



Aurora Energy Limited

Submission to the Commerce Commission

on its

Discussion Paper

on the

**Reset of Default Price-Quality Path for Electricity Distribution
Businesses**

17 July 2009

Executive Summary

The Commerce Commission has published a Discussion Paper setting out its preliminary views on the reset of the initial default price-quality path (DPP) that expires on 31 March 2010. Aurora welcomes the Commission's Discussion Paper, and has prepared this submission in response to the Commission's invitation for interested parties to comment on the Commission's views.

In resetting the DPP, the Commission is proposing to: adopt a two-step approach to setting starting prices (i.e. the rollover of actual prices on 1 April 2010, with P_0 adjustments deferred until input methodologies are determined); and limit clawbacks to exceptional circumstances. In broad terms, Aurora considers these proposals to be reasonable – given the need for the reset determination to be gazetted prior to 1 December 2009. However, there are key parts of the Commission's proposals for the 2010 reset that Aurora is concerned with. In particular, these include:

a. Interpretation and implementation of the new regulatory control principles

Aurora considers that the recent amendments to Part 4 of the Commerce Act 1986 mark a significant shift in regulatory direction, and amongst other things, requires:

- the Commission to promote outcomes consistent with workable competition; and
- the DPP to be set in a relatively low cost manner, and to contribute to the four regulatory objectives of the Act (which includes incentives for investment and innovation).

Aurora contends that the principle of '*what happens in the competitive sector*' should inform the Commission's decision making.

Although the Commission has indicated that it will take into consideration various pragmatic factors in resetting the initial default price-quality path – for example in setting the rate of change – Aurora is concerned that the Commission's pragmatism will continue to be tempered by the focus on allocative efficiency that it and its advisors appear to take. For instance, the proposal to separate sunk costs from variable costs in productivity analysis is likely to increase the cost of the DPP to implement, and frustrate underlying incentives for productive and dynamic efficiency.

The DPP is a key regulatory instrument contributing to the regulatory objectives. By over-representing allocative efficiency, the DPP is not being used as effectively as it could be to incentivise outcomes that are consistent with the regulatory purpose.

b. FCM and asset valuation

Aurora is concerned that the Commission has seemingly adopted Financial Capital Maintenance (FCM), as a regulatory standard and is applying it in support of the Commission's proposals, even though it may produce outcomes inconsistent with competitive sector outcomes.

The FCM concept delivers outcomes consistent with asset values not having changed from their original historical cost. However, one cannot pretend that assets have not changed in value – if in fact they have actually changed in value. In the case of increasing values, if EDBs cannot realise this value through higher prices or a sale of the assets, then the incremental value has been transferred to consumers. This would be unconscionable, if it were not for the opposite applying when assets decline in value. This suggests that the FCM concept may in fact be 'acceptable' as a hedge. However, Aurora does not believe that the Commission should impose this hedge without the merits being fully debated.

Aurora strongly believes that different valuation methods are suited to different purposes. In particular, regulatory asset values should be reflective of their replacement cost as this is important for ensuring efficient investment occurs. However, in adopting FCM the Commission finds itself in a position that several different asset valuation methods are equally acceptable for the purposes of regulatory control.

This means that, under FCM, the choice of asset valuation method has no impact on the determination of an EDB's current profitability – as revaluation gains/losses are taken into account. However, without FCM, asset revaluations may be ignored and the choice of asset valuation method will impact on the determination of an EDB's current profitability. Again, Aurora considers that this latter approach is more consistent with outcomes under workable competition. Asset valuation also has a second order impact on setting the X-factor. The productivity analysis that underpins the X-factor uses asset values to weight factor inputs. However, for the 2010 reset of the DPP, the choice of asset value between IHC and ODV is unlikely to be significant for most EDBs.

The appropriate methodology for asset valuation will be considered in relation to the Commission's Input Methodologies workstream. Aurora suggests that the FCM concept, and its implications for regulatory processes (such as the determination of current profitability), also needs to be considered as an Input Methodology.

c. Productivity

Aurora continues to support the use of *Total Factor Productivity* in setting the rate of change (X-factor) under the DPP. TFP was used in the former threshold regime (for setting the B-factor). Aurora would be happy for this approach to be used in the DPP. However, the Commission proposes to expand the B-factor approach to a modified arrangement that reflects capital inputs as being sunk costs for the purposes of identifying changes in input prices. Aurora does not support this modified proposal on the grounds that it:

- increases complexity but not necessarily accuracy;
- departs from international practice on productivity based regulation; and
- undermines incentives for productivity improvement.

These are Aurora's initial concerns. Little detail has been provided to assist Aurora in understanding the implications of the modified productivity proposal. Aurora is still reviewing the proposal, and may submit additional details to the Commission.

d. Input methodologies

The Commission is proposing technical approaches in relation to assessing productivity, quality and other matters. These are substantive issues for resetting the DPP, and may have significant financial consequence for EDBs. As such they should not be left to the Commission's discretion, but should be considered as Input Methodologies.

It would provide greater certainty for EDBs that these approaches will not be changed at the next reset at the whim of the Commission. Aurora also notes that having such fundamental drivers of the DPP treated as Input Methodologies will leave open the option of financial redress (i.e. positive clawback) for EDBs if future changes to these input methodologies (say to determining X-factor productivity) need to be made because the previous approach was inappropriate.

e. Unintended consequences of the proposed reset

Aurora appreciates that the DPP is intended to be a generic and low cost regulatory method. This means that the Commission is not able to take into account the particular circumstances of each EDB, and target incentives accordingly. This will also mean that the Commission is generally unable to assess whether EDBs are efficient when resetting the DPP.

An unintended consequence of this is that the DPP may encourage EDBs to meet minimum standards of efficiency. In other words, EDBs may be as inefficient as they like – as the Commission is only targeting EDBs whose profitability is too high (even if that high profitability is as a result of improved efficiency).

To address this, Aurora again recommends that the Commission approach the DPP from the perspective of providing strong incentives for productive and dynamic efficiency, and allowing EDBs to benefit from efficiency gains.

At the same time as the Commission published its Discussion Paper on the 2010 Reset, it also published a consultation paper on Input Methodologies. Several of the issues addressed in this submission are also relevant to the Commission's development of Input Methodologies. Aurora intends to respond separately to the Commission's Input Methodologies consultation paper.

1 Introduction

The Commerce Commission (Commission) has published a Discussion Paper¹ setting out its preliminary views on the proposed content and form of the Default Price-quality Path (DPP) which is to reset the initial DPP that expires on 31 March 2010. Aurora Energy Limited (Aurora) welcomes the Commission's Discussion Paper, and has prepared this submission in response to the Commission's invitation for interested parties to comment on the Commission's views.

For the reset of the DPP, the Commission's main proposals are:

- separate price and quality paths (i.e. the same form as currently applies);
- the rollover of current (actual) prices on 1 April 2010;
- to defer P_0 adjustments until after input methodologies are determined; and
- to limit claw-backs to exceptional circumstances.

Aurora does not agree with the ongoing application of separate price and quality paths, as price and quality are inextricably linked in markets for goods and services – and electricity distribution services should not be an exception. However, in broad terms, Aurora considers the remaining proposals to be reasonable – given the need for the reset determination to be gazetted prior to 1 December 2009.

Given that Aurora has encouraged the Commission to integrate price and quality since 2004; it is not an acceptable outcome that the Commission is proposing to look at the introduction of an S-factor (to integrate quality in the price path) for the next reset of the DPP. Aurora would encourage the Commission to have an S-factor for the current reset. If that is not possible, then Aurora suggests that the Commission treat the integration of quality as an input methodology. Once the new input methodology is determined, the price path can be amended pursuant to s54K of the Commerce Act 1986 (the Act). In this way price-quality integration could be given effect before the next reset.

1.1 Purpose

The Commission has invited interested parties to make submissions on its preliminary views. Whilst broadly agreeing with many of the Commission's preliminary views on how the DPP reset is to be implemented, there are key elements in the Commission's proposals that Aurora is concerned with. In particular, these include:

- the Commission's interpretation and implementation of the new regulatory control principles;
- Financial Capital Maintenance and asset valuation;
- determining productivity;
- the need for additional input methodologies; and
- unintended consequences that may result from the proposed reset.

In this submission, Aurora addresses these concerns and provides responses to the Commission's specific questions.

¹ Commerce Commission; "Reset of Default Price-Quality Path for Electricity Distribution Businesses: Discussion Paper"; 19 June 2009.

1.2 Background

The Commission last engaged with EDBs (and other interested parties) on the setting of price and quality paths in 2003². This was in relation to the 2004 price path threshold under Part 4A of the Act (now repealed). With the passage of the Commerce Amendment Act 2008, the price path threshold became the initial DPP which was to apply from 1 April 2009 until 31 March 2010. Under the new Part 4 of the Act³, the Commission is required to reset the initial DPP for five years – commencing 1 April 2010. The Commission is required to publish a determination setting out the reset parameters by 1 December 2009.

On 30 March 2009, the Commission published a Process Paper on the DPP reset – to which Aurora responded. This set out the Commission’s intended process for the reset. A three stage process was envisaged – as follows:

- **Discussion Stage** – the Commission’s process for resetting the DPP commenced with its Process Paper, and was followed by its Discussion Paper (published 19 June 2009).
- **Decision Stage** – the Commission intends to provide its draft decision in September 2009, and after taking into account submissions, will publish its final decisions in mid-November 2009.
- **Drafting Stage** – finally the Commission will draft the final DPP determination and Gazette notice before 1 December 2009.

The Discussion Paper, published on 19 June 2009 is in respect of the First Stage. It is a high-level framework document – and there is no attempt by the Commission (at this stage) to set out the mechanics of resetting electricity prices.

1.3 Structure of this Submission

The remainder of Aurora’s submission is structured as follows:

Section	Description
2. Interpretation and Implementation of the new Regulatory Control Principles	... outlines Aurora’s concerns with the way the Commission has balanced pragmatism and allocative efficiency in the DPP reset proposals.
3. FCM and Asset Valuation	... highlights the concern that Financial Capital Maintenance is being applied to the DPP reset proposals in a manner that is not consistent with competitive sector outcomes.
4. Productivity	... sets out Aurora’s concerns with determining the productivity of the electricity distribution industry, and expresses reservations with the amended TFP formula.
5. Input Methodologies	... identifies that additional Input Methodologies are needed to provide ongoing certainty over the current and future resets.
6. Unintended Consequences of the Proposed Reset	... suggests that EDBs require strong incentives to improve efficiency, else the DPP may encourage EDBs to let efficiency slip.
7. Aurora’s Response to Specific Questions	... provides Aurora’s response to specific questions raised by the Commission in its Discussion Paper.

² The Commission also initiated a consultation process in 2008 for the reset of the price and quality thresholds on 1 April 2009. However, this process was interrupted by the enactment of the Commerce Amendment Act 2008, which repealed the Part 4A thresholds and introduced new regulatory control provisions (i.e. Part 4).

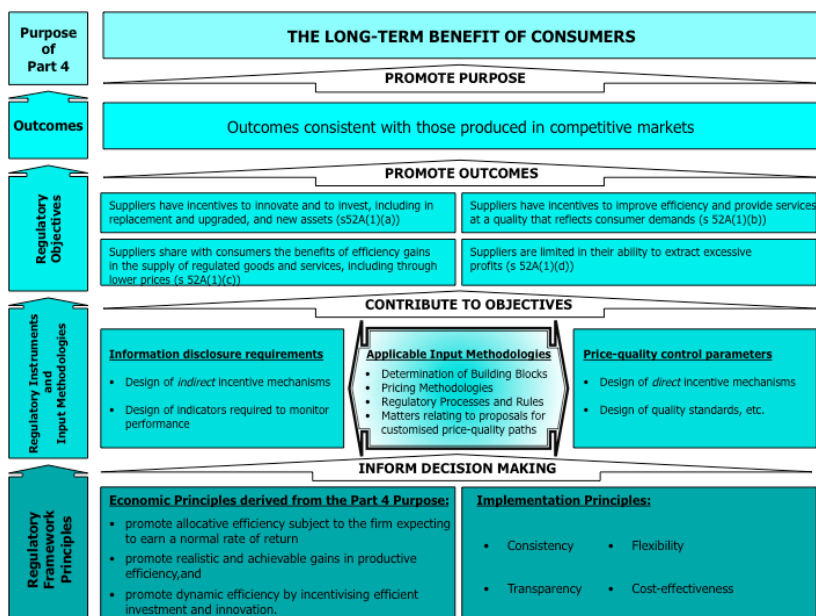
³ as introduced by the Commerce Amendment Act 2008

2 Interpretation and Implementation of the new Regulatory Control Principles

The Commission, in both the Discussion Paper and in its Input Methodologies Paper⁴ has set out its view of the Part 4 regulatory framework. The following diagram (from the Commission’s Discussion Paper) depicts this.

Aurora broadly supports this framework. However, two immediate concerns for Aurora are:

1. the input methodologies that the Commission seeks to determine are too limited to provide a real improvement in regulatory certainty.
2. the Commission continuing to regard economic efficiency in its allocative, productive, and dynamic forms as the fundamental economic principles that inform its decision making. Instead, Aurora contends that the principle of ‘*what happens in the competitive sector*’ should inform the Commission’s decision making. This is not just an issue of semantics – and Aurora provides examples (below) to demonstrate this.



Aurora is, however, encouraged by the Commission’s statement that “*none of these principles, however, outweigh the primacy of the statutory requirements*”⁵. This statement was made in relation to the Commission’s economic principles, its implementation principles, and the real Financial Capital Maintenance (FCM) concept / NPV=0 approach (which the Commission holds to be consistent with these principles). The important question is ‘what are the prime statutory requirements relating to the DPP’?

2.1 Prime Statutory Requirements

Aurora considers that the new Part 4 purpose statement, set out in s52A of the Act, marks a more significant shift in regulatory direction than has been reflected by the Commission in its Discussion Paper. Amongst other things, Part 4 of the Act requires:

- the Commission to promote outcomes consistent with workable competition; and
- the DPP to be set in a relatively low cost manner, and to contribute to the four regulatory objectives set out in s52A(1)(a) – (d) of the Act (which includes incentives for investment and innovation).

Adopting a standard of ‘*what happens in the competitive sector*’ marks a change from the previous Part 4A targeted control regime (now repealed) and the gas control inquiry where the Commission tended to rely on economic efficiency in its allocative, productive, and dynamic forms to inform its decision making. In Aurora’s view, the significance of the new regulatory purpose statement has not been recognised by the Commission.

⁴ Commerce Commission, “Input Methodologies – Discussion Paper”; 19 June 2009.

⁵ ibid (see para X13-X15)

2.2 Regulation Informed by Regulatory Framework Principles

Regulatory control pursuant to the DPP is intended to be a low cost regulatory option. It follows a *one-size-fits-all* approach – but in the case of a *'bad-fit'* a regulated entity may opt for a Customised Price-quality Path (CPP). In particular, the DPP controls prices and/or revenues through the setting of starting prices, determining the rate of change in prices over the regulatory period, and by setting separate or integrated quality standards. In keeping with the requirement for a low cost regulatory option, these price and quality parameters reflect a mix of both industry and EDB specific factors. Whilst there is no expectation that the DPP for each EDB would mirror their CPP, it would be inconsistent with the statutory purpose for the DPP to be a widespread *'bad-fit'* such that most or all EDBs felt compelled to seek relief via a CPP.

Given this, Aurora would expect the Commission to have greater regard to its implementation principles rather than its economic principles in setting the DPP. Pragmatism, rather than economic (or Pareto) efficiency under perfect competition will provide better 'direct incentive mechanisms' and will therefore make a greater contribution to the regulatory objectives under Part 4 of the Act. For example, it is recognised that a CPI-X price path on its own will not incentivise any investment or innovation that does not grow or maintain revenue, or is risky. This is because (in the absence of growth) revenue is fixed under a CPI-X arrangement and EDBs profit from reducing expenditure – not increasing it on investment or innovation. To achieve investment and innovation that provides more efficient outcomes, the Commission must counteract the disincentive inherent in CPI-X regulation. In Aurora's view, this can only be achieved by setting regulatory parameters to allow EDBs to share the efficiency gains.

On the one hand, the Commission has indicated that it will take into consideration various pragmatic factors in resetting the initial default price-quality path. These include:

- consideration of current economic conditions in setting rates of change;
- the use of time series cost data to ensure the determination of an EDB's current profitability is not 'unreasonable';
- a qualitative scenario-based assessment of projected profitability;
- the use of a returns band for determining the need for and magnitude of starting price adjustments; and
- limiting the use of claw-backs (following the post input methodology resettling of the DPP) to exceptional circumstances only.

On the other hand, there is a tendency for the Commission, and certain of its advisors, to pursue allocative efficiency – notwithstanding the legislative requirement to incentivise investment, and its own reasoning favouring an emphasis on dynamic efficiency⁶. Aurora is concerned that this proclivity will temper the Commission's pragmatism. This will adversely affect the 'direct incentive mechanisms' that contribute to the regulatory objectives. The areas that are of concern to Aurora include:

1. *Sharing of efficiency gains*

The Commission takes the view that starting price adjustments should be made to limit excessive profits and to share efficiency gains⁷. As a matter of principle, Aurora does not object to starting price adjustments having the purpose of limiting excessive returns. However, Aurora is concerned that the Commission is motivated by allocative efficiency rather than being motivated by providing ongoing incentives to achieve greater efficiency which is in the long term interests of consumers.

⁶ Commerce Commission; "Regulatory Provisions of the Commerce Act 1986: Discussion Paper"; 19 December 2008; para 183.

⁷ *supra* note 1 para 259

These incentives can be achieved by a more equitable sharing of efficiency gains – for example, through a form of efficiency carryover mechanism (ECM)⁸. In this regard, the Commission’s DPP proposals may be seen as inconsistent with the recommendations of Professor Franks who believes that EDBs should have strengthened incentives to achieve efficiency gains (through having a longer regulatory period)⁹ – as follows:

“One mechanism to strengthen incentives under such a scheme is to lengthen the regulatory period, which allows profits gained over a longer period to be retained.”

Lengthening the regulatory period is not a realistic option under the current legislation. However, Aurora believes that EDBs should benefit more from efficiency gains via a form of ECM. Arguably, an ECM (or at least a more equitable approach to the sharing of efficiency gains) is an aspect of the regulatory method that should be considered in the development of input methodologies.

2. *The treatment of sunk costs in assessing productivity*

The Commission’s tendency to fall back on allocative efficiency is demonstrated through its ‘endorsement¹⁰’ of an amended Total Factor Productivity (TFP) formula. These amendments seek to:

- reflect the difference between sunk and variable costs in determining the input price differential (between the electricity distribution industry and that of the wider economy); and
- address excessive profits (i.e. cost and revenue differences).

The amendments have been made in an attempt to account for sunk costs and the FCM concept. Aurora notes that regulatory opinion is divided on the issue of sunk costs – with some arguing that it is allocatively efficient for sunk costs to be ignored. Others, including the Commission in its approach to date, have tended to take dynamic efficiency considerations into account – which Aurora agrees with. For instance, the Commission has stated:

“If sunk assets were to be valued at their current opportunity cost, and this valuation of the RAB was to be used as the basis for regulated prices, then the regulated firm would only realise a return in the period in which the capital cost was incurred; it would be unable to make a return in subsequent years. The asset would consequently become ‘stranded’ (i.e., incapable of earning a normal return), and yet be so specialised as not to be employable productively in other uses. If this were to happen, investors might be unwilling to replace the asset when it wears out, believing that the value of their future investments would also be expropriated. Continuity of supply would therefore be put in jeopardy if sunk assets were valued at their current opportunity cost, which would not be consistent with promoting dynamic efficiency.”

“... the initial RAB should not be ... too low, such that efficient sunk capital does not generate at least a normal economic return, as this might dampen incentives for investment in the future, which would not be to the long term benefit of consumers ...”¹¹

⁸ Under the proposed approach to resetting the DPP, firms that continue to achieve efficiency gains, will give up all these efficiency gains (i.e. an extreme form of sharing) by virtue of being returned to the top of the ‘return band’ at each regulatory reset.

⁹ Franks, J., Lally, M., Myers, S.; “Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology”; 18 December 2008; para 11.

¹⁰ The Commission refers to the amendments as a theoretical improvement. However, in footnote 207 of the Discussion Paper, the Commission acknowledges that it has not undertaken an in-depth review of the technical report developed the amended TFP approach.

¹¹ *supra* note 6 para 269, 279.

Aurora is, therefore, unsure why the Commission is seeking to include sunk cost (i.e. allocative efficiency) considerations in a metric that is intended to promote productive efficiency. In Aurora's view, the amended TFP approach is overly complicated, and as a consequence will reduce efficiency rather than incentivise it. In addition, Aurora suggests that this, being one of several ongoing 'improvements' to the TFP approach, will erode confidence and support for such productivity measures – as they are tantamount to admissions that the previous approach was wrong¹².

Aurora's broader concerns with the proposed amendments to the TFP formula are detailed in Section 4 of this submission.

In summary, the relevant point is that the Commission may be undermining a key incentive for achieving productive efficiency through a poorly conceived attempt to improve allocative efficiency (which is deemed to be in the interests of short term consumer welfare). As before, the Commission should be ensuring the regulatory instrument is providing incentives aligned with the regulatory objectives.

3. Ongoing financeability

The Commission is proposing a reasonably pragmatic approach to starting price adjustments. This approach is welcomed by Aurora. However, the combination of the X-factor, P₀ adjustments, reliability commitments and investment may from time to time create an adverse financial operating environment for those EDBs with funding commitments. At best this may result in a curtailing of investment programmes. At worst it may result in unsustainable financial outcomes.

Either of these outcomes represents asymmetric risk to consumers. The Commission clearly links asymmetric risks to 'rates of return' – for instance:

*“... if the allowed rate of return is set too low, incentives for firms to undertake efficient, welfare-enhancing investment will be distorted. As a general principle, the Commission considers that the social costs of setting allowed returns too low likely outweigh the social costs of setting them too high.”*¹³

Aurora suggests that the Commission's approach to starting price adjustments should include a 'financeability test'. However, the Commission does not appear favourably disposed towards such tests¹⁴. This may be because EDBs have the option of seeking a CPP if the DPP proves incompatible for their circumstances.

Aurora argues that having to resort to a CPP should be the exception rather than the rule. In any case, the DPP provides a framework for the Commission to undertake financeability tests and, where appropriate, provide relief. The relief may be by way of:

- a smaller downwards P₀ adjustment (or even an upwards P₀ adjustment); and/or
- an adjustment to the X-factor (as pursuant to s53P(8)(a) the Commission can set an alternative X-factor for an EDB to minimise financial hardship).

The Commission, quite reasonably in Aurora's view, suggests that its proposal for profitability scenarios and a returns band may avoid financial hardship outcomes. However, the Commission displays a reluctance to move from the fundamental tenets of allocative efficiency – for instance:

¹² In addition to the current proposed amendments, the Commission proposed resetting the price path threshold in 2009 with an amended MTFP approach. These amendments would have had a significant impact on the relative productivity of individual EDBs.

¹³ Commerce Commission; "Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital"; 19 June 2009; p13.

¹⁴ *ibid* (see para 55)

“... The Commission estimates the cost of capital using market data, therefore, in principle, there should be no compelling reasons to adjust the cost of capital. As such, adding a financeability margin to the allowed rate of return would violate the NPV = 0 principle. However, the Commission recognises that the estimates of the parameters that make up the cost of capital are subject to errors, and in situations where conditions are very uncertain, financeability analysis can inform judgements on the appropriate conclusions. As a result, there may be occasions where an adjustment to the cost of capital could be appropriate.”¹⁵

Given the Commission’s recognition of the asymmetric risks, Aurora believes that the Commission should err on the side of caution with setting the P₀ adjustment and X-factor. It is clear that Parliament intended the Commission to be able to adjust the generic DPP if financeability were an issue. Aurora also notes that the downside risk to consumers – from a cautious approach – is low. At most, any relief would amount to less efficiency gains being shared with consumers over the current regulatory period. This does not constitute a major shift of value to EDBs, but may result in significant long term benefits to consumers.

4. The treatment of revaluation gains in assessing profitability

Aurora does not accept the Commission’s proposed treatment of revaluation gains/losses is consistent with workable competition. In determining current profitability this amounts to an artificial contrivance, based simply on the Commission’s Financial Capital Maintenance (FCM) concept¹⁶. In the competitive sector, firms do not have their capital maintained, and are therefore incentivised to manage the risks and returns of asset ownership. This enhances productive efficiency. Further, by fixing returns to the original historical cost of assets, the Commission may limit the upside incentives from investment. This (arguably) undermines dynamic efficiency, and acts as a disincentive to further investment and innovation. In the competitive sector, asset management decisions are based on minimising the lifecycle costs of assets used in service delivery. These decisions need to be based on knowledge of real costs and prices, and need to be backed by a regulatory framework consistent with this.

Aurora’s broader concerns with the FCM concept are detailed in the next section of this submission. In summary, however, the Commission’s treatment of revaluation gains in determining current profitability demonstrates allocative efficiency being promoted ahead of productive and dynamic efficiency.

¹⁵ *ibid* (see para 57)

¹⁶ i.e. NPV=0 over the life of an asset.

3 FCM and Asset Valuation

Aurora is concerned that the Commission has seemingly adopted the FCM concept as a regulatory standard¹⁷ without this being properly considered as part of the input methodology process. For instance, the Commission notes that the expected Net Present Value of an efficient investment should be zero, and further suggests that this should apply to efficient firms in a workably competitive market¹⁸. Under this approach the firm's financial capital is maintained in real terms (where the discount rate takes into account inflationary expectations). In practice, however, Aurora notes that firms operating in workably competitive markets will derive *actual* investment returns that are different to their *expected* returns.

Whilst such outcomes are available under workable competition, they are not (other things being equal) available under FCM. Instead, the FCM concept delivers outcomes consistent with asset values not having changed from their original historical cost. However, one cannot pretend that assets have not changed in value – if in fact they have actually changed in value. In the case of increasing values, if EDBs cannot realise this value through higher prices or a sale of the assets, then the incremental value has been transferred to consumers. This would be unconscionable, if it were not for the fact that the opposite applies when assets decline in value.

This suggests that the FCM concept may in fact be 'acceptable' as a hedge. The Commission is essentially writing a hedge between asset owners and consumers to protect against asset value volatility. However, Aurora does not believe that the Commission should impose this hedge without the merits being fully debated. Some of the issues connected with FCM are:

- Value may be transferred between consumers and asset owners – i.e. for the FCM 'hedge' to be fair to all parties it is necessary for the value of assets to have an equal chance of both appreciating and/or declining in value. Aurora is not convinced that the probabilities are equal.
- Cash flow difficulties may result – i.e. where assets have an appreciating trend, there is the danger that reducing the current year revenue requirement by the amount of the revaluation gain will leave the business with short term cash flow problems.
- Less volatile / more certain prices – i.e. in determining the revenue requirement the value of the asset base is fixed at its original investment cost. Returns of and on investment are therefore more stable.
- Asset valuation – FCM is inextricably linked to asset valuation. This is discussed more below.

Aurora strongly believes that different valuation methods are suited to different purposes. For instance, in the case of regulatory outcomes, asset values should be reflective of their replacement cost as this is important for ensuring efficient investment occurs. However, in adopting FCM the Commission finds itself in a position that several different asset valuation methods are deemed equally acceptable for the purposes of regulatory control. As a consequence, there may be less rigour in the selection of a regulatory valuation method. Firms then find it convenient to use this valuation method for other commercial purposes. As a result, FCM may undermine commercial disciplines that are dependent on the 'right' valuation method for superior asset management, the management of asset lifecycle costs, and investment decisions. Given the long life nature of electricity distribution assets, inappropriate valuations may precipitate significant inefficiencies – including poor asset management outcomes.

¹⁷ supra note 13 para 32

¹⁸ supra note 6 para 190

In relation to the DPP, this means that the choice of asset valuation method has no impact on the determination of an EDB's current profitability under the Commission's proposals (which include FCM). This is because revaluation gains/losses are taken into account. The Commission is proposing to use an indexed historical cost method (IHC) which adopts the 2004 ODV as the starting value and will then roll this forward on an indexed basis. In the past the Commission was more likely to have used ODV values. However, without FCM, asset revaluations may be ignored and the choice of asset valuation method will impact on the determination of an EDB's current profitability. Again, Aurora considers that this latter approach is more consistent with outcomes under workable competition.

Asset valuation also has a second order impact on setting the X-factor for the DPP. The productivity analysis that underpins the X-factor uses asset values to weight factor inputs. However, for the 2010 reset of the DPP, the choice of asset value between IHC and ODV is unlikely to be significant for most EDBs.

The appropriate methodology for asset valuation will be considered in relation to the Commission's Input Methodologies workstream. Aurora suggests that the FCM concept, and its implications for regulatory processes (such as the determination of current profitability), also needs to be considered as an Input Methodology.

4 Productivity

Productivity measures the efficiency with which firms transform inputs into outputs. From a regulatory perspective, it is desirable to have regulated utilities operate in a socially efficient manner. Incentivising regulated firms to improve their productivity may achieve this. Aurora supports improving the efficiency of the electricity distribution sector, but also acknowledges the difficulty in finding the right measure of productivity to achieve this. In fact, Aurora suggests that there is no right measure of productivity that could be used across the industry to accurately measure the efficiency with which firms transform inputs into outputs. For instance:

- Partial Productivity measures (e.g. operating expenditure, or labour cost per unit of output) may indicate whether efficiency has improved over time or relative to other firms. They are relatively simple measures, and can provide useful insights. However, any partial productivity metric may be misleading as it ignores ‘other’ factors of production which may, for example, have been worsening.
- Total Factor Productivity on the other hand provides a more holistic measure of the firm’s transformation of inputs to outputs. However, TFP is a more complicated measure of productivity. Accurately identifying the outputs of a firm is problematic. Management may have limited ability to influence most inputs (at least in the short/medium term). In addition, efficiency is not the only factor driving TFP changes. Economies of scale, market power, and changes in the economic environment have an influence. The regulation of productivity may also trigger an artificial ‘self-fulfilling’ increase in productivity.
- Non-parametric techniques such as Data Envelopment Analysis (DEA) have been used in some regulatory jurisdictions (particularly in Europe) to help explain the constituent components of productivity growth. However, the validity of such techniques depends on the correct specification of the underlying cost or production functions.

In any case, even if a measure that accurately represented the overall productivity of the industry could be determined, it is questionable whether such a measure will convey incentives to individual firms for them to operate in a socially efficient manner.

4.1 Total Factor Productivity for Informing the X-factor

Under the former Thresholds Regime, the Commission adopted a TFP approach to measuring productivity. Aurora accepted (with some minor reservations) the use of TFP in comparisons for setting the industry-wide B-factor. However, in Aurora’s view, the previous and associated use of MTFP was deficient. In particular, there did not appear to be any logical basis for the productivity rankings attributed to Aurora and many of its peers. Aurora regards itself as one of the most efficient EDBs, and this may be shown to be the case using many traditional measures of efficiency (particularly where prices and quality are taken into consideration). Aurora’s past criticism of MTFP (and, to a lesser extent, TFP) related to:

- the lack of an output variable for ‘quality’;
- the failure to adequately normalise for external/environmental factors¹⁹;
- having a metric being based on technical efficiency; and
- ‘black-box’ outcomes that left EDB management unclear as to how they could/should respond²⁰.

¹⁹ Aurora notes that the normalisation of variables is considered desirable by the Commission’s advisors (although how they propose to do this is not clear) – refer to footnote 23.

²⁰ Aurora notes (Discussion paper – footnote 207) that the Commission is not fully clear as to the implications of its advisor’s recommendations.

The Commission no longer intends to use MTFP, but considers TFP based productivity analysis to remain appropriate for use in setting the X-factor. It would appear that the Commission intends to broadly follow the former *B-factor* approach for setting the DPP's rate of change – albeit with the following amendments (based on recommendations from its advisors):

- including transformer capacity as part of the system capacity 'output' for the electricity distribution sector;
- treating capital inputs in the electricity distribution sector as sunk costs with their rate of price change being set by reference to allowable amortisation charges (that are ideally consistent with both FCM and user benefit²¹);
- valuing assets at indexed historical cost (with the 2004 ODV as the base) for the purposes of deriving asset specific input shares / input weights for the TFP analysis; and
- allowing for the change in specific input prices (which will provide some relief to EDBs whose operating costs are increasing at a differential rate to most other input prices in the economy).

Aurora continues to support the use of TFP in a conventional 'B-factor' sense for setting the rate of change (X-factor) under the DPP. However, little has been provided in terms of implementation detail to assist Aurora in understanding the implications of the current Commission's proposals. For instance, the Commission has not yet indicated whether it proposes to include data from all EDBs in its analysis, or just those EDBs that the 'consumer-owned' exemption does not apply to.

Aurora is still reviewing the implications of the amendments that the Commission has proposed. Given the limited time Aurora has had to consider these highly technical areas, the comments that Aurora makes in this submission in relation to productivity are Aurora's initial views. Aurora is also awaiting the findings of a review commissioned by the Electricity Networks Association into the Commission's productivity proposals. The extent to which Aurora supports the proposed amendments to the B-factor is not clear at this point. However, Aurora welcomes the possibility the Commission may normalise the TFP data series to improve its application. In this regard, the Commission's advisors state:

"When regulation involves several firms and past average rates of technical progress or of TFP growth are used in setting a common rate of change going forward, then the measurement of these rates becomes critical. In particular, the use of average TFP growth rates across a number of regulated firms can create an uneven playing field since the ingredients which go into TFP growth, as shown in the accompanying technical report, can contain [operating environment variables] which are beyond the control of the individual regulated firm." ²²

In the technical report²³, the Commission's advisors noted that adverse operating environment conditions would result in higher costs / lower productivity levels. This is not just relevant to inter-firm comparisons (e.g. MTFP), but is also relevant to the setting of an industry-wide X-factor based on the average TFP of the industry. For instance, adverse operating environment conditions will limit the opportunity for future productivity growth, and will need to be allowed for in price regulation. It was suggested that these operating environment variables would include some or all of:

²¹ 'User benefit' is defined as the marginal saving in operating expenditure resulting from increasing sunk capital by a single unit – whilst output is held constant. This has application to surplus network capacity as user charges are low when capacity utilization is low, and the charges increase with higher utilisation.

²² Diewert, E., Lawrence, D., Fallon, J.; "Asset valuation and productivity-based regulation taking account of sunk costs and financial capital maintenance" Report prepared for Commerce Commission; Economic Insights; 11 June 2009; p vi.

²³ Diewert, E., Lawrence, D., Fallon, J.; "The theory of network regulation in the presence of sunk costs" Technical report prepared for Commerce Commission; Economic Insights; 8 June 2009; p 76.

- differences in energy density and customer density;
- the terrain that the grid must travel over;
- weather, fire and earthquake risks to the grid;
- the peak load the grid must handle; and
- the reliability level the service is required to meet.

Normalising for quality may address the issue of quality not being included as an output. Normalisation can occur in relation to either the inputs or outputs. In the past, Aurora contended that the Commission's use of TFP analysis was flawed as (the input) variables had not been normalised.

Aurora does not support the proposed amendment that treats capital inputs in the electricity distribution sector as sunk costs. The rationale for this is provided in the next section.

4.2 Capital Costs as Sunk Costs

The Commission's advisors have sought to expand the conventional *B-factor* approach used in productivity based regulation to a modified arrangement that reflects capital inputs as being sunk costs for the purposes of identifying changes in input prices. The modified arrangement also includes terms relating to excessive profits. However, the Commission has indicated that these latter terms would be ignored – as the Commission proposes to make EDB-specific adjustments to each EDB's starting prices²⁴.

Aurora does not support this modified arrangement on the following grounds:

1. *The amendments are unlikely to provide a more reliable estimate of productivity gains for the industry*

Aurora contends that the amended TFP formula is likely to increase the X-factor, but without necessarily providing a more reliable estimate of the productivity gains the industry is capable of achieving.

The former B-factor analysis and the proposed analysis are based on similar assumptions. For instance, the choice of inputs, outputs, and input weights²⁵ that directly affect the industry and economy-wide TFP comparisons are essentially the same. To the extent that these assumptions are not robust, the productivity outcome will be unreliable. In particular, the choice of output variables will have a significant impact on what TFP growth is determined. For instance:

"If a common rate of productivity growth is to be used in setting the price cap when regulating a group of firms using productivity-based regulation, then output specification becomes critical since different output concepts can lead to very different estimates of both technical progress and TFP growth. In particular, it is necessary for the output measure to capture as fully as possible what regulated services are being provided by the firms in the group, independently of the institutional and historical factors that determine how the firms happen to charge consumers. As well as it being necessary to use comprehensive measures of output in this instance, it will also be necessary to use output cost share weights rather than revenue weights in forming the productivity measure." ²⁶

The modified proposal, by simply adding assumptions to assumptions, is unlikely to increase the overall accuracy of the productivity analysis by any order of magnitude. In any case, the Commission proposes to make simplifying assumptions that *costs equal revenue*. Aurora has no particular view on the expedience of this simplification – except to question the need for a complex TFP formula in the first place if it is to be 'undermined' by simplifying assumptions.

²⁴ Discussion Paper – para 326

²⁵ although a different asset valuation method is proposed

²⁶ supra note 22 p vi

The major impact will be in relation to input price differentials (i.e. the change in prices in the economy compared with price changes in the industry). However, given that the rate of change in input prices for the industry will be determined²⁷ for each EDB but average outcomes will be applied at the industry level, it is unlikely that a more accurate indication of productivity will result. In fact, the overall consequence is likely to be an increase in the X-factor, as the change in input prices for sunk capital costs is likely to be low when surplus network capacity exists.

2. *The proposed amendment is inconsistent with the statutory purpose*

The Commission's advisors have sought to formulate the whole DPP in a single equation²⁸. The amended TFP formula, however, is referenced to a 'consumer welfare' paradigm that is arguably inconsistent with the Part 4 statutory purpose. For instance, the Commission's advisors claim that "*the role of the regulator in this model is to improve the welfare of households in the economy*"²⁹. A regulatory model based on a consumer welfare paradigm will tend to prioritise lower prices and redistribute value to consumers. Aurora suggests that this is also the rationale for the amended TFP formula – as evidenced by its emphasis on sunk cost concepts, FCM, and the return of past excess profits to consumers. Aurora is unaware that such policies exist, and notes that in the past, the Electricity Commission has excluded benefits that arise merely as a transfer from producers to consumers.

The statutory purpose set out in Part 4 is that of *long term benefit of consumers*. Under conditions of perfect competition, consumers benefit in the long term from economic efficiency – where consumer and producer surpluses (in total) are maximised. Under the standard of workable competition, similar outcomes are expected. There is certainly no expectation that value should be redistributed to consumers.

Another potential inconsistency between the amended TFP formula and the provisions of Part 4 exists. This is in relation to the term for excessive (past) profits. Under the DPP, profitability is addressed by adjustments to starting prices. The Commission suggests that the amended TFP formula may be appropriate if it were unable to undertake a starting price adjustment. The legitimacy of this is not clear – as the Commission would be substituting the proposed approach for adjustments to starting prices, BUT the legislation prohibits the use of past profitability in adjusting starting prices. Aurora notes that this may be a moot point as the Commission proposes to ignore the two profit terms that have been included in the amended TFP formula.

3. *The proposed amendment departs from international practice*

Aurora notes that the *B-factor* approach to using TFP analysis is consistent with the underlying theory of Productivity (Index) Based Regulation (PBR). This theory is based on the premise that the proportional change in industry revenue should follow the proportional change in industry costs. PBR uses a CPI-X approach for resetting prices. The X-factor represents the rate of productivity change expected, and may be restated as the sum of two differential terms – these being:

- the difference between the industry's TFP growth, and that for the economy as a whole; and
- the difference between the input price changes in the economy and input price changes for the industry.

Proposals for PBR in Australia have essentially followed the same approach that was adopted as the B-factor in New Zealand for the former threshold regime.

²⁷ In reality, these are likely to be estimated or approximated rather than determined.

²⁸ Discussion Paper – para 326

²⁹ supra note 23 p 1

This is not to say that the amended TFP formula is without any international support. Aurora notes:

*“To measure TFP, economists traditionally utilize the long-run price of capital services. ... for the purpose of regulation, the shadow rent on capital, which is the short-run measure of the value of capital services, is more appropriate.”*³⁰

Israilevich notes a Utility maximises profit through the choice of input factors. When returns are fair, prices equal average cost, and changes in average costs can be decomposed into changes in input factor costs and changes in TFP. However, when the price of capital does not reflect the fair rate of return on capital – as a result of unutilised capacity – then estimates of average cost and TFP will be incorrect. The deviation of revenue and cost (or the ratio of profit to cost) reflects the capacity bias on TFP. According to Israilevich, capacity bias is likely to be of most concern when comparing the TFPs of regulated and unregulated industries. For unregulated industries, the deviation of revenue and cost is likely to coincide with business cycles, whereas for regulated industries, the deviation of revenue and cost is more likely to coincide with the regulatory cycle.

At first sight, these considerations appear to support the approach adopted in the amended TFP formula. However, Aurora notes:

- the regulatory cycle in Ohio (where the research was undertaken) was related to rate of return regulation. This is not directly comparable with the regulatory regime in New Zealand – where due to the thresholds regime and limited number of resets, the deviation of revenue and cost for EDBs is (arguably) more likely to be correlated with the business cycle; and
- it was indicated that, contrary to common practice, TFP comparisons across regulated and unregulated sectors required consideration of both capacity utilisation and regulatory lag effects.

Whilst Aurora is not in a position to state categorically just how comparable the economy-wide TFP is with the EDB regulated TFP, the findings of Israilevich suggest that the Commission’s amended TFP formula still fall short of the ‘theoretical improvement’ sought by the Commission³¹.

4. *The proposed amendment constitutes bias against the electricity distribution sector*

Sunk costs are not unique to EDBs. The Commission’s advisors cite the presence of sunk costs in numerous industries – including electricity transmission, pipeline networks, telecommunication networks, roads, water supply systems, and railway lines³². Aurora notes that the Commission’s advisors have not proposed that input prices for the broader economy should also be adjusted to reflect sunk cost considerations.

5. *The new approach will undermine incentives for productivity improvement*

PBR is intended to provide incentives to optimise the choice of input factors – i.e. particularly in a productive efficiency sense. The Commission’s advisors state this as follows:

“In other words, we need to recognise that the firm’s relevant decision making options each period are to alter its level of opex given the quantity of sunk investments it has that period. It can opt to change that level of sunk investments gradually over time by undertaking additional investment or allowing the existing stock to run down but it cannot treat capital stocks as freely variable from period to period as has been the implication of past theory developed in this area.”

³³

³⁰ Israilevich, P.; “Total Factor Productivity and Electric Utilities Regulation” Working Paper of the Federal Reserve Bank of Cleveland; December 1985.

³¹ See Discussion Paper para 325

³² supra note 23 pp 34, 46

³³ supra note 22 p v

Aurora, however, suggests that the amended TFP formula may be unsuccessful in incentivising productivity – for much the same reasons as the former MTFP approach was unsuccessful. This is because the amended TFP formula is overly complex and so management cannot readily associate decisions they make with the implications for the X-factor in the future (i.e. cause and effect).

6. *Intended to be an industry-wide measure not EDB specific*

One of the reasons why management cannot readily associate decisions they make with the implications for the X-factor is because the final TFP outcome is an industry level metric. As a result, any firm specific initiatives may be outweighed / dominated by the input and output considerations of all other EDBs.

The amended TFP formula exacerbates this – requiring firm specific information on input prices. In the end, this is amalgamated to form an industry level X-factor. Aurora notes that this is a recipe for free-riding. In particular, there is no strong incentive on any single EDB to incur the costs of improving productivity. If other firms do not follow suit, then the EDB's efforts are in vain. If other firms do improve productivity, then by doing nothing the EDB can benefit at the expense of others.

5 Input Methodologies

The idea of input methodologies is to promote greater certainty and reduce the discretion the Commission has. Therefore, of more immediate importance/relevance to the EDBs, such as Aurora, that are subject to price path regulation, is how the Commission may be proposing to give effect to the default price/quality path. This may require assessments of productivity and future profitability – and possibly also quality.

The Commission is proposing technical approaches in relation to assessing productivity, quality and other matters. These are substantive issues for resetting the DPP, and may have significant financial consequence for EDBs. As such they should not be left to the Commission's discretion, but should be considered as Input Methodologies.

This would provide greater certainty for EDBs that these approaches will not be changed at the next reset at the whim of the Commission or its advisors. Aurora also notes that having such fundamental drivers of the DPP treated as Input Methodologies will leave open the option of financial redress (i.e. positive claw-back) for EDBs if these input methodologies (say to determining X-factor productivity) are successfully appealed – and the provisions of s53ZB of the Act apply.

In this regard, the Commission's Discussion Paper would have benefitted from a more comprehensive discussion on options/preferences for:

- the process for profitability analysis (including the partial building blocks method, and FCM principles) that the Commission may adopt;
- the process for identifying sector productivity;
- approving capital expenditure (e.g. growth and/or reliability);
- integrating price and quality;
- when may the Commission use a revenue path as opposed to a price path; and
- the process for sharing efficiency gains.

Some of these issues constitute *Regulatory Guidelines* whilst others are *Implementation Specifications*. Aurora believes that early consideration of the above issues in the process for determining input methodologies will provide more certainty for electricity distribution businesses that are subject to the default price/quality form of regulatory control. Given the tight timeframes, this is likely to require prioritisation by the Commission, and accordingly, Aurora accepts that input methodologies for other forms of regulatory control (i.e. negotiate/arbitrate and individual price/quality) are less important – as it may be some time before these other forms of regulation are utilised by the Commission.

6 Unintended Consequences of the Proposed Reset

Aurora appreciates that the DPP is intended to be a generic and low cost regulatory method. This means that the Commission is not able to take into address the particular circumstances of each EDB, and target incentives accordingly. This will also mean that the Commission is generally unable to assess whether EDBs are efficient when applying resetting the DPP.

An unintended consequence of this is that the DPP may encourage EDBs to meet minimum standards of efficiency. In other words, EDBs may be as inefficient as they like – the Commission is only targeting EDBs whose profitability is too high (even if that high profitability is as a result of improved efficiency)!

To address this, Aurora again recommends that the Commission approach the DPP from the perspective of providing strong incentives for productive and dynamic efficiency, and allowing EDBs to benefit from efficiency gains. In other words, these incentives demonstrate to EDBs that they (and consumers) will be better off if they improve their efficiency. An ECM (per an input methodology) used in conjunction with this will further demonstrate that the Commission is committed to rewarding the creation of efficiency gains that are of benefit to suppliers and consumers alike.

7 Aurora's Response to Specific Questions Raised by the Commission

In addition to the general comments that have been made previously, Aurora provides the following response to questions raised by the Commission in the Discussion Paper.

Question 1

How might genuine innovations be rewarded under a DPP?

As indicated previously in this submission, a Default Price Path (DPP), as currently proposed by the Commission, has as much potential to stifle innovation as it has the potential to reward (and therefore incentivise) innovation.

Innovation is inherently risky, requiring a change in how existing assets are operated and/or investment in new assets. However, potential rewards for the economy as a whole (consumers and investors) are the offset to these risks.

Whether pursuant to a DPP or CPP, it would be advantageous if the Commission were to facilitate innovation by allowing, in relation to the existing asset base, accelerated depreciation or recompense for stranded assets. It is also important that the Commission allow the rewards to be shared – including through higher returns for EDBs in respect of innovations that (intend to) benefit consumers with lower prices, improved quality, and greater options. It is not clear that the DPP supports this.

The Commission has indicated that it will consider the integration of price and quality at a future reset. Aurora favours such integration. However, for the time being, the Commission must adopt a cautious approach in resetting the DPP and in subsequent consideration of a P_0 adjustment.

Question 2

Are there any other economic principles you believe are relevant to the DPP reset?

Aurora does not believe that the Commission has identified economic principles that meet the statutory requirement for outcomes to be consistent with those produced in competitive markets. In Aurora's view, the Commission should have greater regard to whether the accounting and financial performance of EDBs is similar to that of businesses in the competitive sector. Aurora fully supports the need for EDBs to be efficient, but in a pragmatic rather than theoretical sense.

The Commission continues to regard and promote allocative, productive, and dynamic efficiency as the core economic principles for Part 4 of the Commerce Act 1986. The Commission needs to temper these economic principles by having greater regard for EDB cash-flows. In particular, the Commission's approach to allocative efficiency is contentious. The Commission rationalises lower prices on the basis of allocative efficiency (e.g. in the case of sunk costs, asset valuation, and the overarching FCM concept). However, Aurora questions whether such an approach is in fact allocatively efficient. The Commission should be aware that in other jurisdictions (e.g. in South Africa and in Canada) where historical costs (i.e. FCM by default) have been used as the basis for justifying low prices, that inefficient and potentially unsustainable electricity demand has resulted. Arguably the Commission's approach under the DPP could also result in outcomes that are not allocatively efficient.

Question 3

What are your views on the Commission's proposal to have a single section 52P determination, which specifies requirements for each EDB?

Aurora has no particular view on this.

Question 4

What are your views on the timeframes relevant to the DPP reset?

The reset of the DPP, as proposed, will result in additional work for Aurora and its auditors. The new requirement to prepare and audit annually the base quantities will result in significant additional work plus additional effort will be required around the quality path. Aurora believes that the present 35 day period should be extended to at least 45 days.

Question 5

Are there any other relevant timeframes that should be included in a Determination, but have not been discussed in this paper?

Aurora has no particular view on this.

Question 6

What are your views on the proposed additional content of a Determination set out above? Are there additional matters that should be considered for inclusion?

Aurora has no particular view on this.

Question 7

What are your views on the Commission's proposed approach for meeting the section 54Q requirements for promoting incentives, and avoiding disincentives, for investment in energy efficiency and demand-side management under Part 4?

Aurora accepts that the inclusion of energy efficiency incentives in the DPP may be problematic – as the DPP is a rather generic regulatory instrument. As such it will be difficult to target/promote firm specific initiatives, or differentiate energy efficiency outcomes (e.g. demand savings) from other underlying trends (e.g. less consumption during a recession). However, whilst it may be difficult to incorporate incentives for energy efficiency into the DPP, it is nonetheless important that the Commission does not reset the DPP in a way that undermines (or creates disincentives) for energy efficiency.

In considering the form of incentive scheme to be implemented, the key issue is the incentive being offered. From a practical standpoint this requires compensation for costs incurred, compensation for lost revenues, and incentives to actually establish a program.

From a regulatory economics perspective, there are three classes' of incentives meriting consideration:

- *Shared savings* – these are incentives that would reward a company on the basis of the net benefits achieved by the initiatives;
- *Bonuses* - which reward energy and capacity savings achieved, assuming some form of “cost effectiveness” test has been met; and
- *Mark-ups* - which provide a return greater than the cost incurred and therefore reward spending, for example on information campaigns where the benefits are known but measurement is problematic.

Two major problems exist with any incentive scheme; first, the requirement to accurately identify the benefits achieved and second, the desire by regulators to impose either or both caps on earnings and losses. Given these potential problems, the ability of shared savings incentive schemes can be compromised by inaccurate specification of net benefits and also by any caps placed on programs. Because bonus schemes require the use of a test to ensure cost effectiveness, the use of such schemes can create potentially major regulatory burdens when compared with an alternative such as shared savings. Schemes that use mark-ups are vulnerable to problems of information asymmetry, leading to possible abuse by companies, although their simplicity may warrant their use in circumstances where benefits are hard to measure.

Furthermore, there are several key aspects relating to the design of an incentive scheme that need to be considered:

1. The appropriate quantity to reward - net benefits achieved (to society or consumers), energy or capacity saved (MWhs or MWs), or money spent;
2. The expected incentive payment - based on expected performance;
3. The slope of the incentive payment curve – the marginal incentive rate;
4. The use of earnings caps and penalty floors to reduce the risks arising from high or low levels of performance;
5. Aggregate or individual incentive schemes – one scheme for all initiatives or separate schemes for each initiative; and

6. Treatment of hidden costs - in setting what might be considered as a “fair incentive”, careful consideration must be given to any hidden costs faced by the distribution company; the expected payment must provide adequate compensation for such costs.

Aurora agrees that it is imperative for the Commission to take a cautious approach on the issues of energy efficiency and demand side management (DSM). Rather than rushing to include ill conceived incentives into the DPP for the April 2010 reset, it would be appropriate to consider more fully how energy efficiency and DSM affect EDBs. Generally, however, energy efficiency and DSM will add costs to EDBs and/or reduce their revenue – whilst providing savings to end consumers and the economy as a whole.

As alluded to above, the DPP is not the easiest of regulatory instruments to include energy efficiency incentives – as by nature the DPP is to be of a ‘low-cost’ generic nature. As with the former price path threshold, a CPI-X approach tends not to encourage ongoing investment (as that is not rewarded by the price path). With the DPP, Aurora has concerns that improving energy efficiency by EDB will actually be penalised under the Commission’s proposed approach to ‘rates of change’. If the ‘technical efficiency’ of the EDB sector improves, then this is likely to be reflected as the productivity of EDB improving relative to the economy as a whole. Whilst this is a good thing, it would be a perverse outcome for EDBs to be penalised with a higher X-factor as a result (especially if the improvements imply a higher cost structure for EDBs).

Question 8

The Electricity Commission is currently undertaking work in a number of areas relevant to electricity distribution services, which is yet to be finalised. What do you consider to be the potential impact of the Electricity Commission’s work on the Reset DPP?

With specific reference to the DPP and pricing methodologies, Aurora notes that the revenue requirement (i.e. notional revenue) and the pricing methodology (CPI-X) are essentially combined in the same regulatory control – which is sometimes referred to as a ‘tariff basket’. Arguably, this form of control provides ‘licence’ to EDBs to retain and reorganise their existing tariffs within the limits of the control. The Commission seems to support the view that, under the DPP (which is intended to be a generic and low cost regulatory approach); EDBs have ‘licence’ to set prices according to their chosen pricing methodology.

At a more general level, Aurora is participating in Electricity Commission (EC) workstreams relevant to electricity distribution services. The distribution pricing methodology is one such workstream. Aurora is concerned that an overly prescriptive pricing methodology will be counterproductive. Unlike the case of a single transmission company, there are many EDBs each with differing characteristics, and the expectation that a single pricing methodology could prescribe the right outcomes for all EDBs is dangerous. For instance:

- load factors differ across EDBs – meaning some EDBs have a greater need for capacity pricing;
- high seasonal peaks (due, in Aurora’s case, to the influx of winter visitors) means that providing the right signals, whilst recovering the cost of peaks from those that cause the peaks, requires pricing approaches that may not be required in other areas;
- transmission charges are inherently volatile and especially in the lower South Island region; and
- the introduction of advanced metering will also change the dynamics of pricing and revenue recovery for EDBs.

In addition, there are natural tensions between EDBs and retailers concerning fixed cost recoveries (that better reflect the underlying costs of providing distribution capacity).

Whilst these factors are unlikely to have any significant impact on the reset of the DPP in April 2010, they nonetheless suggest that there needs to be close liaison and ongoing dialogue between the two Commissions. In other countries the revenue requirement and pricing methodology are determined by the same regulatory authority.

It is Aurora’s view that EDBs should be encouraged to adopt the principles articulated in the distribution pricing methodology (once finalised) but should not be forced to comply. EDBs require flexibility at the detail level to modify pricing signals to reflect local conditions. In particular, under the DPP, the Commission should only seek to recast EDB tariffs in extreme cases.

Question 9

What are your views on the appropriate methods for analysing current and projected profitability?

Aurora accepts that ROI is a reasonable measure of profitability. However, in using ROI, the Commission needs to take into account:

1. *Single period profitability is of limited value.*

Because of ongoing business and commercial cycles, profitability will fluctuate. The Commission suggests that having regard to a time-series of actual costs will address such concerns. Whilst useful, Aurora suggests that the Commission must go further and recognise that in order for EDBs to target a rate of return in the long run, then it will be necessary for the rate of return to be higher in some years to offset the years it is lower. This is entirely consistent with workable competition, where competitive pressures restrict the ability of firms to seek *ex post* redress. As a result, most firms seek such compensation/redress through normal prices on an *ex ante* basis.

For instance, if a 1-in-20 year adverse event is a reasonable expectation, then in a 20 year cycle, the rates of return could be expected to be higher in nineteen of those years to offset the low return in the twentieth year.

Maintenance also tends to provide cyclical outcomes that will cause actual profitability to fluctuate over time.

2. *The competitive sector focuses on operational profitability.*

The competitive sector generally focuses on the underlying profitability of operations – rather than windfall gains from asset revaluation. The exception is where assets were acquired with an expectation that they may appreciate in value. This is not the case with EDBs.

The competitive sector rewards prudent and timely investment. Investors accept the risks and rewards of ownership. Where assets appreciate as a result of external market influences, then investors receive windfall gains. This value may be realised by selling assets or through higher prices. The value, after all, belongs to investors and not consumers. The Commission's 'lifetime' NPV=0 approach (i.e. the manner in which the Commission applies the FCM concept) means that this value gain/loss is not available to investors.

3. *EDB investors are generally not holders of diversified investment portfolios.*

The expectation that investors hold diversified assets and therefore reduce their overall risk provides the rationale for comparing actual ROI with a WACC-based target rate of return. WACC, of course, only compensates investors for systematic/non-diversifiable risk.

The reality is that most EDBs are owned by Councils or Trusts. This means that the owners, in acting commercially, have to consider ongoing investment in light of the actual performance of the EDB and not an investment portfolio – as they do not have diversified/offsetting investments to mitigate risk that co-varies. This reality, whilst departing from corporate finance theory, suggests that most EDBs will require higher returns overtime to incentivise and justify investment.

4. *Consistency with the Regulatory Control.*

In assessing projected profitability, it is important that the Commission's projections are consistent with the underlying regulatory control. Under the Commission's proposals, the allowed 'Notional Revenue' may differ from actual revenue depending on underlying volumes (e.g. kWh conveyed). The idea is that EDBs manage volume related risks. It would provide the wrong signals if projected profitability were to be assessed on the basis of increasing volumes.

Given the above concerns, a single period assessment of profitability is unlikely to be as robust as a multiple year average. In addition, Aurora supports the Commission's proposals to consider time series cost data (i.e. past cost data) to help determine whether the returns of the current year are 'unusual'.

Question 10

What are your views on how the Commission should supplement the data made available under information disclosure regulation for the purposes of the DPP reset? What additional information should be requested that allows for estimates of projected profitability?

Aurora considers that substantial data is available for the assessment of future profitability within Asset Management Plans (AMP) and Information Disclosures. This information will assist in providing a view as to whether an EDB is entering a period of increased or decreased expenditure.

Question 11

What are your views on how the Commission should allow for current and likely future economic conditions for the purposes of the DPP reset? How, and to what extent, will these conditions impact on regulated utilities, in particular EDBs?

Aurora, like other EDBs is seeing the effects of an economic downturn. In particular:

- Aurora has experienced a significant decline in capital contributions. As a consequence, capital contributions must be left out of any future profitability projections. Profitability projections must be forward looking, and under present economic conditions it is near impossible to budget for capital contributions. From past experience, Aurora is aware that historic capital contributions are not a good predictor of what may happen in the future. For instance, apart from the economic recession, developers have the option to retain ownership of the assets or transfer them to Aurora. It would not be appropriate for the Commission to base projected profitability on past capital contributions.
- Some large industrial connections have also closed over the last 12 months resulting in a loss of fixed charge revenue and associated kWh delivery.
- Revenue based on kWh throughput has also declined. As mentioned in Q9, it would not be appropriate for the Commission to assess profitability on the basis of increasing volumes.

Question 12

What are your views on whether it is appropriate and/or feasible to explicitly link price and quality performance under a single mechanism, such as an S-factor? What information and analysis would be required to implement a robust and effective mechanism?

Aurora considers the integration of price and quality to be an essential regulatory objective. Price and quality are inextricably linked in competitive markets, and Aurora does not see why it should be any different for the services provided by EDBs. In the past, Aurora has been adversely affected by the Commission's approach to setting the (threshold) price path, as quality has not been included as an output for the MTFP results.

The inclusion of an S-factor in the current DPP should be the one of the Commission's current priorities. Aurora is disappointed that the Commission has not included an S-factor proposal in the Discussion Paper. However, given where things are now, Aurora appreciates that the devil is in the detail. Aurora suggests that the fallback position should be to integrate price and quality through an appropriate input methodology. In this way, the Commission can introduce an integrated price path as part of its two-step approach to resetting the DPP (i.e. pursuant to s54K of the Act). Aurora is aware of the work that ENA has been doing in this area, and supports their efforts. This could feed into the input methodology process. Aurora would also like to work with the Commission, in the future, to identify how quality and price can be integrated within the DPP.

Question 13

What are your views on the dual-path structure as proposed? What are your views on assessing EDBs against separate price and quality paths?

Aurora considers that an integrated price-quality path should be an objective of the current DPP reset – and not the next reset. Aurora does not support the dual price and quality path approach proposed by the Commission.

It is Aurora's view that the Commission should be working towards an integrated price and quality path for implementation on 1 April 2010 and there should only be one path in the longer term. Aurora notes that the Commission may require a price path (with quality integrated) and a separate quality path as a backstop whilst behaviours around an integrated price-quality path are tested

Whether price and quality are separate or integrated paths, Aurora notes that it is difficult to 'regulate' quality – given that quality is mostly affected by external/extraneous factors and not by regulatory fiat. Aurora accepts that it has a part to play in the ongoing quality performance of its network. However, aside from the impact of external factors, Aurora also notes that there is typically a lag between actions/investment taken and the consequential improvement in reliability.

The Commission needs to keep such considerations in mind when setting the price-quality path. In addition, the Commission needs to be aware that the threat of penalties that may be imposed for quality related breaches may affect the behaviour of EDBs in different ways. There is anecdotal evidence from other countries that, with the introduction of performance incentive schemes, firms tend to focus on managing 'high probability but low consequence events' at the expense of 'low probability but high consequence events'. There appears to be, as a consequence, a trend of higher consequence events occurring.

For instance, some EDBs may be inclined to manage low probability but high consequence events. Others may manage higher probability events with lower consequence. The Commission may need to be more discerning in relation to what outcomes it is after.

Question 14

Under what circumstances, if any, do you think the Commission should consider re-opening a DPP within a regulatory period? Under what process should such circumstances be considered, e.g. should the industry make a proposal for the Commission to consider?

Aurora generally does not support re-opening the DPP as they are based on assumptions relating to the full regulatory period. However, in the competitive sector, force majeure events may lead to contractual terms being varied or cancelled. This provides competitive sector support for re-opening the DPP in certain circumstances.

For instance, it may be appropriate to reopen a DPP following a major disaster, particularly if it is inappropriate for EDBs to rely on a Customised Price-Quality Path (CPP) for redress (i.e. where several EDBs may be in the same situation and may all be seeking a CPP). A worsening economic climate may also require the reopening of the DPP. This would place EDBs on the same footing as firms in the competitive sector who can respond to economic shocks (which impact on revenues and/or costs to such an extent that the ongoing business is potentially unsustainable).

In cases of disaster or extreme economic uncertainty, Aurora suggests that the Commission consider the use of a regulatory deferral account into which revenue variances would be transferred over the review period. If certain pre-defined criteria were met, the account would be set to zero, allowing EDBs to recover revenue. This option may provide EDBs flexibility in addressing major changes in circumstances.

Question 15

What are your views on the appropriateness of the Commission's input methodology for pricing methodologies under the DPP? If appropriate, how and when should a related mechanism be implemented?

Aurora supports the Commission's proposed approach. Aurora comments in relation to Question 8 (above) are relevant.

Question 16

What are your views on the proposed use of notional revenue (in a general sense) to specify price under the Reset DPP?

Aurora supports the Commission's proposed approach because the use of notional revenue provides EDBs with flexibility to modify their pricing structures, where necessary, to meet changes in consumer behaviour or provide stronger signals in certain areas.

Question 17

What are your views on the proposed pass-through costs including the incorporation of Commerce Commission levies?

Aurora supports the Commission's proposals in principle, and would be concerned if costs associated with factors outside of the control of EDBs were not recoverable in the future.

The electricity industry is currently the subject of a review by the Government. The outcomes of that review may well change the structure of the industry and / or change the allocation of costs between various parties. Aurora believes that all reasonable costs associated with implementing the proposed industry changes or participating in the regulatory processes that arise as a consequence of those changes should be recoverable.

Aurora highlights this industry review example, as in their recent decision with respect to Transpower's request to obtain approval for the recovery of instantaneous reserves costs associated with the operation of the HVDC link, the Commission appears to apply a version of the *filed rate doctrine*. Based on USA regulatory precedents, this provides that any entity that is required to file tariffs governing the rates, terms, and conditions of service must adhere strictly to those terms. Under this doctrine, once a distribution entity has submitted cost estimates for approval it must be subject to the decision of the Commission over the life of the determination.

Another option, is that a Regulatory (Deferral) Account be established, to which all cost incurred in undertaking such activities are assigned. Costs outside an EDBs control that are incurred can then be amortised over the useful life of the project to which they are attributed. Such an approach would allow EDBs to better match costs and benefits across time periods – for example the actual cost of an initiative with the time period of benefits are expected to occur.

As an aside, the Commission needs to ensure consistency between this Discussion Paper and the Input Methodology Discussion Paper. On page x of the Input Methodology Discussion Paper, the Commission has not included Transmission Costs as a pass-through cost for EDBs.

Question 18

To what extent do you consider transmission charges to be outside the control of EDBs?

Aurora considers Transmission Charges to be outside the control of EDBs. Transmission Charges are highly variable year on year. For Aurora, this variability is exacerbated by the variable operation of the Tiwai Point Aluminium Smelter (60% of the regional load) which has the ability to significantly shift the timing of the regional peaks.

Question 19

Are the Commission's proposed definition of price and the associated definition of excluded services appropriate?

Aurora supports the Commission's proposed approach.

Question 20

What options might there be for the promotion of energy efficiency through the specification of starting prices?

If energy efficiency arrangements are to be successfully introduced in New Zealand, regulated companies such as Aurora need to have certainty over the recovery of 'costs' (including lost revenue). As stated previously, energy efficiency initiatives are not 'costless' to EDBs. Aurora recommends the use of a combination of mechanisms to encourage investment in energy efficiency by EDBs. The schemes which appear to hold the most promise appear to be those that incorporate mechanisms such as:

- Cost recovery for the costs of delivering energy efficiency and demand management programs – including any hidden costs such as management costs and costs associated with organisational change;
- Lost revenue incentive; and
- Performance incentives where utilities are rewarded for achieving a target level of performance with respect to energy efficiency benefits and potentially penalised for not achieving minimum requirements.

Ideally, the preferred approach would be to implement a shared savings scheme, possibly in conjunction with a mark-up scheme on information campaigns. Such a scheme should look to share the benefits from all initiatives, rather than look at each initiative separately. However, as we are talking about an initial step towards the establishment of a sustainable scheme over the long term, Aurora endorses the near term implementation of a pragmatic scheme that encompasses the three mechanisms outlined above.

For a start, Aurora believes that projected profitability, as used in setting starting prices, should take into account the likelihood of lower profitability (i.e. lower consumption growth) in the future. Given uncertainty about costs and benefits, Aurora suggests that as an alternative, the Commission might consider treating some energy efficiency costs as pass-through costs, with these costs recovered using some form of deferral account similar to that outlined in response to question 17.

As stated previously, energy efficiency initiatives are not 'costless' to EDBs. Aurora considers that its revenues may be impacted in a material way – for example in Dunedin, with its colder climate and older houses, the Government's home insulation scheme may have a significant impact on electricity consumption for space heating.

Question 21

Given the generic nature of the X-factor, to what extent might it be necessary to make starting price adjustments, based on EDB's specific circumstances?

X-factors and P_0 adjustments are interchangeable. Aurora has argued in the past that profitability based P_0 adjustments are not necessary as the judicious use of efficiency based X-factors will cause the profitability of EDBs to converge over time.

Given the X-factor under Part 4 is (generally) the same for all EDBs, a P_0 adjustment may be appropriate in some circumstances. Aurora considers that a P_0 adjustment should be used cautiously by the Commission, and only in exceptional circumstances.

Question 22

What are your views on whether it is appropriate for starting price adjustments to be deferred until after input methodologies determinations are published? Do you foresee any issues that may affect the Commission's ability to do so?

Aurora agrees with the Commission's proposed approach to hold over consideration of a starting price adjustment until after the Input methodologies are finalised. There is a great deal of work to be completed yet and EDBs will also need time to consider and respond to the draft proposals. It is also important that the reviewed Information Disclosures are consistent with the final Input Methodologies.

Question 23

What are your views on the indicative timings in Table 4, including the date when the adjustment takes effect (i.e. 1 April 2011)?

Aurora agrees with the Commission's proposed approach.

Question 24

What are your views on whether starting prices should be specified in terms of Actual Prices? How should these prices be specified (e.g. in terms of prices for distribution services, net of pass-through costs, etc)?

Aurora agrees with the Commission's proposal to use actual prices in the Price Quantity calculation. We expect that the Allowable Revenue will be net of pass-through costs.

Question 25

What are your views on the WACC measure appropriate for comparing with a ROI in assessments of current profitability?

Aurora's comments in relation to Question 9 are relevant here. In particular, WACC represents a target return. Actual returns are likely to exceed this target on average. In addition, due to EDB ownership considerations, a WACC based target return is unlikely to incentivise ongoing investment by many Council or Trust owned EDBs.

More generally, however, Aurora has some fundamental concerns with the Commission's proposed approach to using 'partial building blocks'. As noted by the Commission, the DPP is a 'low cost' approach, and it falls outside the ambit of partial building blocks under the DPP to ensure/verify that an EDB's operating expenditure is efficient. What this suggests to Aurora is that an EDB can have expenditure as 'high as it wants' – but it cannot have a return higher than WACC. Clearly the Commission would not endorse such outcomes. Consumers are likely to be better off (particularly in the long term) with efficient EDBs – even if EDB returns are higher as a result.

Aurora strongly advocates providing the right incentives to improve efficiency, and to factor this into projected profitability as an 'allowed' higher returns over the regulatory period.

Question 26

Do you consider that a time series of cost data may provide more helpful contextual information when assessing current profitability than a single year's data? If a single year's data were to be used, is it appropriate to consider the latest available data received under information disclosure, which is likely to relate to the financial year preceding the adjustment?

Aurora supports the use of time series cost data – as this helps to identify the variability in particular costs, and therefore what is a reasonable base-level of cost for assessing an EDB's current base profitability. Without reference to time series cost data, the profitability of a single year needs to be normalised for the various issues/drivers that occurred that year – for example: weather, frequency of faults, changes in input prices; and the level of asset renewals.

Aurora suggests that a five-year time series is appropriate to identify most of the variability in costs that occurs on a routine basis. However, Aurora takes the view that it is the future level of expenditure that is most important. The Commission needs to adopt a realistic view on forward looking costs and profitability, as the potential loss of value from an incorrect estimate of profitability is significant – once extended over a regulatory period.

Question 27

How do you consider a time series of cost data could inform the assessment of current profitability?

As noted in response to question 26, time series cost data can be used to identify any anomaly in the current year. If appropriate adjustments are made, a more robust estimate of current profitability will result.

Question 28

In considering the current profitability of an EDB, is it appropriate to use a partial building blocks approach to estimate its current ROI? What are your views on Formula 2 above in this respect?

Aurora notes that Formula 2 is a variation of the Commission's 'Factual Revenue Model' (FRM). In the first instance, Aurora believes that the process underpinning the FRM needs to be debated as an input methodology. In this regard, Aurora is concerned with the Commission's approach to the treatment of revaluation gains – and in particular:

- the competitive sector does not generally treat (unrealised) revaluation gains in this way; and
- as there is no expectation of realising this gain (e.g. by asset sale in the short term) the inclusion of revaluation gains effectively robs a business of cash.

Another problem with the partial building blocks approach is that efficiency and quality considerations are not taken into account. Aurora accepts that the DPP is intended to be a generic and low cost regulatory instrument. However, it appears that the emphasis is on avoiding high rates of return rather than achieving efficiency. In other words, an EDB's costs can be high and inefficient under the DPP – but their *ex ante* profitability cannot exceed parameters set by the Commission. Again, Aurora is not opposed to reasonable *ex ante* profitability constraints – Aurora is simply pointing out the emphasis behind the Commission's proposals. In short, the partial building blocks approach does not strongly incentivise efficient behaviour.

Question 29

What are your views on the Commission estimating an industry-wide WACC using historical data to inform current profitability assessments?

Aurora is not sure whether this question refers to the Commission:

- a. determining a retrospective WACC to assess current profitability, or
- b. use a contemporary WACC in assessing current profitability – where historic cost data has been used to corroborate whether the current level of profitability is reasonable.

Aurora's views on the latter interpretation have been articulated in its answers to questions 26 & 27. Aurora believes that the use of time series cost data will help avoid the risk of an anomalous single period outcome. However, as argued in response to question 9, the ROI and WACC target are still not directly comparable.

It is also the case that WACC is forward looking. A contemporary WACC therefore relates to a future regulatory period. It may be misleading to use a contemporary WACC to benchmark current profitability (which relates to the current regulatory period).

This suggests that there may be some merit in the first interpretation of this question. Aurora would be comfortable with the Commission determining a retrospective WACC to assess current profitability, as long as like was being compared with like.

Question 30

What are your views on whether an industry-wide WACC should be used to inform projected profitability?

In principle, Aurora prefers that the WACC should be firm specific rather than industry-wide. For instance, the Commission has in the past adopted debt premium and issuer costs that Aurora is unlikely to achieve.

For reasons of pragmatism, Aurora believes that the Commission's suggestion to use a WACC range, and to have some flexibility in how the range is specified, is also appropriate. The Commission indicates that it would have regard to the characteristics of the industry and the prevailing economic conditions.

The downside to this is that this reintroduces 'discretion' which can create regulatory uncertainty – something the input methodologies sought to eliminate. Aurora therefore suggests that the construction of the WACC range is determined by way of input methodology, but the Commission can apply its discretion only to increase the range or point estimate where the characteristics of the industry and the prevailing economic conditions require.

Question 31

What are your views regarding a quantitative return-based assessment of projected profitability under DPP?

Aurora supports the Commission's proposals that quantitative return-based assessments are more suitable to a CPP than a DPP.

Question 32

What are your views on the Commission's proposed approach for assessing projected profitability to inform its adjustments of starting prices?

Aurora broadly supports the Commission's proposals – which involve a quantitative return-based assessment of current profitability, a qualitative assessment of projected profitability, and 'returns bands' to identify when starting price adjustments may be required. This approach is consistent with a 'low cost' DPP.

Question 33

What other options do you consider there are for assessing projected profitability?

As identified previously, Aurora does not support the inclusion of revaluation gains in the 'Factual Revenue Model' (referred to as *Formula 2 – Current ROI* in the Discussion Paper). Interpreting FCM in a manner that requires revaluation gains to reduce the revenue requirement is not consistent with outcomes in the competitive sector.

In addition, Aurora suggests that assessments of projected profitability also need to take into account the X-factor that the Commission is likely to introduce.

Question 34

What type of scenarios do you consider are likely to impact on an EDB's projected profitability that could be defined in advance and taken into account when adjusting starting prices?

Under the former CPI-X thresholds, prices were adjusted for inter alia, productivity and profitability. Other direct impacts on prices, such as the returns on and of the Regulatory Asset Base (RAB), the cost of capital, investment in quality, and step changes in operating expenditure were ignored or were assumed to be covered by the X-factor³⁴. The partial building blocks approach adds a dimension to this form of CPI-X regulation, and directly allows some of these terms to be included in the setting of fair prices.

Scenarios need to be developed to assess the 'financeability' of EDBs under particular P₀ adjustment and X-factor outcomes. In particular, the scenarios will need to test the impact of varying capital expenditure and operating expenditure on the financeability of the business across a range of future conditions.

Given the impossibility of knowing precisely how the future will play out, a good decision or strategy to adopt is one that plays out well across several possible futures. The purpose of scenario planning is to highlight large-scale forces that push the future in different directions. It's about making these forces visible, so that if they do happen, the planner will at least recognise them leading to better decisions.

Aurora suggests that the following should be taken into account when developing future conditions to populate particular scenarios:

- Social dynamics – e.g. demographic issues such as finding skilled employees with an aging workforce, increased migration to New Zealand, and regional growth impacts.
- Economic issues – e.g. macroeconomic trends affecting the broader New Zealand economy and also impacting local economies, inflation and funding costs, and microeconomic dynamics involving the structure of the industry.
- Political issues – e.g. electricity policy and regulatory impacts (i.e. the impact of X-factors) and changes, together with regional policies (e.g. to entice industry and jobs to a particular region).

³⁴ In part, this assumption had some validity, as the C₂-factor (profitability) indirectly addressed the cost of capital, and the CPI adjustment accounted for changes in operating expenditure. Another implicit assumption was that depreciation and capital expenditure were of a similar magnitude – which left the RAB largely unchanged.

- Environmental issues – e.g. direct (how will climate change impact network operations?); enabling (will the growing acceptance of resource sustainability lead to changes in consumer behaviour?).
- Technological issues – e.g. direct (how will electric cars impact distribution?); enabling (what impact will smart grids have?).

What is clear is that all these features may impact on the operations of EDBs, and that EDBs in different locations will face unique pressures. There is therefore a need to develop scenarios and reach broad agreement on the scenarios that may play out ahead of reaching a decision on any adjustment to starting prices.

Question 35

What time period should assessments of projected profitability cover e.g. should these assessments consider periods beyond the applicable regulatory period?

It is unlikely that such scenarios will need to go beyond the applicable regulatory period. In most cases, anything beyond is likely to be ‘subjective’ and can in any case be addressed at the next reset. However, Aurora considers that there are two exceptions to this:

1. significant ‘committed’ investment that is to occur beyond the applicable regulatory period; and
2. where there is a need to an EDB to incur costs ahead of time.

In such circumstances, the EDB and Commission may agree that it is better to avoid a future price shock by commencing a glide path sooner rather than later.

Question 36

What are your views on the proposed two-step approach to calculating starting price adjustments?

Aurora broadly supports the proposed two-step approach. The proposed rollover of prices is appropriate in the circumstances. Aurora also agrees that it is preferable not to have a clawback – other than in exceptional circumstances. The Commission needs to take a cautious approach given the current economic environment, the limitations on forecasting and benchmarking profitability.

In addition, Aurora believes that, in the context of the current regulatory learning curve, a philosophical approach to the clawback issue could be taken. For instance, Aurora notes that some of the current recommendations made by the Commission’s advisors in relation to TFP analysis would probably have improved Aurora’s past MTFP ranking if they were adopted by the Commission in 2004. Aurora had pointed out these issues at the time (e.g. normalisation for reliability and adverse operating conditions), but this was ignored. Aurora is not seeking any clawback in relation to this.

Question 37

What are your views on whether a quantitative returns-band approach should be used reflecting the possible inter-temporal imprecision from partial building blocks analysis? How should such a returns-band be defined (e.g. as an absolute or relative amount to the WACC point estimate)? How should starting price adjustments reflect an EDB’s position relative to the upper and lower bounds?

For the reasons stated by the Commission, the principle of a quantitative returns-band is appropriate. However, the devil is in the detail.

As Aurora has highlighted earlier in its submission, there is a reasonable prospect that the DPP will encourage EDBs to merely meet minimum standards of efficiency. In other words, EDBs may be as inefficient as they like as the Commission is only targeting EDBs whose profitability is too high (even if that high profitability is as a result of improved efficiency).

To address this, Aurora recommends that the Commission approach the DPP from the perspective of providing strong incentives for productive and dynamic efficiency, and allowing EDBs to benefit from efficiency gains.

Question 38

What are your views on whether a qualitative scenario-based mechanism should be used to inform the starting price adjustment? What characteristics should be considered in determining appropriate scenarios and how should their magnitude be defined?

Aurora supports this approach. Characteristics of scenarios have been discussed in response to question 34.

Question 39

How should EDBs that are likely to face scenarios affecting projected profitability be treated? Should adjustments be made to their returns-band?

The scenario analysis should inform the Commission of a likely range of profitability outcomes for that EDB. Under the assumption that the scenarios are 'robust', the Commission should err toward taking the lower end of this range (in an absolute sense or in a statistical sense) for comparing against the returns-band. Under this approach, adjustments to the returns-band are not needed.

Question 40

What circumstances might constitute financial hardship for an EDB or price shocks to consumers? Which circumstances, if any, warrant the use of a glide-path?

Aurora considers the 'financeability test' adopted by some regulators (e.g. in the UK) is appropriate for identifying financial hardship. The Commission discusses this in its guidelines paper³⁵ on the cost of capital. In short, financial hardship is reflected by the inability to maintain a level of creditworthiness or meet fixed financing costs out of cash flow (after excluding certain investment related costs). Financial ratios and qualitative analysis may be used to inform the Commission of financial hardship.

In Aurora's view, a price shock could be defined as an upwards movement in prices that exceeds the annual rate of inflation by more than 5%. A glide path is an appropriate response to any price shock.

Question 41

Under what circumstances do you consider it would be appropriate for the Commission to apply claw-back?

Aurora considers that it is preferable not to have a clawback – other than in exceptional circumstances. See Aurora's response to question 36.

Question 42

How should claw-back be applied? Should it be done as an additional P_0 adjustment or using a glide-path?

Aurora does not have a strong view on this. However, in general Aurora has a preference for a glide path rather than a P_0 adjustment.

Question 43

To what extent will a recessionary economic climate impact differently on the productivity of EDBs and the economy as a whole?

Meyrick & Associates, in advising the Commission on TFP in 2003, suggested that past productivity performance (of EDBs) could be used as an indicator of possible future productivity performance – except when there has been a change in the regulatory regime or when the industry is near best practice.³⁶ In Aurora's view, economic cycles will also have a bearing on the productivity of EDB and the broader economy. Aurora notes that the impact of a recessionary economic climate on productivity has been researched reasonably extensively. For instance, in the USA, eight post-war periods of economic contraction (to 1982) were analysed. It was found that:

³⁵ Commerce Commission, "Revised Draft Guidelines – The Commerce Commission's Approach to Estimating the Cost of Capital", 19 July 2009; pp 11-12.

³⁶ Meyrick and Associates, "Regulation of Electricity Lines Businesses, Analysis of Lines Business Performance – 1996-2003"; Report prepared for the Commerce Commission; 19 December 2003; p8.

- in response to major cyclical contractions in the demand for goods and services, output, employment, productivity, and prices all diverge from long term trends; and
- little can be inferred about the divergence in productivity from the length of the recession alone.

In general, common patterns were found – as follows:

“Although post-war recessions have differed in length and severity, movements of productivity and cost measures follow a common pattern. Generally, employers tend to delay trimming payrolls in the face of uncertain or slack demand in order to postpone the costs associated with layoffs until the nature of weak demand becomes apparent. The resulting delayed cutback in hours contributes to the initial drop in productivity. If a contraction persists, average weekly hours are initially reduced. Eventually, employment cuts also occur, and productivity may actually increase if the belated declines in hours outstrip the fall in output. At the trough of the business cycle, capacity utilization is low, with plant and equipment operating below optimum or design rates because of weak demand for output. Inefficient plants and equipment may be idled completely as demand may be met using only the newest, most efficient facilities. Workers who have been retained may also perform deferred maintenance or other duties previously handled by laid-off co-workers. However, these "hoarded" employees may be those with the greatest seniority, experience, and training specific to the firm's needs, making them the most costly to replace. When demand begins to revive, output can often be boosted without causing commensurate increases in the payroll. Firms respond by using some idle plants and equipment and by redirecting existing labour to production-related tasks. This results in the rapid productivity gains which have characterized the immediate post-trough period of each post-war recovery. The "productivity dividend" continues as long as output gains exceed additions to paid hours. Employers tend to accommodate growing demand by initially lengthening the work week. But as the uptrend continues, furloughed workers return and hiring may begin. The pace of productivity growth slackens as hours increase, and when new workers are hired, trained, and assimilated. The least efficient plants are reopened last.” ³⁷ [emphasis added]

These patterns have been reflected in the early stages of the current recession – for instance:

“According to the US Labour Department, total output in the US shrunk by 1.5 per cent in the third quarter of this year. But the total number of hours worked contracted by even more. In fact, hours worked by all persons – employees, proprietors, and unpaid family workers – fell 2.8 per cent. ... business sector output per hour grew 1.3 per cent in the period.

... Economic theory has this concept known as marginal productivity of labour ... each successive employee you recruit is slightly less productive. You continue to recruit until the marginal productivity of labour equals net profit per employee. That is to say, you carry on recruiting until it is no longer profitable to do so.

...The firms that shed labour will often restructure. The clean-out provides an opportunity to change the way things are done, will make the firms more efficient, and when they start expanding again, the expansion will be based on stronger foundations.

At the same time, as firms shed labour, the potential labour pool grows and wages fall. This can encourage new employers to enter the labour market-place. As these new employers expand, they can often exploit economies of scale. They were previously crowded out of the market-place, and may have been unable to gain traction. The changing economy creates new opportunities for these firms. Recession can force an economy to adjust – it ends up with less resources being employed in traditional areas that may have peaked, and frees-up resources to work in new burgeoning areas.” ³⁸

Graphs provided by Meyrick & Associates (2003)³⁹ show upward sloping trends for EDB productivity and economy wide productivity. However, it cannot be said that the productivity of the electricity distribution sector follows, leads or lags the economy as a whole. Instead, there is evidence that the rate of change in the industry-wide productivity of EDBs is strongly influenced by industry specific issues (e.g. the restructuring of the sector in the late 1990s boosted productivity, the Auckland power crisis, and more

³⁷ Fulco, L.J.; “Strong post-recession gain in productivity contributes to slow growth in labor costs”; Monthly Labor Review; December 1984.

³⁸ Baxter, M.; “Productivity Rises – Is recession good for us?”; November 7, 2008.

³⁹ supra, note 36 pp 20, 41-42

recently, the shortage of skilled labour had put pressure on productivity), and the rate of change in the economy is strongly influenced by specific economy-wide issues (e.g. the Asian crisis in 1999).

With electricity being an essential service rather than a discretionary/luxury good, it is unlikely that EDBs will face the rapid productivity improvement that seems to follow a recessionary cycle in the broader economy. However, the EDB sector may also face less decline in productivity at the outset of the recession. Aurora suggests that it will be difficult to infer how the productivity of the economy and that of the electricity distribution industry will change relative to each other over the course of the current recessionary cycle.

On this basis Aurora suggests that the Commission should be cautious in comparing the rates of productivity change between the industry and the economy as a whole – particularly as the initial impact of the recession may be to lower economy wide productivity more than that of the electricity distribution sector. Aurora recommends the use of long term trends to smooth short term impacts. As was the case in setting the B-factor for the 2004 threshold reset, it may also be appropriate to ignore ‘single events’ that would otherwise prove distortionary.

Question 44

What are your views on the potential promotion of energy efficiency through the setting of the X-factor?

Aurora does not believe that the setting of the X-factor will promote energy efficiency, unless it is directly and transparently accounted for. It is possible that energy efficiency could be identified in the course of TFP analysis (e.g. in terms of TFP analysis to identify partial productivities). However, given the Commission’s proposed approach to setting the X-factor, any improvement in the (partial) productivity of EDBs due to energy efficiency will actually lead to a higher X-factor.

Clearly, to avoid any disincentive toward energy efficiency objectives, the productivity improvement relating to energy efficiency needs to be excluded from the industry TFP.

In Aurora’s view, it will be difficult to promote ‘energy efficiency’ via the X-factor. In the first instance, the measure would still need to constitute a ‘productivity’ measure to be consistent with the legislation. In Aurora’s view, energy efficiency is broadly related to productivity. Other difficulties may include:

- There are numerous energy efficiency initiatives – which ones are to be targeted as part of the metric?
- Ensuring the expectation of ‘incentive’ under the X-factor matches the ‘cost’ of the energy efficiency initiative
- Avoiding free-riding – for instance, why would an EDB ‘invest’ in energy efficiency (or incur the associated costs) when there is uncertainty that its peers would do likewise, and if its peers were all to do so, the EDB simply benefits at its peers’ expense (by not investing or incurring the cost but still receiving the same X-factor as the industry).

Question 45

How might international productivity data be used as a check for the reasonableness of results based in New Zealand data? Do you have any views on the likely sources of appropriate data? (e.g. by jurisdiction or overseas regulators)?

It is difficult to see how international productivity data, without normalisation, can be used to check the reasonableness of New Zealand productivity results. Any normalisation exercise will be quite an involved and subjective process – requiring a fairly detailed understanding of similarities and differences between firms and between operating environments. Most of the jurisdictions that we are familiar with (e.g. Australia, UK, and North America) are not readily comparable as they have significant differences of scale (e.g. size) and scope (e.g. distribution and retail combined).

Question 46

What are your views on the amended TFP formula? What are your views on the proposed practical application?

As noted earlier in this submission, Aurora is still considering its position on the amended TFP formula. This submission only sets out Aurora's preliminary views on this very technical issue. Aurora may make a further submission on this area (including the two *Economic Insights* reports) after the Electricity Networks Association has reported its findings. However, in terms of its preliminary view, Aurora does not agree with the amended TFP formula, and does not believe that it lends itself to practical application. The reasons for this have been separately discussed in Aurora's submission. However, in short, Aurora considers that the proposed amendment:

- departs from international practice (i.e. the approach taken with productivity based regulation)
- will undermine incentives for productivity improvement (e.g. it is esoteric and complex, and it is not clear how management should respond to it)
- constitutes bias against the electricity distribution sector (i.e. other sectors in the economy have sunk costs, but there is no indication that their input prices will be amended in calculating the X-factor)
- is unlikely to provide a more reliable estimate of productivity gains for the industry (e.g. the proposed amendments add assumptions to existing assumptions)
- is inconsistent with the statutory purpose (i.e. reflects past profitability, and is based on a consumer welfare paradigm)
- has little relevance as an industry-wide measure (e.g. its impacts are driven by significant inputs of a firm specific nature that are then applied to the industry as a whole).

Aurora considers the previous B-factor approach – which was based on generic information – is more suitable for setting the X-factor.

Question 47

What are your views on potential use of IHC, rather than ODV in the TFP analysis? Do you agree that the 2004 ODV is the best starting point for an electricity distribution IHC series? If not what alternative starting point should be used?

Asset valuation is a second order impact for the TFP analysis. The more important question is what valuation method is 'right' for all or most regulatory purposes. Asset valuation has an important part to play in asset management, and in ensuring that assets are recognised/compared at their efficient cost. Aurora would like to have consistency in the regulatory asset valuation method. This is a subject that will be debated more fully as part of the input methodologies.

In any case, Aurora is not yet convinced that it is necessary to develop an IHC asset register. Starting the IHC series with the 2004 ODV is also problematic – given the known problems with the 2004 ODV Handbook. However, in general Aurora accepts that the ODV method (providing it is accompanied by an appropriate handbook) is an appropriate basis for updating the RAB from time to time.

Question 48

What are your views on an appropriate method of forming an IHC time series? How should this be achieved?

If an IHC series were to be developed, then Aurora broadly supports the approach the Commission has proposed (which is also the approach taken in relation to the Vector/Powerco gas authorisation). The 2004 ODV is used as the base, and this is updated for capital additions, disposals, depreciation, and CPI indexation. The 2004 ODV base may also be updated for 'found assets'. In addition, however, Aurora recommends that adjustments need to be made to the 2004 ODV to remedy deficiencies with the 2004 ODV Handbook.

Question 49

Do you agree that transformer capacity, as well as line capacity, should be recognised in a measure of system capacity? Do you agree with the measure proposed to incorporate both transformer capacity and line capacity in the system capacity output?

Aurora supports the Commission's proposal in principle. It is important that TFP outputs are improved. However, without more information with which to test the transformer capacity / lines capacity proposal, Aurora is not sure that the proposal will actually improve the specification of TFP.

Question 50

What are your views on forming a system capacity output measure, taking account of the need for such a measure to be relatively simple and easy to construct?

Aurora notes that the 'validity' of the TFP analysis rests to a large degree on the definition/choice of output variables. Aurora believes that the former B-factor approach should be the basis of the TFP formulation. Aurora would welcome an improvement in the specification of TFP outputs (as per question 49).

Other outputs that could be considered include reliability and (some measure of) energy efficiency. However, at this stage Aurora is of the view that these additional outputs should only be included if their inclusion did not act as a disincentive to their improvement (see Aurora's comment on this in response to question 44).

Question 51

What are your initial views on whether an approach that accounts for sunk costs might effectively implement the input price differential?

Aurora believes the suggested approach to be a theoretical, but impractical approach to accounting for input price differentials. Its complexity does not auger well with the low-cost philosophy of the DPP. The Commission has suggested simplifications that it may make (such as setting the ratio of 'costs to revenue' equal to one). However, any such simplifications undermine the theoretical construction of the approach, and call into question the basis for its use.

The essence of accounting for input price differentials is to compare the *rate of change for input prices in the economy* with the *weighted rate of change for EDB operating expenditure and the weighted rate of change in sunk cost amortisations*. Another simplification is likely to be needed for the rate of change for input prices in the economy. In the past the Commission has looked at the Capital Goods Index (CGI) and the Labour Cost Index (LCI), but ultimately opted to set the input price differential as zero. However, in the future Aurora questions whether the Commission could accurately identify the rate of change for input prices in the economy – given that many other sectors of the economy have sunk costs too. The CGI and LCI are no longer comparable as the construction of these indices does not account for sunk costs.

Aside from these practicalities, it is also not clear that sunk assets/unutilised capacity should be penalised when this may in fact be in the long term interests of consumers. For instance, the overall cost of providing distribution services would be significantly higher if EDBs only built the capacity required at that point in time, and then constantly augmented the network (both HV and LV).

Aurora considers a more traditional 'user cost of capital' approach to be more appropriate.

Question 52

How should the Commission estimate capital expenditure for the forthcoming regulatory period in a cost effective manner?

The Commission should rely on AMPs, and forecasts provided in the AM1 information disclosure schedule.

Question 53

What are your views on whether annually updating the base quantities is preferable to using those from a fixed reference year? What is the minimum time period (lag) that would be required to allow the auditing of quantity data for use as the reference quantities?

Aurora supports the Commission's proposal to annually update the base quantities. Whilst this will result in additional effort by EDB's to prepare the statement and for the auditors, which should be recognised by a longer time period to publish the compliance statement, it will remove the present anomaly with regard to pass through costs being based upon actual costs especially transmission costs including avoided transmission costs. The base quantities should be lagged by at least 12 months so that quantities are known by November each year when calculating the pricing for the following April year. ie Quantities for the 12 months ending March 2009 are used when setting prices for year beginning April 2010.

Question 54

Would the use of a lagged CPI measure in price-path compliance lead to the removal of CPI forecast errors? Would a six month lag between the most recent quarterly CPI change used, and the start of the pricing year allow businesses sufficient time to implement pricing changes?

Aurora supports the Commission's proposed changes which are likely to remove the risk of CPI forecast error.

Question 55

Are there alternative ways of including the CPI change that may be preferable to using lagged actual values while avoiding technical breaches, e.g. using an agreed recognised forecast of the CPI?

Aurora would support the use of a recognised CPI forecast. However, given that a CPI forecast, or a lagged CPI will both introduce (minor) error, Aurora's (slight) preference would be to use a recognised CPI forecast.

Whilst the Commission is not necessarily proposing to do so, the CPI forecast could be revisited (after the fact) and a wash-up be made. However, Aurora notes that, in reality, this would be no different to EDBs making their own CPI forecast, and then taking any technical breach to an 'unders and overs' account.

Question 56

Have you any views on the inclusion of Commerce Act Levies as pass-through cost under the DPP?

Aurora supports Commerce Commission levies being treated as pass-through costs.

Question 57

What are your views on the treatment of transmission charges as pass-through costs? How might avoided transmission charges be taken into account?

Avoided transmission costs should be treated the same as transmission costs - i.e. full pass-through (provided they are actual avoided transmission costs and linked to the transmission pricing methodology).

Question 58

Should the Commission seek to address the pass-through anomaly identified under the thresholds regime? If so, what is the more appropriate mechanism for doing this?

By resetting the volumes each year (with resulting assembly and audit cost) any anomaly as identified under the previous threshold regime is significantly reduced if not totally removed.

Question 59

How feasible would it be to 'unbundle' distribution and transmission charges and, if so, how could this be done with least complexity? To what extent would such a mechanism address potential technical breaches relating to AC loss rental rebates?

Aurora does not believe that it is necessary to unbundle distribution and transmission charges given the proposal to reset base quantities each year, albeit on a lagged basis. Technical breaches relating to AC loss rental rebates or other forecast errors could be treated via an under and overs account.

Question 60

Alternatively, do you consider that an ex post approach might reduce the impact of the anomaly while increasing certainty?

Aurora does not support this approach based upon the limited information provided.

Question 61

What are your views on the use of a separately assessed quality-path? Is such an approach appropriate for promoting incentives for EDBs to provide services at a quality that reflects consumer demands?

Aurora does not support the use of a separately assessed quality path. Instead it would like to see quality integrated with the price path so that those distributors that improve or provide better than average quality are rewarded with financially via the price path.

A separate quality path should only exist as a backstop whilst the Commission and EDB's gain more experience and comfort with operating under a single integrated price-quality path. An integrated mechanism will provide stronger incentives for EDBs to improve quality.

Question 62

In your opinion, to what extent should increased investment deliver higher levels of quality?

There is some correlation between investment spend and reliability/quality. The magnitude of correlation, however, will differ between EDBs and will change over time. The nature and purpose of the investment is a key determinant of the correlation.

Increased investment is only part of the equation to deliver higher levels of quality. Some investment, for example network growth, may reduce reliability in other areas of the network as a result of increased demand on some circuits/feeders. However, improvements in quality should occur if the increased investment;

- improves the security of supply such that future faults in areas do not result in circuits tripping out (i.e. security is improved from n to n-1); or
- reduces the number of consumers exposed to a fault (i.e. installation of additional switches); or
- results in renewal of old equipment which is prone to faults.

However increased maintenance spend will also improve quality e.g. additional vegetation maintenance.

Question 63

What other methods could be used to determine the price-quality trade-off deemed most appropriate by consumers?

Aurora believes that the AMP is the best forum for price – quality trade-off issues to be discussed. For the situation where a group of consumers have agreed to accept lower quality for a lower price and this lower quality causes a breach of the quality 'control' then the Enforcement Guidelines should provide discretion for the Commission to investigate further and provide dispensation.

Note: Aurora is providing responses to Questions 64-76 on the basis that the Commission adopts separate price and quality paths. Aurora would instead prefer an integrated price-quality path.

Question 64

What are your views on the use of a 'no material deterioration' basis in the quality standard, and how it may be appropriately reflected in the quality standard?

Aurora agrees with the principle of 'no material deterioration' in the quality standard. It is important given the new regulatory regime that technical breaches for quality do not arise. Assessment of quality needs to consider the trend in the underlying quality after adjustment for extreme events and at least five years of data are required to establish a trend.

Question 65

What do you consider are appropriate criteria for demonstrating an EDB's responsiveness to consumers?

Aurora believes that the criterion for assessing an EDB's responsiveness to consumer's views on quality is best addressed in the AMP. The annual assessment of the AMPs by independent auditors will incentivise EDBs to improve the quality of their communications and move to best practice approaches. These should be left to each EDB to manage and evolve over time.

Question 66

What do you consider is the most appropriate regulatory mechanism under Part 4 for including a customer communication criterion?

Aurora believes that the Information Disclosure regime is the most appropriate regulatory mechanism for a customer communication criterion.

Question 67

What are your views on the use of a five-year historic average as the basis for quality standards under the DPP? Do you have any comments on the potential for quality standards to be based on a moving five-year historic average?

Aurora agrees with the concept of a five year historic average (after normalising for extreme events) as the basis for setting the quality standard. The quality standard should be fixed for the regulatory period and thus the dead band (based on the adjusted 5 years of data) will also be fixed for the regulatory period.

Question 68

What are your views on the proposal to include 2008/09 non-normalised daily outage data?

Aurora accepts that 2008/09 daily outage data should be requested and then normalised so that together with data from 1 April 2004 to 31 March 2008, a five year period is available. It is not clear whether the Commission is proposing to use a moving 5 year period or fix the quality standard for the term of the quality path by using only data for the 5 year period ending 31 March 2009.

Question 69

What are your views on the appropriateness of the IEEE 2.5 Beta Method for identifying extreme variability in quality data?

As advised previously Aurora does not agree with the IEEE 2.5 Beta Method as it believes that the selection of 2.5 Beta does not exclude some events which should be treated as extreme events. Subject to the selection of the Beta number or other processes which accommodate the normal variability in normalised data, Aurora accepts that the IEEE Method is appropriate.

Question 70

What are your views regarding any other appropriate methods for identifying extreme variability that could be implemented under DPP reset?

Aurora has no other comments at this stage however it notes that under a CPP other methods for treating extreme variability may be appropriate.

Question 71

Do you agree that dead-bands are an appropriate statistical method for accounting for the effects for normal variability in order to identify material deteriorations in quality?

Yes Aurora agrees with the concept of dead bands to account for normal variations in adjusted quality.

Question 72

What are your views as to appropriate methods for calculating the size of the dead-band?

Aurora has modelled the Commission's proposals using its own SAIDI data and the IEEE 2.5 Beta method. It has determined that the proposed 5% or 7.5% dead bands will create problems with technical breaches of quality path after using the Commission's proposed approach to assessing quality standards. Given Aurora's overall excellent quality performance during the last 10 years it does not believe that a percentage dead band approach is workable unless the percentage is set to 15%.

Aurora believes that a dead band based upon at least one standard deviation provides a more robust approach to the setting of the dead band and consequently this will lead to fewer technical breaches of quality.

Question 73

How appropriate is the potential use of a three-year moving average scheme, as described above? Is three years an appropriate timeframe? Would such a scheme impact incentives related to the timing of planned maintenance?

Aurora believes that the three year period is an appropriate period. The proposal to take the Assessed Value as the lower of the actual value or the moving three year value should accommodate normal data variability. It does not believe that a moving average scheme will impact on short term decisions relating to planned maintenance.

Question 74

What are your views on whether a multi-year assessment, as described above, is appropriate under a DPP? What, if any, potential problems do you see with adopting this type of mechanism?

Aurora considers that a multi-year assessment will also be needed. Aurora notes that under this proposal that the quality assessment for the first year will be for information only as two years of assessments will be needed in order to determine whether the quality path has been breached.

Question 75

What are your views on the incentives for EDBs with respect to quality performance given that a breach can only occur when an EDB's quality performance does not meet the required standard for two out of any three years?

It is very important that normal data variability is recognised. Assessing an EDB's quality performance against a standard for two out of three years would reduce the risk of a breach for technical reasons and thus improve certainty for the EDB. Integrating an S-factor into the price path would provide incentives for an EDB to improve quality.

Question 76

What are your views on the Commission's proposed approach for assessing quality standards under the Reset DPP?

Subject to our response in Question 61, Aurora agrees with the proposed approach to assessing quality standards under the Reset DPP.