



3 December 2020

Attn: Fiona Towers  
Independent Pricing and Regulatory Tribunal  
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Haymarket, NSW 2000

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Dear Ms Towers,

To inform the Independent Pricing and Regulatory Tribunal's (**IPART**) ongoing review of the NSW electricity distributor's Licence Conditions, IPART has requested additional information about our CBD network. We are pleased to be able to assist with this request.

#### **Recent improvements in both network costs and reliability**

At the outset we note that, since our reliability standards were last updated, Ausgrid has made significant steps towards improving both the affordability and reliability of our network. Since 2014 our network charges have reduced by \$226 for the average residential customer in our network area, while our reliability in the CBD has remained in line with our customer's expectations. This demonstrates that the current regulatory regime is delivering positive outcomes for customers.

#### **Current CBD reliability standards are fit-for-purpose**

Following our recent discussions with IPART staff and consideration of a number of important factors relating to our CBD network, we believe that our existing reliability Licence Conditions for CBD feeders are fit-for-purpose and deliver the right outcomes for customers. This is based on the following:

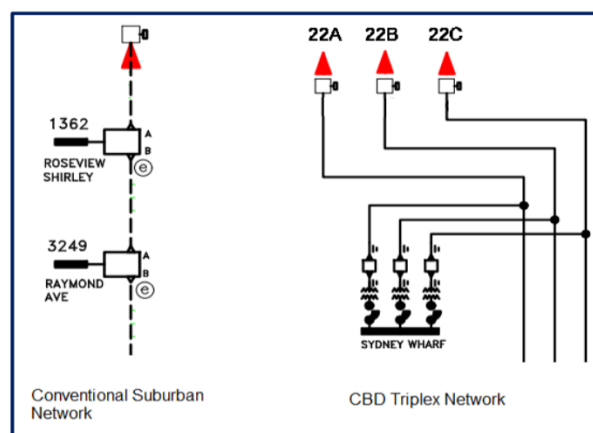
- the unique design of the CBD HV network ('triplex configuration') which is significantly different to other parts of our network;
- we do not have any planned capacity or reliability investment planned for the CBD network in the 2019-24 regulatory period; and
- average network reliability on CBD feeders in recent years.

When these considerations are taken into account, we believe that changes to our existing CBD reliability conditions are not necessary. Given the current stage of IPART's review, further work focusing on our CBD feeders may challenge current timeframes, or risk unintended consequences. This may also take attention away from other parts of the review.

## Unique design: Triplex network

The distribution network serving the Sydney CBD follows a unique ‘triplex’ configuration. It was designed and implemented before Ausgrid became custodian for the reliable supply of electricity in the Sydney CBD, with some assets dating back to the 1930s.

The core feature of the triplex network is that the majority of distribution substations have three transformers, each supplied by their own separate underground 11kV feeders running in parallel to each other. The firm rating of each distribution substation is also two-thirds of total capacity, meaning that any one element (e.g. transformer or feeder) can be interrupted or de-energised without causing loss of supply. This configuration, which cannot be found elsewhere in Australia, was designed with the aim of providing a high degree of reliability to customers in the Sydney CBD. In the figure below, a conventional suburban network configuration is compared to the triplex design in the Sydney CBD.



## No planned investments in the CBD and past investigations

The triplex configuration, due to its stability and high level of reliability performance, means that we have no planned capacity or reliability investments in the Sydney CBD for the 2019-24 regulatory period. This significantly narrows the scope to deliver even more positive outcomes for customers in terms of both reliability and costs.

The only Ausgrid projects that are currently planned for the CBD involve: (1) the retirement of Dalley St and City East zone substations (2) replacement works. These investments are based on economic cost benefit analysis that incorporates the value of customer reliability (VCR), in line with policy intent underpinning IPART’s terms of reference to consider bill outcomes.

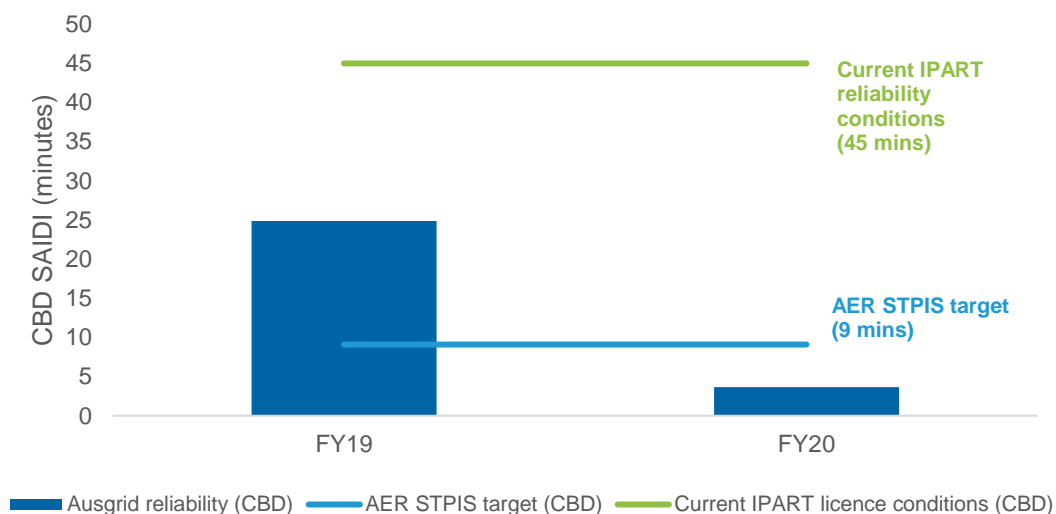
Additionally, we have undertaken a review our CBD feeder investigations records from the past five years in compliance with our Licence Conditions and reporting to IPART. Three of these were driven by high voltage (HV) faults, but it should be noted:

- two were driven by substation flooding; and
- the remaining HV cable fault was caused by an explosion in a pit that caused severe damage and took a significant time to repair.

None of these investigations resulted in projects to remediate poor performance. This is indicative of the HV distribution system in the CBD that is highly stable, with supply typically only impacted by rare, unpredictable events. It further demonstrates that any changes to our Licence Conditions for our CBD network are likely to impose additional costs without any positive benefits for customers.

### Current reliability and national standards

In FY19 our average duration of unplanned outages (SAIDI) in the CBD was 24.863 minutes while we recently reported to the AER that our FY20 SAIDI was 3.624 minutes. Our target set by the AER for its service target performance incentive scheme (STPIS) is 9.092 minutes. As shown in the figure below, even materially increasing (or decreasing) our unplanned SAIDI for the CBD is unlikely to have a major impact on how we plan our network and report to IPART.



If you would like to discuss our submission in more detail please contact Shannon Moffitt, Senior Regulatory Analyst, on [REDACTED]

Yours sincerely

[REDACTED]

Alex McPherson  
Head of Regulation