self-source. Requires connecting party to deal with multiple contractors nationally.	EDBs need to provide nationally consistent connection standards and requirements relevant to categories of connection types and voltages. This should extend to nationally accredited installers of equipment.	**All loads**
C2	Even with operational separation, risk of EDBs favouring their own public EV charging installations through the connection process	Lessening of competition in the provision of public charging facilities.	Amend existing Part 6 requirements for arms-length (6.11) to include public EV charging, energy storage devices.	**CPO specific**

Not clear that C1 falls within the boundaries of a Part 6 access regime

Monitoring

#	Issues	Consequence	Principle	
M1	Timelines experienced by CPOs are not routinely measured, reported or monitored by the regulator	There is a lack of evidence regarding EDBs performance in terms of providing efficient service to enquiring CPOs	Performance of EDBs against new Part 6 requirements (timelines, costs) is monitored and benchmarked against national standards Performance monitoring should apply to all connection applications. Performance must be reported by EDBs, confirmed by connecting party, on a national register and monitored by Electricity Authority. This is akin to the current hedge disclosure requirements.	**All connection applications**

Is Transpower's CMF a potential model?

Transpower publish and operate to its own "connection process". We understand that part of this – its **Connection Management Framework** - is being considered as a starting point for an access regime for load connections. The CMF is primarily concerned with the "negotiation and contract" phase of our customer journey.

The nature of Transpower and the market design means that Transpower's process does not have to address some of our principles. These principles would still need to be addressed under a distribution network access regime. These include:

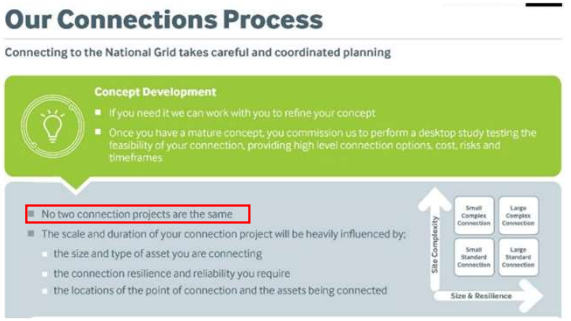
- Our principles that require **national consistency** (**N3, N6, C1**); there is only one national grid owner, but 29 EDBs.
- Our principle regarding **digital search** (**D1**); The quality of accessible, digital data about available capacity and current usage of grid assets is materially higher on the HV grid than on the distribution network.
- Our principles regarding **standardised contracting and right of appeal** (**N5**); the CMF does not detail the key terms of the Services Agreement and Works Agreement (see right) and we have not been able to review these. Once the connection is commissioned, the benchmark agreement exists in the Code.

How well does the CMF meet our principles?

Principles	Does the CMF meet our principles?
Efficient Discovery	The presumption of the CMF is that a customer has identified a location in the network, and requires (as a pre-requisite) some detail about the connection (e.g., a "connection capacity assessment" and "conceptual design"); it appears that these would be outputs of the **Concept Assessment Report**, rather than the autonomous search by the connecting customer.
Negotiation & contract	From the little information available, Transpower's "**Concept Assessment Report**" (phase 2) may allow the connecting customer to test different price/service offerings (**N1**). The primary focus of the CMF is the **Connection Application** (3-5 in graphic). This offers a potential framework for a number of our 'negotiation and contract' principles, including response times (**N2**), and FMD (**N6**).

How well does the CMF meet our principles?

Principles	Does the CMF meet our principles?
Negotiation & contract **(N2)**	Transpower's framework starts from the premise that "No two connection projects are the same", which is true of almost all connections to a high-voltage grid substation. For CPOs, many connections will be substantially similar to each other. Transpower does, however, recognise small simple connections which may be exempted from their investigation phase (Step 4, previous page). We believe standard CP connection types, with standard guidelines and equipment standards and standard accredited installers, do not need a design phase either.
Contestability	Transpower's framework allows 'customer-led connections' under some circumstances (**C1**). Transpower's criteria re: customer-selected contractors/service providers appear reasonable[1].
Monitoring	Transpower self-imposes KPIs and reports against these (**M1**)



1. See Section 3.2, "Transpower Guideline – draft: Customer-led new connections".

Pricing principles

Pricing and price structures – scope

- The Electricity Authority highlighted connection pricing and other matters pertinent to CPOs in its 'Targeted reform of distribution pricing' consultation paper. Specifically, the Authority noted the following areas of general focus (emphasis added):
  - time-varying pricing is **not being applied comprehensively or consistently**, nor is it applied in a way that provides confidence that it correctly signals the economic cost of network use
  - there has been little progress in **establishing price signals that reward flexibility and some regression with respect to services subject to control**
  - material off-peak usage charges remain common
  - there is wide variation in approaches to assessing **whether cost allocation is subsidy-free**
  - **there is wide variation in connection pricing practices, a lack of transparency and some approaches that could inefficiently deter connection of new load such as public EV chargers**
  - many retailers are billed on deemed or residual profiles, even where properties have smart meters installed (which significantly reduces retailers' incentives to manage input costs).

Distribution pricing principles

Here, 'pricing' is used in reference to the price of connection (including the capital contribution) and the ongoing use-of-system charges. The analysis below suggests that a number of aspects of connection pricing may not be consistent with the Distribution Pricing Principles.

The 2019 Distribution pricing principles

a. Prices are to signal the economic costs of service provision, including by:

i. being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);

ii. reflecting the impacts of network use on economic costs;

iii. reflecting differences in network service provided to (or by) consumers; and

iv. encouraging efficient network alternatives.

b. Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.

c. Prices should be responsive to the requirements and circumstances of end users by allowing negotiation to:

i. reflect the economic value of services; and

ii. enable price/quality trade-offs.

d. Development of prices should be transparent and **have regard to transaction costs, consumer impacts, and uptake incentives**.

Pricing and price structure principles

#	Issues	Consequence	Principle	
P1	No transparency over efficiency of price (between incremental and standalone); or allocation of standalone costs	Introduces uncertainty as to whether the connection is genuinely costly, or just inefficiently priced	National reporting, monitoring and independent benchmarking of application fees and connection costs vs standalone costs. Standalone cost test could be applied only when 95th percentile cost/MVA.	**All loads**
P2	Pricing methodologies are hard to understand, different across EDBs, and thus outcomes hard to estimate during search/discover phase. Pricing is static and potentially inefficient – e.g., CPD/peak prices	Hard to prioritise search for lower cost locations, and difficult to establish early-stage business cases. Response of demand to peak prices may be inefficiently compromising customer experience	Nationally standardised pricing structures with plain-English guides. Pricing needs to be cost-reflective	**All loads; CPO critical**

Pricing and price structure principles

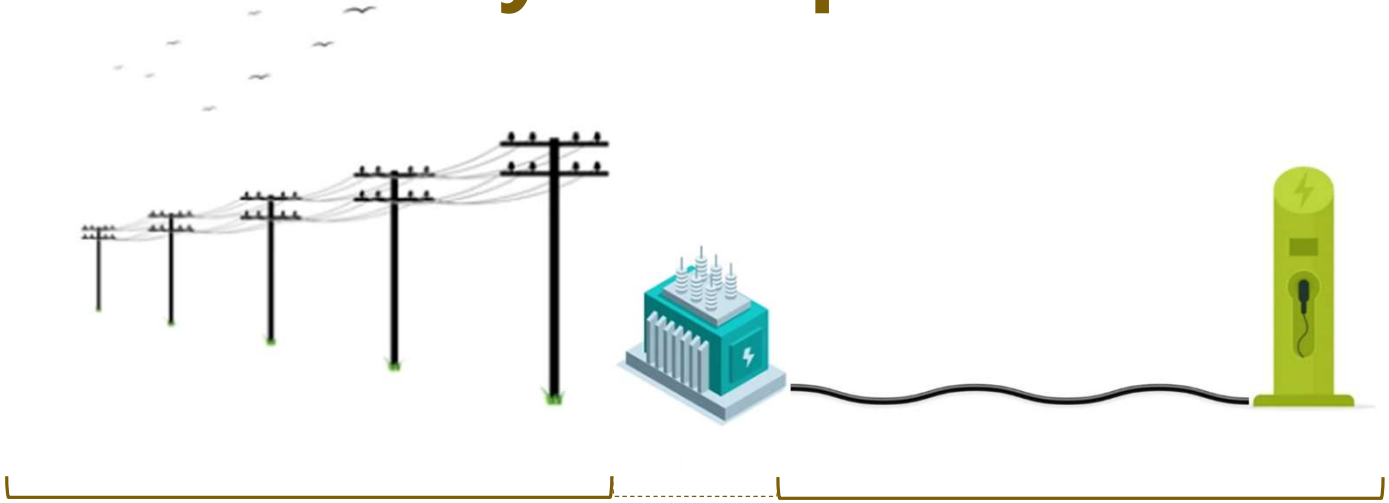
#	Issues	Consequence	Principle	
P3	Few EDBs provide commercial incentives for connecting parties to provide dynamic lines services (e.g., network capacity management, voltage support, transient stability) through smart demand automation	Payments for lines services could offset or reduce connection cost, improving efficiency and competition for lines services. Lost opportunity to limit or defer deeper network upgrades through smart demand management.	EDBs to provide cost-reflective incentives for smart demand management, and/or lines services.	**All flexible loads**
P4	Difficult to understand capital contributions policies and assess what is being paid for including 'deeper' upgrades and/or use-of-system charges.	Introduces greater variability and unpredictability in connection costs.	Nationally standardised capital contributions policies with plain-English guides and customer templates.	**All loads; CPO critical**

Illustration – capital contributions

Capital contribution – regulated industries

- In regulated industries capital contributions can have the following benefits:
  - Ensure the recovery of incremental costs for new connections where ongoing use of system charges may be insufficient due to e.g., averaging in pricing across customers.
  - Avoiding having to recover (from other customers) investment costs incurred for a new connection's planned demand, when these levels don't eventuate and lower use of system charges are received
  - Ensure the connecting customer pays for network growth, in the case where network growth allowances have not already been made in use of system charges
  - Ensure user pays where a higher standard of service than required by other consumers, e.g. higher redundancy and reliability for industrial plant
- In all cases, capital contributions arise due to the insufficiency of most use-of-system charges to perfectly recover every customer's costs
- This insufficiency may be because of poor pricing, or the result of a conscious tradeoff between pricing efficiency and transaction costs.

Definitions & key concepts



'Deep' connection costs
Assets currently in existence, may require upgrading

+

'Shallow' connection costs
Required to physically access the network

=

Total cost of connection

Use of system charges

Capital contributions

=

Total cost of connection recovery

Example assessments

- To draw out some of the issues we have compiled two connection examples and applied the capital contribution policies of four EDBs
- The full picture for each example should also include use of system charges to make a full assessment of total cost. We have not included the use of system charges at this early stage of the analysis. However, the very different outcomes of applying the capital contributions policies is informative.

Example 1 – small connection (shallow costs: $14,000)

- LV connection (3Ø – 100 amps, 69kVA)
- 10m underground extension from existing underground supply
- $14,000 cost of connection

Example 2 – large connection (shallow costs: $180,000)

- LV connection (3Ø – 300kVA)
- Requires additional 300kVA substation
- 20m 11kV double circuit underground connecting to existing 11kV ring feed
- $40,000 transformer + $20,000 switchgear + $120,000 cabling and installation = $180,000

Summary of example capital contributions

	Example 1	Example 2
Shallow connection cost	$14,000	$180,000
CC - EDB A	$1,030	Cannot be determined
CC - EDB B	$6,000	$120,000 possibly more
CC - EDB C	$29,282	$206,447 possibly more
CC - EDB D	Cannot be determined	Cannot be determined

- There is a big range of capital contributions, the policies confirm this is not just differences in the underlying networks (and therefore costs that arise) but also quite different philosophies
- The implication is that there *should* commensurately be quite different approaches to ongoing network pricing methodologies, to maintain a correct reflection of total cost; if this is not the case, there is a risk of exceeding standalone cost (as identified for a number of the EDBs assessed)

Other considerations

- There is significant difference between the EDBs on what is considered a 'standard connection'
- There are differences between whether prices can be published or must be bespoke
- In isolation, none of the approaches are obviously wrong, but none of them are obviously right

Changes needed to capital contributions

- The current volatility in capital contribution are driving a lack of trust; in turn this is resulting in a skewing of investment away from high capital charges (inefficient allocation of capital, comprising customer experience and CPO revenue)
- CPOs (and all connection customers) need **local and national consistency** – we see no valid reason for having 29 different approaches to calculating capital contributions
- The regulator needs to assure CPOs they won't pay more than standalone cost as a result of use-of-system charge and capital contributions policies/methodologies:
  - The policies must give CPOs assurance that the contributions are the quid pro quo of lower-than-otherwise UoS charges (i.e., the balance between the two is deliberate, obvious and quantifiable)
  - EDBs should be required to make every effort to at least publish prices/costs that substantially indicate total cost.

Summary of principles

Summary of principles

PART 6 – ACCESS REGIME

EDBs provide digital search infrastructure

Ability for connections to evaluate value of flexibility

Mandatory maximum response times for EDBs

Nationally consistent equipment standards, processes, contract forms and pricing.

Standard processes and contract forms to clearly delineate the point where capacity and price move from indicative to binding.

Effective avenue to appeal.

Nationally consistent FMD framework.

Amend arms-length provisions to include public EV chargers;

OTHER REGULATION

Nationally consistent connection standards and requirements relevant to categories of connection types and voltages.

Performance monitoring of connection timelines and costs, benchmarked against national standards;

National reporting, monitoring and independent benchmarking of connection costs

Nationally consistent pricing methodologies with plain-English guides.

Nationally consistent capital contributions policies with plain-English guides.

EDBs to provide incentives for smart demand management, and/or lines services.

Alignment with statutory objective

PART 6 – ACCESS REGIME

EDBs provide digital search infrastructure **E**

Ability for connections to evaluate value of flexibility **E**

Mandatory maximum response times for EDBs **E**

Nationally consistent equipment standards, processes, contract forms and pricing. **E**

Standard processes and contract forms to clearly delineate the point where capacity and price move from indicative to binding. **E**

Effective avenue to appeal. **E**

Nationally consistent FMD framework. **E**

Amend arms-length provisions to include public EV chargers; **C**

OTHER REGULATION

Nationally consistent connection standards and requirements relevant to categories of connection types and voltages. **E** **C**

Performance monitoring of connection timelines and costs, benchmarked against national standards;

National reporting, monitoring and independent benchmarking of connection costs **E**

Nationally consistent pricing methodologies with plain-English guides. **E**

Nationally consistent capital contributions policies with plain-English guides. **E**

EDBs to provide incentives for smart demand management, and/or lines services. **C**

E = Efficiency **C = Competition**

Impact on the CPO customer journey