

Quality Standard Variation (QSV) to Aurora's default price-quality path – Draft decision

Draft reason paper

The Commission: Sue Begg
John Crawford
Derek Johnston
Elisabeth Welson

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Associated documents



Publication date	Reference	Title
27 November 2019	978-1-869457-68-6	Default price-quality paths for electricity distribution businesses from 1 April 2020 – Final decision
5 December 2019		Letter from Aurora to Commerce Commission on QSV
17 March 2020		Letter to Aurora regarding QSV
27 March 2020		Letter from Aurora to Commerce Commission - intention to apply for a QSV
30 June 2020		DPP3 Quality Standard Variation Proposal
12 November 2020	978-1-869458-46-1	[Draft] Electricity Distribution Services Default Price-Quality Path (Aurora quality standards variation) Amendments Determination 2020
12 November 2020		Reliability model for Aurora Draft QSV Determination (RY2021) and Draft CPP Determination (RY2022-2026)
12 November 2020		Aurora model - forecast unplanned SAIDI and SAIFI (provided 12 June 2020)
12 November 2020		Aurora model - forecast unplanned SAIDI and SAIFI (alternative provided 23 July 2020)
12 November 2020		Aurora model - forecast planned SAIDI and SAIFI (provided 12 June 2020)

Glossary

Table of abbreviations	
Buffer	Difference between the quality limit and the baseline target for quality standards
Cap	A cap refers to the maximum SAIDI or SAIFI after which marginal penalties no longer accrue
Collar	A collar refers to the minimum SAIDI or SAIFI at which marginal rewards no longer accrue
CPP	Customised Price-Quality Path
DPP3	Default price quality path from 1 April 2020 to 31 March 2025
Incentive rate	The 'incentive rate' is the \$ per SAIDI minute a distributor is rewarded or penalised for when its reliability deviates from the quality incentive target. Rewards and penalties are only accrued within the cap and collar
Quality standard	Quality standards are the accumulated SAIDI and SAIFI limits for planned and unplanned interruptions for the Default Price-quality Path (DPP)
QSV	Quality Standard Variation (QSV) is a variation to any standard or incentive measure specified in a DPP determination and prescribes the use by a distributor of an historic time series of data relating to service quality measured in accordance with a specified metric
Quality limit	The maximum number and duration of outages that customers experience on average before contravening a quality standard
Baseline target for quality standards	The baseline target is the level of quality we expect an EDB can achieve with respect to quality standards
Target for quality incentives	The target level of quality which represents the revenue neutral point. This represents the point where Aurora would not receive any reward or penalty. If Aurora's SAIDI is above the target it receives penalties, and if it is below the target it receives a reward.
SAIFI	System Average Frequency Index is the average number of interruptions per customer
SAIDI	System Average Interruption Duration Index is the average outage duration for each customer served
Value of Loss Load	An estimated amount that customers receiving electricity would be willing to pay to avoid a disruption in their electricity service

Purpose

1. On 30 June 2020, Aurora submitted a Quality Standard Variation (QSV) proposal¹ for the regulatory year ending 31 March 2021 under clause 4.5.5 of the Input Methodologies (IMs)², which are the key rules, requirements and processes underpinning the regulation of electricity distribution businesses (EDBs) under Part 4 of the Commerce Act (Part 4). Aurora's QSV proposal sought changes to Aurora's quality standards and incentives set in the default price-quality path (DPP3) from 1 April 2020, for the first year of DPP3.
2. This draft reasons paper outlines our consideration of Aurora's QSV proposal and our draft decision to amend the quality standards and incentives in DPP3 in a way that differs from Aurora's QSV proposal. The associated DPP amendments to give effect to the QSV under the IMs in accordance with section 52Q of the Act³ are published alongside our draft decision.⁴
3. Submissions on our draft decision can be made via the Commission website and are due by 5pm on 26th November 2020. We note that our draft decision on Aurora's QSV proposal is separate to our draft decision on Aurora's Customised Price-Quality Path (CPP) proposal which, among other things, relates to Aurora's quality standards and incentives from 1 April 2021.

Summary of our draft decision

4. Our draft decision is to amend the unplanned quality standards and the planned and unplanned quality incentive measures that apply to Aurora under DPP3.⁵ We have not accepted Aurora's proposed QSV in its entirety. We propose amendments of a smaller magnitude than Aurora's proposal so that the quality standards and incentives Aurora will face over the remainder of the DPP3 period before its CPP takes effect (the remainder of the 2021 regulatory year) are more stringent than Aurora's proposal, but more lenient than that set for DPP3.
5. In our assessment of Aurora's QSV proposal we consider that the current DPP3 quality standards and incentives are unlikely to reflect Aurora's realistically achievable performance.

¹ Aurora Energy "[DPP3 Quality Standard Variation Proposal](#)" (30 June 2020)

² [Electricity Distribution Services Input Methodologies Determination 2012](#) (Consolidated as of 20 May 2020)

³ [Commerce Act 1986](#), section 52Q

⁴ [Draft] Electricity Distribution Services Default Price-Quality Path (Aurora quality standards variation) Amendments Determination 2020 (12 November 2020)

⁵ Clause 4.5.7 of the Input Methodologies refers.

6. We consider that Aurora’s QSV proposal is realistically achievable. However, we are concerned that Aurora’s proposed unplanned standards and proposed incentives are too lenient. We consider that our draft decision is also realistically achievable and is preferable to Aurora’s QSV proposal as it better meets the purpose of Part 4 of the Act⁶. This is because Aurora is likely to be incentivised to provide a level of quality closer to consumers’ demands and, likely to receive rewards and penalties that are more appropriate for the reliability it provides to consumers.⁷
7. The tables below show how our draft decision compares to Aurora’s proposal and current DPP3 standards and incentives. We note that Aurora did not propose any changes to its planned quality standards.

Table 1.1 Unplanned quality standards (annual)

	SAIDI (Minutes)		SAIFI (Interruptions)	
	Baseline target	Limit	Baseline target	Limit
Our draft QSV decision	106.50	124.94	1.78	2.0710
Aurora's QSV proposal⁸	110.02	142.01	1.80	2.2579
Current standard (DPP3)	63.44	81.89	1.17	1.4687

Table 1.2 Incentive scheme parameters for planned outages⁹

	SAIDI target (revenue-neutral point)	SAIDI cap	SAIDI collar	Incentive rate (per SAIDI min)
Our draft QSV decision (1 April 2020 – 31 March 2021)	102.05	No change	No change	\$6,578
Aurora's QSV proposal¹⁰	138.98	No change	No change	\$7,140
Current incentive (DPP3)	65.32	195.96	0 mins	\$6,578

⁶ [Commerce Act 1986](#), section 52A

⁷ The limits apply to the quality standard. They are the maximum number and frequency of unplanned outages that Aurora’s customers could experience on average before we may bring court proceedings seeking pecuniary penalties on Aurora for contravening the standard. For the incentive scheme, targets incentivise Aurora to consider cost quality trade-offs in its decision making. The targets in the incentive scheme are separate from the targets in the quality standards. See the introduction below for more detail.

⁸ Aurora’s QSV proposal refers to Aurora’s resubmitted QSV proposal. The updated figures use more appropriate assumptions for normalisation. Table 1.4 below shows the difference between Aurora’s proposal and resubmitted proposal.

⁹ Our draft QSV decision SAIDI targets and caps are pro-rated according to the number of days in the period.

¹⁰ Aurora’s QSV proposal refers to Aurora’s resubmitted QSV proposal. The updated figures use more appropriate assumptions for normalisation. Table 1.4 below shows the difference between Aurora’s proposal and resubmitted proposal.

Table 1.3 Incentive scheme parameters for unplanned outages¹¹

	SAIDI target (revenue-neutral point)	SAIDI cap	SAIDI collar	Incentive rate (per SAIDI min)
Our draft QSV decision (1 April 2020 – 30 September 2020)	63.44 pro-rated to 31.81	81.89 pro-rated to 41.06	0 mins	\$13,155
Our draft QSV decision (1 October 2020 – 31 March 2021)	106.50 pro-rated to 53.10	124.94 pro-rated to 62.30	0 mins	\$13,155
Aurora's QSV proposal¹²	110.02	142.01	0 mins	\$14,279
Current incentive (DPP3)	63.44	81.89	0 mins	\$13,155

Introduction

8. We are required by the Act to set quality standards that must be met by regulated suppliers when setting price-quality paths. We may also set financial incentives for an individual supplier to maintain or improve its quality of supply. We consider that quality standards and incentives are important as they promote the purpose of Part 4 of the Act.¹³ In particular, they are important for ensuring distributors have incentives to provide service at a quality that reflects consumer demands. However, as distributors' revenues are constrained by the price path, quality standards are also important for ensuring distributors have incentives to invest, and are constrained in their ability to earn excessive profits at the expense of quality.
9. In DPP3 we separated setting quality standards and incentives for unplanned and planned outages. Separation removes the ability of distributors to avoid contravening their unplanned quality standard by deferring planned work when distributors expect they are likely to contravene. It also means distributors' SAIDI and SAIFI values are more likely to indicate distributors' underlying performance. We use average duration (SAIDI) and average frequency (SAIFI) of outages per customer to measure distributors' reliability performance.¹⁴
10. Our draft decision on Aurora's quality standards sets limits for unplanned SAIDI and SAIFI¹⁵ which are the maximum number and duration of unplanned outages that Aurora's customers could experience on average before we may bring court proceedings seeking pecuniary penalties on Aurora for contravening the standard.

¹¹ Our draft QSV decision SAIDI targets and caps are pro-rated according to the number of days in the period.

¹² Aurora's QSV proposal refers to Aurora's resubmitted QSV proposal. The updated figures use more appropriate assumptions for normalisation.

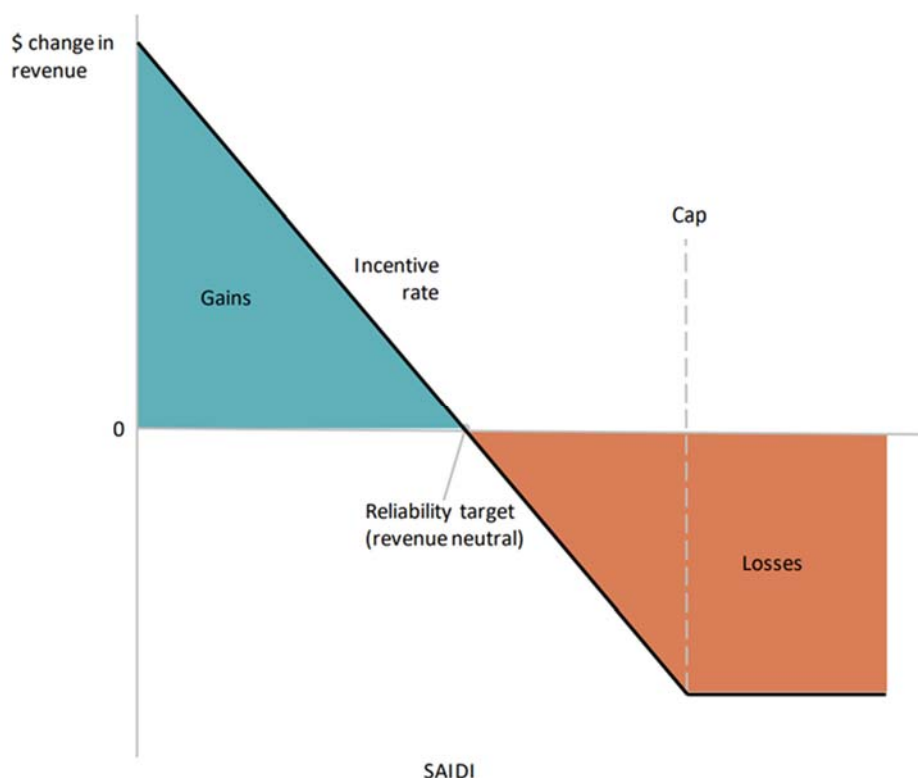
¹³ [Commerce Act 1986](#), section 52A

¹⁴ Commerce Commission "[Default price-quality paths for electricity distribution businesses from 1 April 2020 - Final decision - Reasons paper](#)" (27 November 2019) page 137

¹⁵ Aurora did not request changes to the planned outage standards it currently faces under DPP3.

11. We also refer to the targets for quality standards as 'baseline targets.' Baseline targets are used to calculate the limits and reflect the level of reliability we expect Aurora to achieve on average during the year. The targets for the incentive scheme reflect the revenue neutral point in the incentive scheme. We note that the targets for the incentive scheme differ to the baseline targets. This is because we have calculated the targets for the incentive scheme by pro rating them from 1 April 2020 to 31 September 2020 and from 1 October 2020 to 31 March 2021.
12. Our draft decision on Aurora's incentive scheme is designed to provide Aurora with incentives to consider cost quality trade-offs in its decision making. We set targets for SAIDI which represent the revenue neutral point. This is the point where Aurora would not receive any reward or penalty. If Aurora's SAIDI is above the target it receives penalties, and if it is below the target it receives a reward.
13. The size of the reward or penalty depends on the incentive rate set. The incentive rate determines the financial exposure distributors have to a marginal change in reliability. Rewards and penalties apply within caps and collars which represent the boundaries of the incentive scheme. The cap is the point at which no further incentive losses are applicable and the collar is the point at which no further incentive gains are applicable. The general parameters of the incentive scheme are set out in Figure 1.1.

Figure 1.1 Relationship between parameters of the quality incentive scheme



Aurora's QSV proposal

Correspondence with Aurora on a QSV proposal

14. As part of our 2016 review of IMs we introduced a new DPP quality standard reopener, a 'quality standard variation' (QSV)¹⁶, to deal with circumstances where a regulated supplier considers that its existing quality standards are not realistically achievable. The QSV reopener allows us, based on a proposal from a regulated supplier, to reopen an existing DPP to vary that supplier's quality standards and quality incentives, subject to certain criteria set out in the IMs.
15. Aurora submitted its QSV proposal on 30 June 2020¹⁷. It is the first QSV proposal that we have received and assessed under the DPP QSV provisions in the IMs. Aurora's proposal was submitted after the start of DPP3 on 1 April 2020. This is because it relied on its CPP verification report and consumer consultation to support its QSV proposal, which were submitted as part of Aurora's CPP proposal on 12 June 2020.
16. During the process of setting DPP3, Aurora had told us that it did not expect to be able to comply with our proposed DPP3 quality standards. In our response, we signalled that a QSV might be a viable option for Aurora.¹⁸ On 5 December 2019, after the DPP3 decision was finalised, Aurora wrote to us indicating its intention to apply for a QSV for the 2021 regulatory year, and proposed relying on its CPP verification report and consumer consultation in support of its proposal.¹⁹
17. We signalled our comfort with Aurora's QSV proposal relying on this CPP material.²⁰ We also noted that we reserved the right to request additional information if we considered what had been provided was insufficient and, it was up to Aurora to decide how much risk it was prepared to carry around the timing of submitting its QSV. On 27 March 2020, prior to DPP3 taking effect, Aurora confirmed its intention to submit a QSV proposal.²¹

¹⁶ [Input methodologies review decisions – summary paper](#) (20 December 2016) page 30

¹⁷ Aurora Energy "[DPP3 Quality Standard Variation Proposal](#)" (30 June 2020)

¹⁸ DPP3 final reasons paper "[Default price-quality paths for electricity distribution businesses from 1 April 2020 – final decision](#)" (27 November 2019) at para J74-J75.

¹⁹ Aurora Energy "DPP3 Quality Standards – Options to address expected non-compliance in RY2021" (5 December 2019).

²⁰ Letter from Dane Gunnell (Manager, Price Quality Regulation, Commerce Commission) to Alec Findlater (General Manager Network Commercial, Aurora Energy) regarding Aurora Energy's proposed Quality Standard Variation (17 March 2020).

²¹ Letter from Alec Findlater (General Manager Network Commercial, Aurora Energy) to Dane Gunnell (Manager, Price Quality Regulation, Commerce Commission) regarding Aurora Energy's proposed Quality Standard Variation (27 March 2020).

18. In July 2020 after submitting its QSV proposal, Aurora provided an updated unplanned reliability forecast for our consideration, with lower unplanned targets and limits than its original proposal. This updated forecast corrected for an error in the method it used to exclude the full impact of major interruption events, including severe weather events, from its forecasts.²² For our draft decision on Aurora’s QSV, we assess Aurora’s updated figures, rather than the figures submitted in its QSV proposal. The difference between the updated figures and its submitted figures are compared in Table 1.4 below, for reference.

Table 1.4 Aurora’s updated reliability forecasts compared to its submitted proposal

	Unplanned SAIDI (Minutes)		Unplanned SAIFI (Interruptions)	
	Baseline target	Limit	Baseline target	Limit
Current standard (DPP3)	63.44	81.89	1.17	1.4687
Aurora’s submitted proposal, 30 June 2020²³	113.34	146.29	1.99	2.5067
Aurora's updated proposal²⁴	110.02	142.01	1.80	2.2579

Details of Aurora’s QSV proposal

19. Aurora’s QSV proposal requested changes to the values within the unplanned outage standards and planned and unplanned incentives for the year ending 31 March 2021 under DPP3. Aurora did not request changes to the planned outage standards it currently faces.

20. Aurora’s proposal says:²⁵

the current DPP3 quality standards are not realistically achievable considering Aurora’s historic and forecast performance. Compliance with the DPP3 unplanned quality standards in RY21 could not be achieved with an efficient level of expenditure, appropriate to the expressed preferences of our consumers, nor is the timeframe available to achieve such a change in performance;

²² Specifically, Aurora incorrectly converted its ‘raw’ unplanned SAIDI and SAIFI forecasts to ‘normalised’ forecasts using a scaling factor that did not appropriately reflect the DPP3 methodology. Aurora applied the incorrect normalisation method to unplanned outage forecasts over the 2021-2026 period. This was identified by the Verifier as the most material reason for differences between Aurora’s proposed forecasts and the Verifier’s alternative forecasts; Farrier Swier Consulting Pty Ltd and GHD Pty Ltd ["Verification report - Aurora Energy CPP proposal"](#) (8 June 2020) at page 39 and Table E.6.

²³ Aurora Energy ["DPP3 Quality Standard Variation Proposal"](#) (30 June 2020) at Table 2.

²⁴ In addition to the correction applied to the normalisation method provided by Aurora, we have also corrected for an error we found in Aurora’s model outputs. This only affects SAIDI and reduces the SAIDI target by an additional 1.05 minutes, or about 1%.

²⁵ Aurora Energy ["DPP3 Quality Standard Variation Proposal"](#) (30 June 2020) at para 15.1.

21. Aurora's QSV proposal sought:
 - 21.1 more lenient unplanned outage standards compared to those set in DPP3, which Aurora said reflects the realistically achievable performance of its network;²⁶
 - 21.2 more lenient planned and unplanned outage duration targets under the incentive schemes applying to planned and unplanned outages so that, compared to current DPP3 settings, Aurora is less likely to accrue financial penalties and more likely to accrue financial rewards.
 - 21.3 a higher unplanned SAIDI cap relative to DPP3 which aligns with its proposed SAIDI limit; and
 - 21.4 a higher incentive rate for planned and unplanned outages relative to DPP3. This is driven by a higher Value of Loss Load (VoLL) which is consumer' willingness to pay to avoid disruptions.

Framework for our draft decision and factors in exercising our discretion

Our framework

22. Our power to reconsider an EDB's DPP for a QSV proposal is set out in the Electricity Distribution Services Input Methodologies Determination 2012²⁷ (IMs).
23. Pursuant to clause 4.5.6(1), reconsideration of a DPP to address a QSV is triggered by us receiving a QSV proposal which we are satisfied complies with the requirements of clause 4.5.5(2).
24. In assessing a QSV proposal we will consider the following:
 - 24.1 The factors set out in clause 4.5.5(4) as follows:
 - (4) In assessing a quality standard variation proposal, the Commission will consider the extent to which-
 - (a) the proposed quality standard variation better reflects the realistically achievable performance of the EDB over the remainder of the regulatory period;
 - (b) the EDB has consulted with consumers on its proposed quality standard variation; and
 - (c) the proposed quality standard variation is supported by consumers.
 - 24.2 The purpose of Part 4²⁸, which underpins every decision we make, as follows:

The purpose of this Part is to promote the long-term benefit of consumers in markets referred to in section 52 by promoting outcomes that are consistent with

²⁶ Aurora Energy "[DPP3 Quality Standard Variation Proposal](#)" (30 June 2020) at para 15.2.

²⁷ Subpart 5 of Part 4 of the Input Methodologies

²⁸ [Commerce Act 1986](#), section 52A

outcomes produced in competitive markets such that suppliers of regulated goods or services—

- (a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and
 - (b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and
 - (c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and
 - (d) are limited in their ability to extract excessive profits.
25. If, after considering the above factors, we determine that they support the amendment of the determination, clause 4.5.7(1) provides that we may amend aspects of the DPP. The word ‘may’ in this clause provides for us a final discretion whether to make an amendment.
26. If we do decide to make an amendment to the DPP, clause 4.5.7(2)(b) provides that the amendment cannot be more than is reasonably necessary to reflect our decision on the quality standard variation proposal.
27. We are not bound to either accepting or rejecting the proposal we receive. We are able to amend the DPP differently from the proposal to give effect to a quality standard variation that we determine.
28. In making our draft decision we have applied proportionate scrutiny, taking account of the purpose of DPP regulation as set out in section 53K of the Act, which is to provide a relatively low-cost way of setting price-quality paths for suppliers of regulated goods or services.

Factors in exercising our discretion

29. In exercising our overall discretion, we consider other factors, outside of the IM criteria and the purpose of Part 4, that influence our decision on whether and how to amend Aurora’s quality standards and incentives. In our view, this includes taking account of the following features, specific to Aurora’s specific circumstances.
- 29.1 We consider the impact on consumers is limited as the QSV applies to one year only, and the proposal was received part way through the regulatory year to which it relates. Our draft decision, which is also made part way through the year to which it relates, only influences Aurora’s behaviour following publication of our decision.
- 29.2 Aurora’s QSV proposal is directly followed by a CPP, scheduled to commence 1 April 2021 and to will apply for five years. We are required to set quality standards, and may set quality incentives, as part of Aurora’s CPP. Our decisions on Aurora’s CPP quality standards and incentives must apply separate criteria and are not constrained by our decision on Aurora’s QSV proposal for the year ending 31 March 2021.

- 29.3 Aurora was fined almost \$5 million for contravening its network quality standards through an excessive level of power outages in the 2016-2019 years. Low levels of historical investment have resulted in deterioration of Aurora's network assets that now require remediation. Aurora is taking steps to address its historic under-investment through its CPP proposal, which acknowledges its historic under-investment and seeks additional funding for the 2022 regulatory year onwards to deliver safety improvements and arrest the deterioration in reliability on its network.²⁹
- 29.4 We do not consider it appropriate to apply a QSV reopener to retrospectively alter the quality standards applicable to a previous regulatory year. We would expect regulated suppliers that identify that DPP quality standards are not suitable to their circumstances should apply for a QSV in a timely manner. However, we agreed that Aurora could submit its QSV proposal part way through the current regulatory year. That was because we recognised there were exceptional circumstances in relation to Aurora's circumstances as Aurora could not make a complete QSV proposal until after the DPP3 reset decision was made in December 2019, and because Aurora wanted to leverage off its CPP verification and consultation processes before it submitted its proposal in June 2020. In the meantime, as Aurora has no guarantee whether we will ultimately vary its quality standards and incentives, the existing standards and incentives have been and continue to provide some incentive for Aurora to not allow reliability to decline unchecked. The incentive may depend on Aurora's expectations over the QSV decision.

Are we satisfied that Aurora's proposal complies with 4.5.5(2)?

30. We consider that Aurora's QSV proposal contains the information specified in clause 4.5.5(2) of the IMs.
31. We consider that Aurora's proposal contained the parameters for the quality standards and incentives, an explanation of the reasons for the proposed QSV and demonstrated the estimated effect of the proposed QSV by using historic data and by contrast with the quality standards in DPP3.³⁰ This is consistent with clause 4.5.5(2)(a), (b) and (d).
32. We are satisfied that Aurora's engineering report meets the requirements in clause 4.5.5(2)(c). Aurora relied on independent verification of its CPP proposal, which reviewed Aurora's proposed variations to quality standards, applying to the 2021 regulatory year as well as the CPP period.³¹

²⁹ For example, Aurora Energy "[Customised Price-Quality Path – Application](#)" (12 June 2020) at para 189.1.

³⁰ Aurora Energy "[DPP3 Quality Standard Variation Proposal](#)" (30 June 2020)

³¹ Farrier Swier Consulting Pty Ltd and GHD Pty Ltd "[Verification report - Aurora Energy CPP application](#)" (8 June 2020)

33. Aurora has relied on its CPP consultation to support its QSV proposal. While its CPP consultation does not specifically seek feedback on Aurora's proposed QSV for the 2021 regulatory year, it does seek consumer feedback on reliability levels and associated price increases.³² We consider that Aurora's has complied with clause 4.5.5(2)(e), by demonstrating any consumer consultation undertaken in respect of the proposed QSV, and the results of that consultation.

Consideration of the factors listed in clause 4.5.5 of the IMs and the purpose of Part 4

Extent to which Aurora's proposed QSV better reflects its realistically achievable performance

34. We consider that the current DPP3 targets and limits may not reflect Aurora's realistically achievable performance.
35. Aurora's recent reliability performance has deteriorated and is worse, and its future performance is likely to be worse, than the DPP3 standard. The main reason for this is that the DPP3 quality standards were capped at 5% above the quality standards that Aurora previously faced (i.e. the DPP2 standards).³³
36. Figure 1.2 and Figure 1.3 below show that Aurora would need to achieve a step change improvement in its reliability performance over the next few years to adhere to the DPP3 standard. We do not think this is a reasonable expectation, especially without further network investment. We agree with Aurora that it is not feasible to expect such a change in performance before the year ending 31 March 2021.³⁴
37. We note that the Verifier's report on Aurora's CPP application agreed that the DPP3 standards do not reflect Aurora's realistically achievable performance.³⁵

³² For example, see UMR Quantitative Research Report: Households and Businesses (on behalf of Aurora Energy), February 2020; and Aurora's consumer consultation document at page 23-25.

³³ Without the cap, Aurora's DPP3 unplanned standards would be higher at 92.78 SAIDI minutes (compared to 81.89 minutes) and 1.65 SAIFI interruptions (compared to 1.47 interruptions). These uncapped values are still substantially below the standards we are proposing for Aurora's CPP. This is because an uncapped DPP3 standard would reflect the average of Aurora's historical SAIDI and SAIFI performance over the 2010 - 2019 period, over which Aurora's reliability performance has deteriorated materially.

³⁴ Aurora Energy "[DPP3 Quality Standard Variation Proposal](#)" (30 June 2020) at para 15.1.

³⁵ [Farrier Swier Consulting Pty Ltd and GHD Pty Ltd "Verification report - Aurora Energy CPP application"](#) (8 June 2020) page 38

Figure 1.2 Aurora's recent unplanned SAIDI performance against DPP3 standard

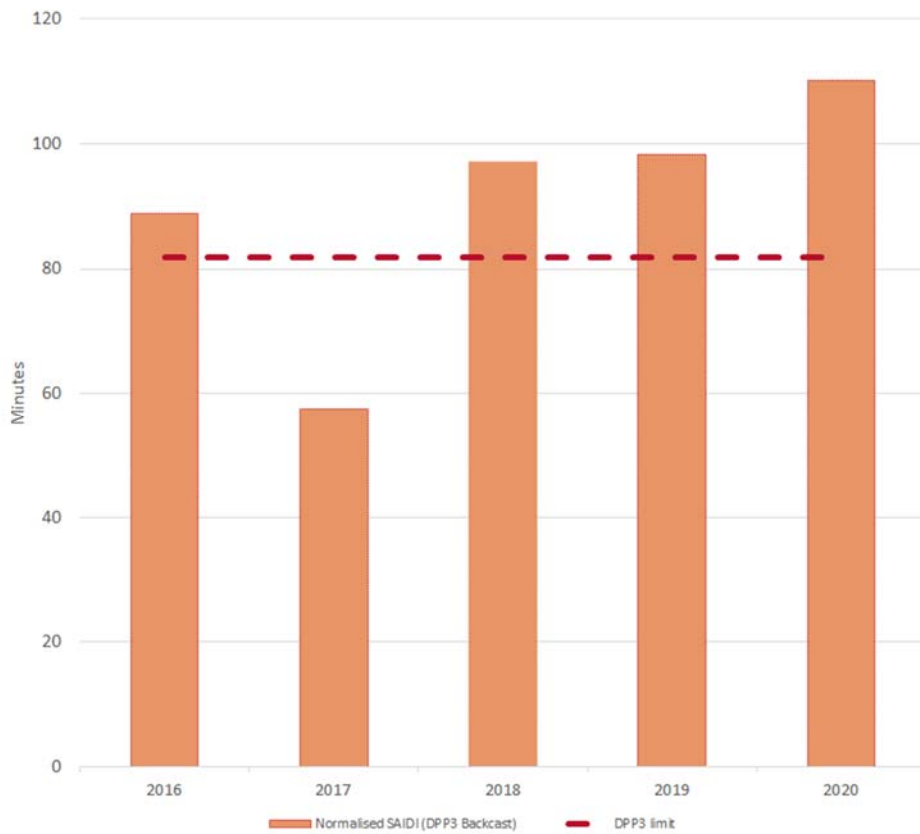
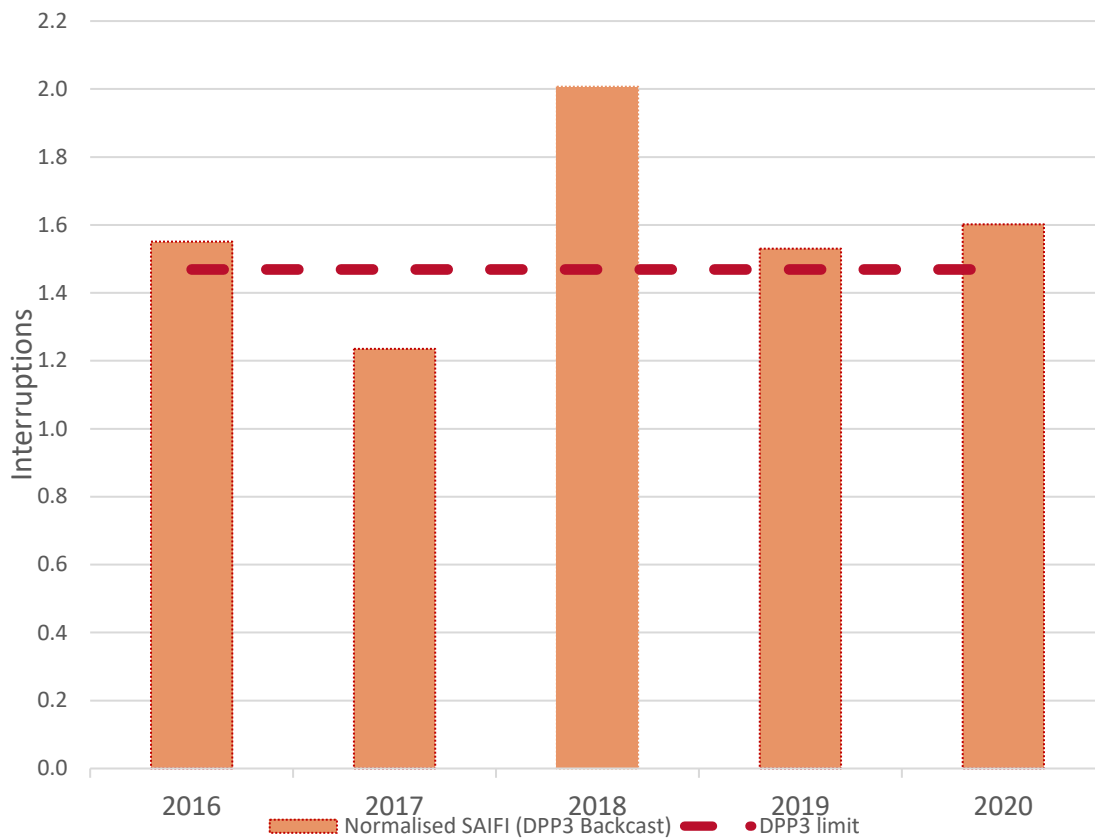


Figure 1.3 Aurora's recent unplanned SAIFI performance against DPP3 standard



Our views on the extent to which Aurora has consulted with consumers on its proposed QSV, and if Aurora’s proposed QSV is supported by consumers

- 38. Aurora relied on its CPP consultation to support its QSV proposal, which does not cover the 2021 regulatory year. We consider that in relation to the QSV, Aurora has engaged to a low extent. Its CPP consultation provides an indication of consumer views given how close the start of the CPP in 2022 is to the first year of DPP3 in 2021. We note that our draft reasons paper provides a further opportunity for consumers to provide views.
- 39. The Verifier commented on Aurora’s consultation with consumers on its QSV proposal. It commented that “Aurora Energy did not explicitly consult on its proposal to update the quality standard limits. However, Aurora Energy provided consumers with information on expected quality outcomes to enable them to form a view on Aurora Energy’s plan to maintain current unplanned reliability over the proposed CPP period and into the future.”³⁶
- 40. We accept that the consumer feedback Aurora received on its consultation indicated that most consumers are not in favour of Aurora incurring further expenditure to improve reliability to enable compliance with the quality standards in 2021, as this would result in even higher prices for consumers than are contemplated by Aurora’s CPP proposal. Although this does not provide us with much of an insight into whether to approve, reject or amend Aurora’s QSV proposal, we are mindful not to vary Aurora’s quality standards and incentives more than is appropriate, as that may weaken incentives to maintain reliability for the remainder of regulatory year 2021.

Explanation of our draft decision on the unplanned quality standard and baseline target

Details of our draft decision on Aurora’s proposed unplanned quality standard and baseline target

- 41. Aurora’s proposed unplanned quality targets and standards/limits are outlined in Table 1.5. These are compared to the DPP3 standards and targets and our draft decision to amend these values.

Table 1.5 Unplanned quality baseline targets and limits (annual)

	SAIDI (Minutes)		SAIFI (Interruptions)	
	Baseline target	Limit	Baseline target	Limit
Our draft decision	106.50	124.94	1.78	2.0710
Aurora's proposal	110.02	142.01	1.80	2.2579
Current standard (DPP3)	63.44	81.89	1.17	1.4687

³⁶ [Farrier Swier Consulting Pty Ltd and GHD Pty Ltd "Verification report - Aurora Energy CPP application" \(8 June 2020\) section 3.4.3](#)

42. Table 1.5 shows that our draft decision is to amend Aurora's 2021 unplanned SAIDI and SAIFI targets and limits, but at levels below (more stringent than) Aurora's proposal.
43. Our draft decision in Table 1.5 above applies key assumptions Aurora made to derive its proposed unplanned targets and limits over 2021 and makes adjustments to some assumptions which we did not consider to be statistically robust.

Key assumptions

44. Our draft QSV decision applies key assumptions Aurora made to derive its SAIDI and SAIFI targets. Our calculation of SAIDI and SAIFI targets:
 - 44.1 are largely based on Aurora's historical outage experience over 2018 – 2020; and
 - 44.2 reflect Aurora's maximum (worst) normalised reliability performance forecast over the 2021 – 2026 period as SAIDI and SAIFI targets for 2021.
45. We apply these assumptions as we accept that it would be challenging for Aurora to deliver meaningful reliability improvements over the remainder of the 2021 regulatory year. We consider that significant investment would have been needed above Aurora's DPP3 allowance given its recent performance.³⁷
46. We have not applied all of Aurora's assumptions. We disagree with several of Aurora's assumptions that we do not consider to be statistically robust. We outline our reasons for our amendments to Aurora's proposed unplanned targets and standards over 2021 below.

Adjustments to the normalisation scaling factor

47. Normalisation is a process that excludes the full impact of major interruption events for assessment purposes, such as the impact of severe weather events which can be volatile and beyond Aurora's direct control. The DPP3 normalisation methodology reduces the impact of major events significantly more than past normalisation methods which were applied over earlier regulatory periods – DPP1 and DPP2. For a meaningful comparison between forecasts and actuals, the DPP3 normalisation methodology should be applied consistently.

³⁷ Commerce Commission "Aurora Energy's proposal to customise its price and quality standards" (12 November 2020)

48. Aurora relied on its 10-year historical performance to calculate a scaling factor to normalise its forecasts that were largely based on its three-year historical performance. Our view is that Aurora's forecasts should be normalised with reference to the historical experience that is used to inform Aurora's SAIDI and SAIFI forecasts, which is the three most recent years (2018-2020). This change has minor impacts, reducing Aurora's SAIDI target by 2.6% and the SAIFI target by 1.4%.
49. Aurora's unplanned SAIDI and SAIFI forecasts are largely based on its historical outage experience over 2018-2020. To convert its forecasts to normalised forecasts, it applies a "normalisation scaling factor" based on the level of normalisation over the 2011-2020 period, using the DPP3 methodology. In the absence of using a simple average of the historical normalised values, we consider that Aurora's general approach for converting 'raw' forecasts to normalised forecasts is satisfactory. However, we consider that the inconsistency in the reference periods applied in this conversion (10 years compared to three years) is inappropriate. Our view is consistent with the position reached by the Verifier in its review of Aurora's CPP forecasts.³⁸
50. Aurora reasoned that it had a relatively high level of normalisation in recent years which should be addressed by using a longer time series of 10 years. It referenced extreme weather events in 2016 and 2019 and a fire in 2017 and considered these events outliers.³⁹ Aurora's approach removes less of the raw outage data than occurred over the recent years that forms the basis of its forecasts. This results in a higher normalised forecast. We disagree with this approach and consider it contrary to the purpose of normalisation, which is to remove the impact of major events that occurred. Removing more or less normalisation than actually occurred is not appropriate, especially given a substantial proportion of Aurora's forecasts are based on its average pre-normalised experience over 2018-2020
51. We have some reservations about forecasting using pre-normalised data as Aurora has done. It adds a further degree of uncertainty. Ideally, normalised forecasts would be based on normalised historical data. This is the approach taken in DPP3 to derive distributors' SAIDI and SAIFI targets and limits. It would have been possible for Aurora to take this approach for the significant portion of its forecasts that relied on its three-year historical experience. However, we accept that it may have been challenging for Aurora to use normalised forecasts in its asset-health modelling because of the way it assigns asset classes to individual outage events. Despite these reservations, we are comforted that Aurora's historical *normalised* experience over three-year period is not significantly different to our proposed targets that are based on Aurora's pre-normalised performance over a three-year period. This is shown in Table 1.6 below.

³⁸ The Verifier noted that the period used to estimate the normalisation scaling factor should be the same as the period used to estimate its forecasts to ensure consistency. [Farrier Swier Consulting Pty Ltd and GHD Pty Ltd "Verification report - Aurora Energy CPP application"](#) (8 June 2020) page 39.

³⁹ RFI Q019 - Reliability, service measures and quality standards (2).

Table 1.6 Our proposed targets compared to a simplified approach (annual)

	SAIDI Target (Minutes)	SAIFI Target (Interruptions)
Aurora's proposal	110.02	1.80
Aurora's historical three-year normalised experience	101.75	1.71
Our draft decision	106.50	1.78

Adjustments to forecasting the relationship between SAIDI and SAIFI

52. In our view, Aurora's linear regression used to determine SAIDI by asset class, based on SAIFI outcomes is not appropriate. This approach is based on seven datapoints and produced some anomalous outcomes.⁴⁰ We have instead relied on the observed SAIDI to SAIFI ratio, or the average interruption length, over the period for which data is available at this level of disaggregation (7 years) to forecast this relationship. This has an immaterial impact, reducing the SAIDI target by 0.65 minutes.

Adjustments to Aurora's proposed limits

53. Our draft decision to amend the unplanned limits Aurora faces is less than Aurora's proposed amendments. This is because our draft decision has added a smaller 'buffer' to our draft targets to obtain standard limits at 124.94 SAIDI minutes and 2.0710 SAIFI interruptions in Table 1.5 above. These draft standards are about 12% and 8% below Aurora's proposed standards.
54. Aurora's proposed unplanned outage limits are more than three standard deviations above its proposed targets. Aurora described its proposed limits as its target plus two standard deviations, with a scaling factor to account for its higher target. Aurora considered this will allow for annual volatility in accordance with our DPP3 decision.⁴¹ In our view, this approach is not reasonable; a higher standard deviation indicates greater variation in the data, but Aurora has simply assumed variation is proportional to the change in the target, which we do not consider to be statistically robust. Our draft decision is based on adding two standard deviations to the target. We consider this is more appropriate and is consistent with the DPP3 approach.⁴²

⁴⁰ For example, some regressions by asset class produced negative SAIDI outcomes (which Aurora set to zero) for a given SAIFI, very low marginal SAIDI outcomes for a change in SAIFI, or SAIDI outcomes that significantly differed from zero with a SAIFI of zero (the intercept).

⁴¹ Aurora Energy "DPP3 Quality Standard Variation Proposal" (30 June 2020) at para 76.

⁴² The DPP3 standard deviation of 9.22 for SAIDI and 0.15 for SAIFI, which we have applied to this decision, reflect Aurora's historical unplanned SAIDI and SAIFI experience over the 2009-2019 period. For completeness, we note that the SAIDI and SAIFI standard deviations relating to the three-year historical period that Aurora's proposed targets (and our draft decision) largely rely on are insignificantly different from those we have applied, at 10.72 SAIDI minutes and 0.17 for SAIFI interruptions.

Reasons for our draft decision on unplanned quality standards and limits

55. We consider our draft decision on quality standards and limits is still realistically achievable but better meets the purpose of Part 4 of the Act compared to Aurora's proposal. This is because we consider our draft unplanned outage standard is set at a level which better incentivises Aurora to provide a level of quality closer to consumers' demands. We do not consider Aurora's proposal aligns with consumers' concerns around deteriorating quality as its unplanned outage target for RY2021 is higher than its recent SAIDI and SAIFI performance in all its historical years except for its SAIFI in 2018. While we do not expect Aurora to make meaningful improvements to its reliability by the end of 2021, we consider it realistically achievable for Aurora to work within our draft standards, and achieve our draft baseline target over the remainder of 2021, given its current DPP3 expenditure allowance.

Explanation of our draft decision on the planned and unplanned quality incentives

Details of our draft decision on planned and unplanned quality incentives

56. Aurora proposed changes to the parameters in the quality incentive schemes that apply to planned and unplanned outages. Relative to DPP3 incentive parameters, Aurora proposes a longer target duration of planned and unplanned outages which is driven by higher levels of forecast outages. It also proposes a higher incentive rate which is driven by a higher VoLL.
57. Quality standard targets are usually used as the basis for the revenue-neutral point of incentive schemes. For our draft decision, we have maintained the DPP3 target from 1 April 2020 to 30 September 2020, and set a more lenient target from 1 October 2020 to 31 March 2021. Aurora will face financial penalties and rewards when its performance from 1 October 2020 onwards deviates from this new target. We propose different targets because our decision is made part way through the year in which the QSV decision applies. In our view, applying the new target part-way through the year retains forward-looking incentives, while ensuring Aurora is not financially rewarded for historical performance that was not influenced by this decision.
58. Our draft decision is to amend Aurora's current DPP3 unplanned baseline target of 63.44 SAIDI minutes to 106.50 SAIDI minutes, but pro-rated to 53.10 minutes consistent with our draft decision to introduce the amended target from 1 October 2020. We have also decided to amend the unplanned SAIDI cap to 124.94, consistent with our draft decision to amend Aurora's unplanned standard. This would also be pro-rated (to 62.30 minutes) to apply from 1 October 2020. Contrary to Aurora's proposal, our draft decision is that the DPP3 target and cap will remain in place (pro-rated) prior to 1 October 2020 and the current incentive rate will remain over the entire 2021 year.

59. For the planned outage incentives, we have set a more lenient planned outage target relative to DPP3 incentives but more stringent than Aurora’s proposed outage target. Our draft decision is that Aurora’s planned outage target is 102.05 minutes from 1 April 2020 to 31 March 2021. This higher target relative to that set in DPP3 and aligns with our expectations that the level of planned outages will be higher than during the ten-year reference period used for setting DPP3 because of the large amount of asset replacement intended. Aurora’s proposed planned SAIDI target also includes an expectation that it will achieve compliance with the DPP3 notification criteria for 20 percent of its planned outages. This is a higher standard than applied under DPP3, which set targets assuming zero compliance with the notification criteria. We think applying this slightly higher target across the whole year is reasonable given the significant increase in planned work Aurora is undertaking, which is disruptive to consumers.
60. As with our decision on the unplanned target in Table 1.8, we calculate the planned SAIDI target by applying the DPP3 target for half the year and applying Aurora’s proposed target over the remainder of the year. In total, this results in an annual planned SAIDI target of 102.05. Financial rewards and penalties apply when Aurora’s planned outage performance deviates from this target over the 2021 period.
61. Aurora’s proposed unplanned and planned quality incentives are outlined in Table 1.7 and Table 1.8 below. These are compared to the DPP3 incentives and our draft decision which amends these values.

Table 1.7 Incentive scheme parameters for planned outages⁴³

	SAIDI target (revenue-neutral point)	SAIDI cap	SAIDI collar	Incentive rate (per SAIDI min)
Our draft QSV decision (1 April 2020 – 31 March 2021)	102.05	No change	No change	\$6,578
Aurora’s QSV proposal⁴⁴	138.98	No change	No change	\$7,140
Current standard (DPP3)	65.32	195.96	0 mins	\$6,578

⁴³ Our draft QSV decision SAIDI targets and caps are pro-rated according to the number of days in the period.

⁴⁴ Aurora’s QSV proposal refers to Aurora’s resubmitted QSV proposal. The updated figures use more appropriate assumptions for normalisation.

Table 1.8 Incentive scheme parameters for unplanned outages⁴⁵

	SAIDI target (revenue- neutral point)	SAIDI cap	SAIDI collar	Incentive rate (per SAIDI min)
Our draft QSV decision (1 April 2020 – 30 September 2020)	63.44 pro-rated to 31.81	81.89 pro-rated to 41.06	0 mins	\$13,155
Our draft QSV decision (1 October 2020 – 31 March 2021)	106.50 pro-rated to 53.10	124.94 pro-rated to 62.30	0 mins	\$13,155
Aurora's QSV proposal⁴⁶	110.02	142.01	0 mins	\$14,279
Current standard (DPP3)	63.44	81.89	0 mins	\$13,155

Reasons for our draft decision on Aurora's proposed unplanned and planned quality incentives

62. In making our draft decision on Aurora's proposed amendments to the incentive scheme parameters, we have balanced setting incentives that are ex-ante, reasonably achievable and reflect consumer demands.
63. We recognise that for the first part of 2020, DPP3 settings were likely to provide ex-ante incentives for Aurora to improve its quality performance and, Aurora's incentives are likely to change part way through the year in line with its expectations from our QSV draft, and final decision.
64. We consider that ex-ante incentives are a relevant factor in considering Aurora's quality incentives because our QSV decision may influence Aurora's reliability performance in the future as it may be incentivised to earn financial rewards or minimise financial penalties. In our view, Aurora is less likely to adjust its behaviour in response to our draft decision on unplanned quality standards. This is because Aurora is incentivised to prevent its quality deteriorating up until the point it contravenes, and we consider it is likely that Aurora may contravene before the end of the year given our view that current DPP3 settings may not be realistically achievable.

⁴⁵ Our draft QSV decision SAIDI targets and caps are pro-rated according to the number of days in the period.

⁴⁶ Aurora's QSV proposal refers to Aurora's resubmitted QSV proposal. The updated figures use more appropriate assumptions for normalisation.

65. Ex-ante incentives are an important consideration as they promote the long-term benefit to consumers by incentivising EDBs to provide services at a quality that reflects consumers demands.⁴⁷ We noted in our IMs reasons paper: “We do not think it is appropriate to apply the quality standard variation reopener to retrospectively alter the quality standards applicable in previous disclosure years. Suppliers who identify that the quality standards applicable under the DPP are not suitable should apply for a quality reopener in a timely manner. The quality standards set under the DPP are intended to provide ex-ante incentives to provide quality at a certain level. Adjusting these standards ex-post would remove these incentives.”⁴⁸
66. We consider that retaining DPP3 planned and unplanned parameters throughout the duration of RY2021 could still provide Aurora with ex-ante incentives to efficiently restore outages as the incentive rate has not changed. This is the amount Aurora is rewarded or penalised for when its reliability deviates from the quality incentive target within the bounds of the cap and collar. However, we consider DPP3 planned and unplanned targets would not reflect Aurora’s realistically achievable performance for the remainder of 2021 and would likely penalise Aurora.
67. Aurora’s proposed incentive targets may better reflect Aurora’s realistically achievable performance as discussed in para 55 above. However, we consider that more stringent targets than Aurora’s proposal are realistically achievable. This would benefit consumers by ensuring Aurora is incentivised to provide a level of quality closer to consumers’ demands and, ensures Aurora receives more appropriate rewards and penalties for the quality it provides.
68. Our draft decision retains DPP3 incentives, pro-rated from 1 April 2020 to 30 September 2020. We have pro-rated our draft decision on the unplanned and planned baseline targets from 1 October 2020 to 31 March 2021. We have chosen to pro-rate incentives halfway through the year to balance the duration and impact of DPP3 incentives and our proposed pro-rated incentives. A further reason is because we cannot be certain when Aurora’s incentives may have adjusted in line with its expectations on the QSV decision.
69. The benefit of retaining DPP3 incentives for the first half of 2020 is that it preserves ex-ante incentives, and pro-rating DPP3 incentives from October 2020 onwards provides forward looking incentives which may better reflect Aurora’s realistically achievable reliability performance. Splitting the revenue-neutral targets halfway through the year provides a simple way of balancing these outcomes appropriate to the QSV for a relatively low cost DPP. Compared to Aurora’s proposal, our draft decision also ensures Aurora is incentivised to provide a level of quality closer to consumers’ demands and, Aurora receives more appropriate rewards and penalties for the quality it provides.

⁴⁷ [Commerce Act 1986](#), section 52A

⁴⁸ [Input methodologies review decisions – summary paper](#) (20 December 2016) Para 93

Next steps

70. We invite submission on our draft decision in this report. Written submissions are due by 26th November 2020. Submissions should be addressed to:

Dane Gunnell, Manager, Price-quality regulation

feedbackauroraplan@comcom.govt.nz

71. After considering submissions, we intend to publish our final decision and final amendments to Aurora's default price-quality path in December 2020.