

**2009 NETWORKS REGULATORY RESET**

**SUBMISSION BY POWER AND WATER  
IN RESPONSE TO INITIAL DRAFT  
DETERMINATION BY THE NT  
UTILITIES COMMISSION**

**NOVEMBER 2008**

*This report contains 38 pages*

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# 1 Background and Purpose

## 1.1 Purpose of this Document

This is Power and Water Corporation's (Power and Water) Submission to the Northern Territory Utilities Commission (the Commission) in response to the Commission's Initial Draft Determination: 2009 Regulatory Reset October 2008 (Draft Determination).

This Submission has been drafted to meet paragraphs 1.31 and 1.32 of the Draft Determination and to meet all of the Commission's requests for additional clarification. In particular, it seeks to respond to the Commission's request that submissions address:

- Whether any particular aspects of the Draft Determination are not considered consistent with the facts or with the NT Code or otherwise with the *National Electricity Rules* (the Rules); and
- Whether the draft decisions contain omissions, including in light of material included in Power and Water's Initial Regulatory Proposal (IRP).

## 1.2 Executive Summary

Power and Water is concerned that the Draft Determination does not provide it with sufficient revenue to conduct its forecast business operations over the third regulatory period. Under the Commission's most conservative operating assumptions, which Power and Water does not support, Power and Water forecasts that its costs will exceed its revenues by **\$104 million** in present value terms based on the forecasts provided with its IRP. Power and Water is of the view that the Commission should take these forecasts into account before making its Final Determination.

Power and Water considers that the following draft decisions are not considered consistent with the facts or with the NT Code or otherwise with the Rules:

- The draft decision in relation to the initial value of the regulatory asset base in paragraph 2.5. Power and Water does not consider that this decision is consistent with section 6 of Schedule 7 of the NT Code as it does not consider deprival value or generally accepted regulatory practice;
- The draft decision in relation to the  $X_2$  factor in paragraph 2.12. Power and Water does not consider that the outcomes of the GHD Meyrick Report are sufficiently accurate for the purposes of setting either the  $X_2$  factor or the 2008-09 efficient operating and maintenance cost forecasts;
- The roll-forward method as employed in the Po model is not consistent with section 6.5.5(b)(2) of the Rules, as it does not provide Power and Water with the ability to recover the value of assets in depreciation allowances over the useful lives of the assets;

- The draft decision in relation to the removal of the holding gains in 2008-09 and the consequent impact on the return on assets calculation. The Commission's current treatment means that Power and Water does not receive a return on the inflated closing asset base for 2008-09. This is inconsistent with general regulatory precedent;
- Amendment 5-4, in relation to the efficient operating and maintenance costs for 2008-09. Power and Water does not consider that the process the Commission has adopted for assessing Power and Water's operating and maintenance expenditure is consistent with paragraphs 2.24 and 5.51 of the Commission's Final Decision, and 6.5.6(c), 6.5.6(e) of the Rules. In particular, the Commission has restricted its assessment of operations and maintenance costs to that required by 6.5.6(e)(4), which is only one element in the suite of matters that the Commission should take into account. Further, Power and Water has concerns in relation to the data, assessment and findings of the GHD Meyrick Report, in particular that such a large reduction in expenditure (26.9%) could be recommended without any consideration by that consultant of the activities or requirements underpinning the forecasts, or any qualification being drafted into the report to limit its use; and
- Amendment 5-5, in particular paragraph 2.28, in relation to Power and Water providing explanations and statements of out-turn versus forecast expenditure over the second regulatory period that the Commission considers satisfactory. This requirement is not consistent with the Rules or the NT Code.

Power and Water considers that the only aspect of the Draft Determination that contains material omissions is in the Commission's assessment of the 2008-09 operating and maintenance expenditure forecasts. Power and Water included significant amounts of detailed information in its IRP, which were in turn assessed by ACIL Tasman, to support the consideration by the Commission of its forecasts under 6.5.6(e) of the Rules. Power and Water considers that these are relevant for consideration of the efficiency of Power and Water's expenditure.

As well as the above issues, Power and Water has also provided responses to the Commission's queries in relation to pass-throughs in this submission.

### **Events Occurring After the Initial Regulatory Proposal**

Following a major explosion that occurred on 19 September 2008 at the Casuarina Zone Sub-Station (Casuarina ZSS), Power and Water intends to include a section in its Revised Regulatory Proposal (RRP) that sets out expected expenditure consequent to the incident, and demonstrate that this expenditure is prudent and efficient.

## 2 Concerns with Initial Draft Determination

### 2.1 Expected Revenue and Costs over the Third Regulatory Period

Power and Water is concerned that the Draft Determination does not provide it with revenue sufficient to meet its forecast costs over the next regulatory period.

This is because:

- Power and Water is forecasting that operating and capital expenditure will increase substantially over the next ten years. These forecasts do not yet include any expenditure impacts from the current Government reviews, and are therefore likely to be under-estimated;
- These forecasts are considerably higher than that provided to the Commission as supplementary information with the IRP, due to a spreadsheet error made by Power and Water in collating these forecasts; and
- The impact of these forecasts is that there is a significant difference between the revenue that Power and Water will recover under the Commission's Draft Determination and its forecast costs over the third regulatory period.

Power and Water's operating and maintenance and capital expenditure forecasts are set out in the table below.

	2009-10	2010-11	2011-12	2012-13	2013-14
Operating Expenditure (\$000)	68,718	74,111	75,480	83,907	83,445
Capital Expenditure (\$000)	108,200	74,200	63,700	63,200	71,300

These operating expenditure forecasts are significantly larger than those that Power and Water previously advised to the Commission in its supplementary data submission in September 2008. This reflects a spreadsheet error made by Power and Water which has now been corrected.

Power and Water also expects that it will re-submit its 2008-09 capital expenditure forecast to take account of a new project at CZSS as well as other amendments to the capital program with its RRP in January 2008.

Power and Water has undertaken four revenue and cost scenarios in order to test whether the Commission's Draft Determination disadvantages it, and to what degree. All scenarios use the forecasts of capital expenditure for the 2009-10 period onwards, and use the Commission's estimate of tariff revenue for 2008-09, but do not include any changes to 2008-09 capital or operating expenditure from that previously submitted to the Commission:

- The first scenario assumes the SKM asset valuation is used, and Power and Water's operating expenditure forecasts are not adjusted for any "efficiency factor";

- The second scenario assumes the \$350M roll-forward asset valuation is used, and Power and Water’s operating expenditure forecasts are not adjusted for any “efficiency factor”;
- The third scenario assumes the SKM asset valuation is used, and Power and Water’s operating expenditure forecasts are adjusted for a 17% “efficiency factor” each year; and
- The fourth scenario assumes the \$350M roll-forward asset valuation is used, and Power and Water’s operating expenditure forecasts are adjusted for a 17% “efficiency factor” each year.

The net present value of the losses faced by Power and Water under each scenario is set out below.

<b>Scenarios</b>	<b>Present Value of Loss<sup>1</sup> (\$ million)</b>
Scenario 1 – SKM Asset Valuation, Full Opex for 2009-10 Onwards	219.9
Scenario 2 – \$350M Roll-Forward Asset Valuation, Full Opex for 2009-10 Onwards	160.7
Scenario 3 – SKM Asset Valuation, Opex for 2009-10 Onwards reduced by 17% per annum	171.2
Scenario 4 - \$350M Roll-Forward Asset Valuation, Opex for 2009-10 Onwards reduced by 17% per annum	103.7

Under all scenarios, the Commission’s Draft Determination does not provide Power and Water with sufficient revenue necessary to meet its obligations. This suggests that:

- The X factors are currently insufficient to take account of Power and Water’s actual requirements to spend money on its distribution network and its customers, regardless of the asset valuation method or operational cost efficiency scenarios chosen; and
- The TFP method adopted by the Commission should be balanced with a check by the Commission that Power and Water will not be under-funded in this Determination process. Power and Water’s modelling, which it would be pleased to share with the Commission, suggests that a large Po at the cessation of the third regulatory period is a certainty if the current Draft Determination parameters are maintained.

Power and Water’s strong view is that the correct scenario for assessment is Scenario 1 – using the SKM asset valuation and assuming that Power and Water cannot realistically reduce its operating and maintenance costs by 17% - which means that it will incur a loss of around \$220 million over the regulatory period.

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<sup>1</sup> PV analysis calculated using the Commission’s method from the Po Model, calculated as the present value of the difference between the building block of costs for each year, and the tariff stream using the X factors, using a discount rate of 10.45%.

## **Events Occurring After the Initial Regulatory Proposal**

A major explosion occurred on 19 September 2008 at the CZSS which feeds power to about 15,000 customers in surrounding areas. Since then, the CZSS has been operating at approximately two-thirds its normal capacity.

Emergency generation equipment has been sourced from around Australia with some 61 sets comprising 47 MW now in Darwin. These generators will provide Power and Water with additional security and flexibility while the CZSS is restored.

Power and Water has established the Power System Remedial Asset Management Program in response to the CZSS incident. As the Commission is also aware, the Northern Territory Government (Government) has commissioned an independent investigation into the CZSS incident, and that it is already Government policy to implement all of the inquiry's recommendations. In this regard, all expenditure that is consequent to the inquiry is considered by Power and Water to be prudent and will set service standards going forward.

It is likely that Power Networks' operating and capital expenditure plans will be very different in two months' time. In this regard, the Commission should be aware that Power and Water intends to include a section in its Revised Regulatory Proposal (RRP) that sets out expected expenditure consequent to the recent events surrounding the CZSS, and demonstrate that this expenditure is prudent and efficient.

## **2.2 Roll-Forward of Asset Base to 1 July 2009**

Power and Water acknowledges that:

- The Commission's revised Po Model employs a roll-forward method that has extensive precedent through its use by the AER; and
- The "holding gain" methodology used by the Commission to remove the asset inflation component of the asset roll-forward has precedent and is consistent with the AER's Roll-Forward Model.

Power and Water's only remaining concern with the asset roll-forward method used by the Commission is that it does not allow Power and Water to recover depreciation charges over the life of assets that are equal to the initial commissioning value of the assets. This occurs because the roll-forward model commences depreciating assets in the year in which the asset is capitalised, and the depreciated value of that asset is rolled forward into the following year.

When a regulated business makes a prudent capital investment, the business can reasonably expect to recover that investment over time, including earning a market return on capital (WACC). This is the financial capital maintenance concept. This means that over a certain period the net present value of revenues earned from an investment and the net present value of the residual value of the investment should equal the initial investment.

Because the Commission's Po Model includes capital expenditure in the year in which it is incurred, the opening asset base for 2008-09 uses "actual" depreciation in rolling forward capital expenditure for previous years. This has the following effects:

- Where actual capital expenditure is less than forecast capital expenditure in the current regulatory period, Power and Water would retain the benefits of the higher depreciation associated with its forecast capital expenditure amount, without this value of depreciation being removed from the regulatory asset base at the end of the regulatory period; and
- Where actual capital expenditure is more than forecast capital expenditure in the current regulatory period, Power and Water would be disadvantaged because of the lower depreciation associated with its forecast capital expenditure amount. The shortfall in depreciation is not added to the regulatory asset base at the end of the regulatory period.

This is potentially at odds with section 6.5.5(b)(2) of the Rules, and incentivises Power and Water to underspend its capital expenditure allowance in a regulatory period, and therefore:

- Creates a distortion in the capital expenditure decision process, incentivising Power and Water to spend to its "cap" and nothing more; and
- Disadvantages Power and Water in the current regulatory period because the value of the capital expenditure for the opening 2008-09 asset base is a depreciated value, not the full value. This fails the financial capital maintenance principle because Power and Water will never be able to recover that "lost" depreciation.

As the Commission is aware, the capital expenditure overspend amount in the second regulatory period was significant. Using the reconciliation provided in table 5-18 of the Draft Determination, without seeking to identify the capital expenditure "benchmark" inherent in the 2004 Determination, the overspend was around \$4 million in 2005-06, \$4.7 million in 2006-07, \$26 million in 2007-08 and \$41 million in 2008-09. These are assets for which Power and Water received no return on assets to compensate it for its cost of capital, and no depreciation allowance.

While it is standard regulatory practice for a network company to receive no return on assets for "overspent" amounts in the regulatory period in which they were incurred, it is difficult to understand why the roll-forward model should commence depreciating these assets when no depreciation amount has been recovered through network tariffs.

Power and Water therefore requests that the Commission consider making an amendment to its roll-forward model. The amendment would remove depreciation of all assets associated with capital expenditure "overspends" in the second regulatory period, by excluding depreciation amounts in the roll-forward of assets to 1 July 2009. Power and Water would have no issues with using the forecast and actual amounts in table 5-18 of the Draft Determination for this purpose.



This amendment would ensure that Power and Water will receive revenue sufficient to recover depreciation charges over the life of assets that are equal to the value of the assets, and therefore would satisfy the financial capital maintenance principle. It would also remove distortions in the incentives that Power and Water faces to underspend on its capital expenditure “benchmarks” inherent in the TFP methodology.

## **2.3 Return on Assets Calculation in 2008-09**

Power and Water is concerned with the application of the “holding gain” methodology to the 2008-09 year.

Power and Water understands that:

- The return on 2008-09 capital expenditure is a real return on a mid-year value, expressed as (half of the real return on assets (WACC) \* full 2008-09 capital expenditure). This means the Commission is allowing Power and Water to receive a real return on capital expenditure assets notionally in place as at 30 June 2009, but under an assumption that only half of the assets were in place for the full year (therefore that capital expenditure was commissioned progressively);
- The return of 2008-09 capital expenditure is a return of a mid-year value, expressed as half capital expenditure divided by useful life. This means the Commission is allowing Power and Water to be compensated for capital expenditure assets notionally in place at 30 June 2009, but under an assumption that only half of the assets were in place for the full year (therefore that capital expenditure was commissioned progressively as above); and
- The Po Model provides Power and Water with a nominal WACC on the opening asset base. This includes asset inflation for the whole of 2008-09, and therefore means that the Commission is allowing Power and Water to receive the costs of capital and depreciation for those assets that were in place for the whole year, as at 30 June 2009.

As Power and Water understands it, the “holding gain” methodology as applied by the AER, seeks to remove a double-count inherent in the use of a post-tax WACC methodology and a current cost accounting roll-forward, by removing one “lot” of inflation. It is applied in the post tax revenue model in order to equate the depreciation cost included in the roll-forward model with the cash-flow received in the depreciation “building block”. It is similar, although applied differently, to the treatment used by the Queensland Competition Authority (QCA) which does not apply it in the roll-forward of assets but removes asset inflation from the calculation of its Aggregate Annual Revenue Requirement.<sup>2</sup>

The use of this methodology in the Commission’s Po Model removes the asset inflation from the calculation of the revenue that Power and Water is allowed to

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<sup>2</sup> See page 172 of the QCA 2005 Final Determination: ENERGEX and Ergon Energy

recover. In this way, it is similar to the approach taken by the QCA. Power and Water notes, however, that the QCA's application of this methodology does not remove the holding gain from the regulatory asset base – it removes asset inflation from revenue **instead** of removing it from the regulatory asset base.

The QCA calculates the return on and return of assets for the opening RAB for a regulatory year as (Nominal WACC) \* (inflated asset base) + (depreciation on inflated asset base). Because the asset base has been inflated in both the ROA and depreciation calculations, as well as in the nominal WACC, the QCA's method removes an amount of (CPI \* Opening Assets). The final form (excluding operating and capital expenditure) as it relates to the opening asset base is therefore:

$$AARR = (Nominal\ WACC * Inflated\ Opening\ Asset\ Base) + (Depreciation\ on\ Inflated\ Opening\ Asset\ Base) - (CPI * Opening\ Asset\ Base).$$

By comparison, the Po Model calculates the TFP base revenue requirement as:

$$Revenue = (Nominal\ WACC * Uninflated\ Opening\ Asset\ Base) + (Depreciation\ on\ Uninflated\ Opening\ Asset\ Base) - (CPI * Opening\ Asset\ Base).$$

This treatment means that Power and Water does not receive a return on the inflated closing asset base for 2008-09. The return on capital for 2008-09 is therefore better defined as a return on the closing 2007-08 asset base.

Power and Water therefore requests that the Commission consider making an amendment to its roll-forward model, such that the return on opening assets for 2008-09 is calculated on an inflated opening asset base. The holding gains amount will then be removed from the calculation of the required revenue, which will cancel out the double count of asset inflation.

Alternatively, the Commission could consider not removing the holding gains amount from the 2008-09 required revenue, on the basis that this will be removed in any event at the end of the third regulatory period through the roll-forward model at that time.

## 2.4 SKM versus \$350 Million Roll-Forward

Power and Water based its asset values in the IRP on a valuation undertaken by Sinclair Knight Mertz (SKM) as at 1 July 2007.

The Commission:

- Noted in paragraph 4.6 of the Draft Determination that it "*has already considered the arguments put by Power and Water in the IRP in favour of a DORC valuation of sunk assets as at 1 July 2002, as part of the Commission's Off-Ramp Decision (in 2005). The Commission stands by its reasoning underlying that Decision and so does not intend to re-open the decision*".
- Rejected, in paragraph 4.7 of the Draft Determination, Power and Water's argument that the Off-Ramp Decision provides a disincentive to investment –

because the Commission's roll-forward methodology recognised all investments made since 1 July 2002 at cost.

The Commission noted in paragraph 4.8 that the only argument that it would consider is if the \$350 million Roll-Forward value "*would give rise to financial viability problems for Power and Water*". It dismissed this argument on the basis that:

- The initial regulatory asset base remains capable of generating net cashflows in excess of the minimum necessary to ensure at least a single A stand-alone credit rating, and so ongoing financial viability; and
- Use of the SKM asset valuation would upgrade Power and Water's cashflows to that equivalent for a AAA credit rating, which the Commission considers would involve returning "*excessive net cashflows*"<sup>3</sup> to the "*Northern Territory Government as Power and Water's owner*". These cashflows would be "*the equivalent of an additional tax on electricity usage in the Northern Territory*".

As a side issue, Power and Water is not convinced that use of the \$350 million asset valuation, combined with the other aspects of the Commission's Draft Determination, will return cashflows to it or to the Northern Territory Government which are capable of maintaining a single A stand-alone credit rating. Power and Water's modelling suggests that under all scenarios, the Draft Determination does not provide sufficient revenues to fund Power and Water's costs.

- Aside from viability issues, Power and Water is concerned with the Commission's Draft Determination in relation to its asset base. This is because regardless of the Commission's findings in the 2005 Off-Ramp Review, it is bound to act in accordance with the *NT Electricity Networks (Third Party Access) Act* and the NT Code. Section 6 of Schedule 7 of the NT Code provides the basis for valuing network assets. The Commission has not taken this section into consideration and it must do so for the purposes of rejecting Power and Water's decision to propose the SKM asset valuation.

Power and Water, in its IRP, set out its reasons for engaging SKM to revalue its assets and why it considers that the values derived by SKM should be reflected into its regulatory accounts.

Section 6 of Schedule 7 of the Code provides that "*in approving the basis of asset valuation to be used, the regulator must have regard to –*

- a) the agreement of the Council of Australian Governments of 19 August 1994 that deprival value should be the preferred approach to valuing network assets;*
- b) any subsequent decisions of the Council of Australian Governments regarding the valuation of public sector assets; and*
- c) generally accepted regulatory practice at the time."*

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<sup>3</sup> Paragraph 4.14 of the Draft Decision

The Commission had regard to these matters in the 2005 Off-Ramp Decision, in which it:

- Formed an interpretation of deprival value at that time, finding that there is a basis to write-down an asset if there is a constraint on prices that can be charged; and
- Formed an interpretation of generally accepted regulatory practice, which was primarily based on gas network decisions at that time.

It is Power and Water's view that the Commission should re-examine its interpretation of deprival value, in particular to take into account the 2007 increases in retail tariffs and agreed price paths. A decision by the Commission to maintain the 2005 Off-Ramp Decision, and to ignore the SKM valuation, implies that Power and Water would not be able to recover the increase in network tariffs consequent to the use of the SKM valuation.

Further, Power and Water considers that the Commission's 2005 Off-Ramp valuation methodology is no longer consistent with generally accepted regulatory practice, in particular the introduction of Chapter 6 of the Rules and the new Gas Rules. This is because:

- Under a deprival value methodology, the Po is both a determinant of, and consequent to, the return on assets in the building block calculation. It is a determinant of the return on assets because the Commission's 2005 method calculates the value of assets on the basis of future revenue. It is a consequence of the return on assets because the higher the asset base is, the higher the return on assets is, and therefore increases the Po. Generally accepted regulatory practice is to recognise this circularity and to use DORC to overcome this.

## **2.5 Pass-Through Concerns**

The Draft Determination (in paragraph 6.71) required that Power and Water must, in its IRP:

- Limit the qualifying events to those which are unexpected and beyond Power and Water's control and not as a result of Power and Water's actions; and
- Include a materiality provision.

The Draft Determination also noted that:

- In paragraph 6.68, that "variances in costs or demand inputs, even material ones, seem to be a catch-all which of themselves are not clearly restricted to events outside of Power and Water's control";

- In paragraph 6.69, that “any future structural separation of Power and Water or similar reforms is a matter for the NT Government, as owner of Power and Water”; and
- In paragraph 6.70, that “the connection of large customers is a matter that should be handled under the approved capital contributions policy and not necessarily impact on existing network users”.

The Draft Determination did not explicitly accept or reject the pass-through mechanisms proposed by Power and Water. The required amendment was that Power and Water must ensure that pass-through events were “limited to the occurrence of specific events which are (a)<sup>4</sup> unanticipated at the time the regulatory proposal is approved and (b) beyond the control (i.e. not as a result of actions) of Power and Water’s owner, board or management and (c) include an explicit materiality provision in relation to the change in cost involved.

Power and Water submitted its proposed pass-through mechanisms in line with the Final Methodology Decision. The Final Methodology Decision narrowed the Commission’s previous position in the Issues Paper, and stated in paragraphs 6.41 and 6.42:

*(6.41): On reflection, the Commission notes that the National Electricity Rules limit a pass through event to specified events (most notably: a tax change event, a terrorism event, and a service standard event). The Rules also allow for other types of events to be added at the regulator’s discretion.*

*(6.42): The Commission therefore has decided to amend its Draft Decision slightly to, in effect, restrict the ‘default’ events to those in the Rules. As part of its regulatory proposal, Power and Water can (if it wishes) propose any additional types of cost pass through events which it considers should apply, for the Commission’s consideration and possible approval.*

The Final Methodology Decision clearly indicated that the Commission would rely, to the greatest extent possible, on Chapter 6 of the Rules in determining both the types of pass-throughs that would be allowed, and the way in which positive and negative pass-throughs (termed “change events” in the Rules) would be administered. For this reason, Power and Water paid close attention to the only other revenue proposals that have been submitted under Chapter 6, that being the NSW distribution companies. These have now been submitted, and are available publicly, and the AER is due to release its Draft Determination on 28 November 2008.

Integral Energy and Country Energy sought to include additional pass-through events in their regulatory proposals.

As well as the defined pass-through events in the Rules, Integral Energy sought:

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<sup>4</sup> Power and Water has added (a), (b) and (c) in order to assist in addressing each item in turn. For this reason, the lettering has been italicised.

- an asbestos event, to pass-through the costs of any asbestos related claims;
- an automated interval meters event, to pass-through the costs of mandated interval meter roll-out;
- a business continuity event, to pass-through the costs of an event which significantly impacts the ability of Integral Energy to provide direct control services in accordance with its usual operations;
- a change in ownership event, to pass-through the costs if there is a change to the ownership of Integral Energy's retail electricity business and as a consequence the costs to Integral Energy of providing direct control services;
- a change in reporting requirements event;
- a distribution loss event, to pass-through the costs of an event which results in the imposition of costs or legal obligations on Integral Energy in relation to distribution losses from the operation of its distribution network;
- an electric and magnetic fields event, to pass-through either the costs of increased maintenance because of safety concerns, or the costs of a claim relating to electric and magnetic fields;
- an emissions trading scheme event, to pass-through the costs of any legal obligations on Integral Energy arising from the introduction or operation of a carbon emissions trading scheme by the Commonwealth Government;
- a functional change event, to pass-through the costs of any event which results in the imposition of new obligations, or changes the nature of the existing obligations, on Integral Energy as a Distribution Network Service Provider;
- a gradual pollution event, to pass-through the costs if Integral Energy's provision of direct control services is materially increased by virtue of increased claims or changes in work practices;
- a retailer of last resort event, to pass-through the costs of an event which results in the imposition of costs or legal obligations on Integral Energy as retailers of last resort; and
- a sabotage event, to pass-through the costs of the use of force or violence (or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government).

Country Energy sought the following additional pass-through events:

- New or additional market requirements (such as the mandatory rollout of interval meters and the consequent significant data handling costs);

- 'Intelligent network' investments, designed to incorporate positive and negative cost events consequent to the development of a more 'intelligent' network;
- Self insurance events. This includes climate change events, asbestos, electrical and magnetic fields, business continuity and gradual pollution pass-through events similar to that put forward by Integral Energy. It also included workers compensation events, designed to cover unforecast increases in workers compensation requirements;
- Changes in risk assessment costs due to legal outcomes. This provides a pass-through for costs associated with several court cases in NSW involving Country Energy;
- Changes to obligations, structure and costs due to outcomes of the Retail Reform Project. This provides a pass-through for all costs imposed on Country Energy by virtue of the NSW Government's Retail Reform Project, involving the separation of Country Energy's retail and network businesses; and
- Input cost variations. This provides a pass-through for changes in input costs which are unknown at the time of the submission being made.

Energy Australia, Integral Energy and Country Energy all made a clear connection between events that were insurable and events that were not insurable. They all sought self-insurance premiums for insurable events and pass-throughs for non-insurable events.

Power and Water's IRP stands in contrast to these, but relies upon the same principles.

Firstly, Power and Water has not included an operating expenditure cost for self-insurance for events that are insurable, but for which the premium is very high and therefore market sourced insurance is not worth purchasing. These would include self-insurance for such matters as:

- Fraud;
- Environmental contamination;
- Earthquakes (magnitude of less than 7);
- Counterparty credit;
- Bushfire;
- Cyclones;
- Risk of non-terrorist impact of planes and helicopters;

- Key assets (transformers and circuit breakers);
- Key person risk;
- Contractual risks; and
- General public liability.

By not including these self-insurance premiums, Power and Water has made clear that it considers the risk of these events is so low, and the cost of these events when they occur is so high, that the risk weighted self-insurance premium would be significant. It has left these out of the operating expenditure cost base, the effect of which reduces the Po.

Pass-throughs, in contrast to self-insurance amounts, do not impose any cost on the consumer other than the reasonable costs of catastrophic and uninsurable events when and if they occur. They therefore provide Power and Water with the ability to remain solvent in the event of catastrophe, but without levying customers the probabilistic costs of these events before they occur.

Power and Water's proposed pass-throughs reflect common catastrophic, uninsurable and exogenous events that cause a network company to lose money within a five year regulatory reset period.

As well as the defined events under the Rules, Power and Water sought:

- A force majeure event – this covers uninsurable catastrophic loss, which cannot be prepared for and which would significantly increase Power and Water's costs of providing standard control services. These are uninsurable and beyond the control of Power and Water to mitigate ahead of time;
- Cost or demand input variance event – this covers costs arising from unexpected and extraordinary increases in input costs within a regulatory period. These are also uninsurable and beyond the control of Power and Water to mitigate ahead of time;
- Compliance event - this covers costs arising from unexpected and extraordinary changes in the regulatory regime, for example the mandated roll-out of interval meters or the connection of Power and Water to the National Electricity Market (and the commencement of regulatory responsibilities in the Rules) within a regulatory period. These are also uninsurable and beyond the control of Power and Water to mitigate ahead of time;
- Large customer connection event – this covers the costs of an unexpected and large customer connection which are not covered by the capital contributions methodology but which impose costs on Power and Water; and



- Separation event – similar to the NSW regulatory proposals, this covers the costs of any separation of Power and Water Networks and Retail that might impose costs on Power and Water Networks.

The following section assesses each of these against the Commission's requirement that Power and Water:

- Limit the qualifying events to those which are unexpected and beyond Power and Water's control and not as a result of Power and Water's actions; and
- Include a materiality provision.

Power and Water intends to submit in its RRP that the process for preparing and lodging a pass-through application, and the Commission's assessment of applications, should be in accordance with section 6.6.1 of the Rules.

### **2.5.1 Force Majeure Event**

A Force Majeure Event is designed to include provision for fire, flood, earthquake, cyclone, storm, or other weather related events or natural disasters. These are events that are not insurable (either because cover is not available commercially or because cover is not available at a price that is worth pursuing).

These events involve risks that have a very low probability of occurrence but potentially a very high impact. The cost impacts of these events are not already being covered by either self insurance risk quantification, or any other regulatory cost pass through mechanism. Given the difficulty in quantifying this class of risk, and the fact that these events are outside Power and Water's control, Power and Water intends to include this provision in the RRP.

In line with the Commission's request, Power and Water will propose a materiality provision such that the pass-through amount must exceed 1% of the annual revenue from standard control services in the financial year in which the event occurs.

Power and Water notes that the total cost of the event will be assessed against 1% of the revenue in the year in which the event occurred, regardless of whether or not the expenditure carries across several financial years. For example, if a cyclone occurred on 26 March 2009, and the activities required to restore supply took place between 27 March 2009 and 30 December 2010, then the pass-through cost would be the total cost of the restoration between 27 March 2009 and 30 December 2010, assessed against the total revenue received in 2008-09 (i.e. the financial year in which the event occurred).

### **2.5.2 Cost or Demand Input Variance Event**

A cost or demand input variance event is designed to allow Power and Water to pass-through (either negatively or positively) any changes in input costs or demand variances that occur within a regulatory control period.

While Power and Water accepts that it may be able to manage some of these risks through efficient and effective procurement and internal processes, the efficient 2008-09 operating expenditure allowance assumes these processes. The TFP base year approach is derived from estimates of Power and Water's 2008-09 operating and capital expenditure, and the X factor is set to allow for expected increases in overall input costs both in the industry and for the economy as a whole. Any additional increase in unit costs and/or demand which the prudent service provider would not be able to forecast and which the Commission's X factor and operating expenditure Decision did not foresee could therefore be defined as non-controllable.

Power and Water considers that these non-controllable risks are best borne by users of the network and not Power and Water. As the X factors are fixed for the length of the regulatory period, Power and Water would bear the financial risk associated with these events should they occur. The costs associated with unforeseen events may significantly impact on returns (both positive and negative) to Power and Water and therefore should be allowed to be passed through.

Power and Water acknowledges that this pass-through is akin to a reopening in some respects, and therefore considers that a materiality threshold would provide a necessary buffer on immaterial claims. In line with the Commission's request, Power and Water will propose a materiality provision such that the pass-through amount must exceed 1% of the annual revenue from standard control services in the financial year in which the event occurs.

As with "force majeure" events, the total cost of the event would be assessed against 1% of the revenue in the year in which the event occurred, regardless of whether or not the expenditure carries across several financial years.

### **2.5.3 Separation event**

Power and Water has received no indication from the Northern Territory Government that it intends to separate Power and Water Networks from Power and Water Retail.

That said, separation of Power and Water into separate businesses would impose considerable costs on Power and Water Networks given its current joint head office operations and shared service model.

Due to the uncertainties involved, Power and Water considers that any structural separation event needs to be incorporated as a nominated pass through event. Power and Water is of the view that the trigger for a separation event should be at the time when Power and Water has been able to firm up all costs, benefits and impacts to the point where a full business case can be presented to the Commission.

Power and Water proposes a materiality threshold of 1% of revenue from standard control services.

#### **2.5.4 Large customer connection event**

Power and Water accepts the Commission's Draft Determination and will remove this pass-through provision from the RRP.

#### **2.5.5 Compliance event**

A compliance event pass-through covers costs that occur caused by unexpected and extraordinary changes in the regulatory regime, for example the mandated roll-out of interval meters or the connection of Power and Water to the National Electricity Market (and the commencement of regulatory responsibilities in the Rules) within a regulatory period. These are uninsurable and beyond the control of Power and Water to mitigate ahead of time.

While Power and Water accepts that it may be able to manage some of these risks through active involvement in the processes that might give rise to these events occurring, it remains the case that these events are not within Power and Water's control.

Power and Water considers that these non-controllable risks are best borne by users of the network and not Power and Water. As the X factors are fixed for the length of the regulatory period, Power and Water would bear the financial risk associated with these events should they occur. The costs associated with unforeseen events may significantly impact on returns (both positive and negative) to Power and Water and therefore should be allowed to be passed through.

Power and Water will submit that the total cost of a compliance event should be passed through in the year in which it occurs without any materiality provision.

### **2.6 Concerns in relation to 2008-09 Operations and Maintenance Cost Forecasts**

#### **2.6.1 The Commission's Draft Determination**

The Commission's assessment of Power and Water's 2008-09 operating and maintenance costs was in three steps:

- A review of Power and Water's 2008-09 forecast operating expenditure, as set out in its IRP, by ACIL Tasman, to determine "accuracy" but not efficiency;
- An assessment of Power and Water's 2008-09 forecast operating expenditure against a benchmark operating expenditure index by GHD Meyrick, to determine the efficient level of operating expenditure; and
- Acceptance of both the ACIL Tasman and GHD Meyrick recommendations by the Commission.

The ACIL Tasman Report<sup>5</sup> stated that:

- There was around \$500,000 of non-network functions inadvertently included by Power and Water within the costs for Technology Services, which needed to be removed; and
- That Power and Water's "accurate" operating and maintenance expenditure forecast for 2008-09 is \$57.1 million, instead of Power and Water's proposed \$57.6 million.

The Commission, in paragraph 5.79 of the Draft Determination, accepted ACIL Tasman's recommendation that the "accurate" operating and maintenance expenditure forecast for 2008-09 is \$57.1 million.

The GHD Meyrick Report determined both the efficiency of Power and Water's 2008-09 forecast operating expenditure, and the X<sub>2</sub> factor to apply in the third regulatory control period. As Power and Water understands it, the methodology used by GHD Meyrick to undertake the assessment was to:

- Establish Power and Water's "unique" environmental operating factors that increase Power and Water's operating and maintenance costs relative to other Australian DNSPs – it established the value of these to be \$14.1 million per annum;
- Adjust Power and Water's total operating expenditure forecast downwards by 5 per cent in recognition of the extra "transmission equivalent operation" functions that Power and Water performs relative to interstate DNSPs;
- Deduct the total of the "unique" environmental operating factor costs and the "transmission equivalent operation" costs from Power and Water's 2008-09 forecast operating expenditure (\$57.1 million – as recommended by ACIL Tasman), leaving \$39.6 million<sup>6</sup>. GHD Meyrick assumed that this was Power and Water's "comparable" operating and maintenance expenditure for benchmarking purposes;
- Benchmark this \$39.6 million operating and maintenance expenditure against other network companies using an output index. In order to do this GHD Meyrick:
  - Used 2003 operating and maintenance costs for all network companies because they did not have any more recent data and deflated Power and Water's 2008-09 operating and maintenance forecast to 2003 dollars, in order to establish a common dataset. This meant that all operating cost data was expressed in 2003 dollars;
  - Used the output parameters from a report prepared by Meyrick in 2005 (referred to as the 2005a Report) to establish a multilateral unit

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<sup>5</sup> Page 15 of ACIL Tasman Report

<sup>6</sup> GHD Meyrick page 28 and Commissions initial Draft Determination paragraph 5.75

operating expenditure index. The output parameters included customers, GWh and network kilometres; and

- Obtained the average result of only four of the thirteen network companies, being Country Energy, Ergon Energy, Powercor, and SP AusNet to establish the average multilateral unit operating expenditure index. GHD Meyrick then compared Power and Water's 2008-09 (in 2003 dollars) forecast expenditure against this index in order to determine whether it was an efficient level and to derive the  $X_2$  to apply in the third regulatory control period.

The GHD Meyrick Report noted that this data showed that the average multilateral unit operating expenditure index of the four comparators is around 0.43 compared to Power and Water's unadjusted index of 1.00 and its adjusted index of 0.70.

GHD Meyrick therefore determined that in order for Power and Water to reach the same multilateral unit operating expenditure as the four comparators, it would have to reduce its unit operating expenditure by 26.9 per cent. This means that Power and Water's efficiency gap (the gap between its operating expenditure and that of the "multi-lateral average") is around 27%.

GHD Meyrick recommended that this efficiency reduction be applied to Power and Water through an up-front adjustment and through the application of X factors. The Commission, in paragraph 5.82 of the Draft Determination, accepted GHD Meyrick's recommendations and reduced Power and Water's operating and maintenance expenditure forecast by 16.9% to \$47.36 million, with the remaining 10% to be removed from Power and Water through the  $X_2$  factor over the third regulatory control period.

## **2.6.2 Power and Water's Principal Concerns with the Commission's Method**

Power and Water has three principal concerns with the Commission's method of establishing the efficient operating expenditure level. These concerns are that:

- GHD Meyrick has assessed Power and Water's efficient 2008-09 operating expenditure on the basis of a "top down" (benchmarking) approach, and has not undertaken any more detailed "bottom up" assessment of Power and Water's 2008-09 operating expenditure. This means that GHD Meyrick has recommended an efficient level of operating expenditure without any understanding of what Power and Water intends to spend this money on, or why;
- There are several issues with the calculation of the benchmarking levels by GHD Meyrick, that in Power and Water's view, dilute the accuracy of the outcomes. These issues are that:
  - The process whereby GHD Meyrick has established "same year" operating costs does not reflect the current differentials in operating and maintenance costs between these companies in 2008-09;

- The four comparators that GHD Meyrick has chosen have been chosen without any consideration of why these companies are similar to Power and Water – except that they appear to be “regional”; and
- The way that GHD Meyrick has constructed the multilateral unit operating expenditure index is not transparent and has been presented in a manner which does not allow Power and Water to make an informed submission.
- The outcomes of the GHD Meyrick Report are difficult to sustain with reference to Power and Water’s past and forecast expenditure. When compared with simple benchmarking outcomes based on publicly available data for the same businesses as GHD Meyrick assessed, Power and Water’s operating expenditure for 2008-09 does not appear markedly higher than in other jurisdictions. As noted in section 2.1, Power and Water is forecasting increases in forecast operating and maintenance expenditure and it would be impossible for Power and Water to maintain its network at the cost that GHD Meyrick has determined.

These concerns are set out in detail in the following sections.

### **2.6.3 The GHD Meyrick Method for Determining Efficiency**

The Commission’s approach has been to use, wherever possible, the framework for submission and assessment set out in Chapter 6 of the Rules. Paragraph 2.2 of the Commission’s Final Decision states:

*For the purposes of the 2009 Reset, to the maximum extent possible,... the Commission will follow the procedures set out in the National Electricity Rules for arriving at a Final Determination, in order to achieve consistency with procedural practice now evident elsewhere in Australia in the regulation of electricity distribution networks.*

In relation to operating expenditure, the relevant provisions of the Final Decision are paragraphs 2.24 and 5.51. In particular paragraph 5.51 states that:

*First, operating expenditure must reasonably reflect the operating expenditure criteria stated in clause 6.5.6(c) of the National Electricity Rules.*

Clause 6.5.6(c) of the Rules states that:

*The AER must accept the forecast of required operating expenditure of a Distribution Network Service Provider that is included in a building block proposal if the AER is satisfied that the total of the forecast operating expenditure for the regulatory control period reasonably reflects:*

- *the efficient costs of achieving the operating expenditure objectives (as stated in clause 6.5.6(a));*

- *the costs that a prudent operator in the network service provider's circumstances would require to achieve the operating expenditure objectives; and*
- *a realistic expectation of the demand forecast and cost inputs required to achieve the operating expenditure objectives.*

*(the operating expenditure criteria).*

Therefore clause 6.5.6(c) provides that the AER and therefore the Commission (noting that all references to the AER in the Rules have been interpreted to apply to the Commission) must accept Power and Water's 2008-09 forecast operating expenditure if it is satisfied that the forecast reasonably reflects these operating expenditure criteria.

In order to demonstrate that it satisfies these requirements, Power and Water:

- Presented its 2008-09 operating expenditure on the basis of a bottom-up cost-build-up. This involved Power and Water identifying all the categories of expenditure that comprise its total 2008-09 forecast operating expenditure;
- Justified each category of expenditure comprising its total 2008-09 operating expenditure forecast in accordance with the operating expenditure criteria under clause 6.5.6(c) of the Rules; and
- Justified each category of expenditure comprising its total 2008-09 operating expenditure forecast in accordance with the operating expenditure objectives under clause 6.5.6(a) of the Rules.

Section 6.5.6(e) of the Rules provides further guidance for the Commission in determining whether or not the operating expenditure amounts submitted to it, in accordance with clause 6.5.6(c) are prudent and efficient. Section 6.5.6(e) of the Rules sets out that:

*In deciding whether or not the AER is satisfied as referred to in paragraph (c), the AER must have regard to the following (the operating expenditure factors):*

- (1) the information included in or accompanying the building block proposal;*
- (2) submissions received in the course of consulting on the building block proposal;*
- (3) analysis undertaken by or for the AER and published before the distribution determination is made in its final form;*
- (4) benchmark operating expenditure that would be incurred by an efficient Distribution Network Service Provider over the regulatory control period;*

- (5) *the actual and expected operating expenditure of the Distribution Network Service Provider during any preceding regulatory control periods;*
- (6) *the relative prices of operating and capital inputs;*
- (7) *the substitution possibilities between operating and capital expenditure;*
- (8) *whether the total labour costs included in the capital and operating expenditure forecasts for the regulatory control period are consistent with the incentives provided by the applicable service target performance incentive scheme in respect of the regulatory control period;*
- (9) *the extent the forecast of required operating expenditure of the Distribution Network Service Provider is referable to arrangements with a person other than the provider that, in the opinion of the AER, do not reflect arm's length terms;*
- (10) *the extent the Distribution Network Service Provider has considered, and made provision for, efficient non-network alternatives.*

This highlights that benchmarking referred to in clause 6.5.6(e)(4) is only one element in the suite of matters that the Commission must take into account when assessing the efficiency and prudence of Power and Water's 2008-09 operating expenditure.

The Rules' emphasis in determining the efficiency and prudence of total forecast operating expenditure is clearly articulated at clause 6.5.6(c) which states that the Commission must accept the forecast of required operating expenditure included in a revenue proposal, if it is satisfied that the total of the forecast reasonably reflects "*the costs that a prudent operator in the circumstances of the relevant Distribution Network Service Provider would require to achieve the operating expenditure objectives*".

This is because:

- Firstly, it is difficult for Regulators to assess efficiency without understanding the particular circumstances of the DNSP which have given rise to the need for expenditure; and
- Secondly, there are well documented shortcomings of benchmarking which are generally overcome by detailed "bottom-up" assessments of expenditure forecasts by Regulators.

Each of these matters is discussed in turn below.

### ***Assessment of efficiency and prudence requires bottom-up cost assessment***

The AER has publicly recognised the importance of understanding the detail and nature of the costs which comprise an expenditure forecast when assessing whether



it is a prudent and efficient expenditure claim, and has reflected this in its Statement of Regulatory Principles for the Regulation of Transmission Revenues (SRP). The SRP sets out the meaning of, and its approach to determining, prudence and efficiency of expenditure. The AER's Draft Decision SP AusNet Transmission Determination 2008-09 to 2013-14, dated 31 August 2007, applied this three step approach, which it stated to be:

- *First, assess whether there is a justifiable need for the investment. This stage examines whether the TNSP correctly assessed the need for investment against its statutory and regulatory obligations. The assessment focuses on the need for investment, without specifically focusing on what the correct investment to meet that need should be. An affirmation of the need for an investment does not imply acceptance of the specific project that was developed;*
- *Second, assuming the need for an investment is recognised, assess whether the TNSP proposed the most efficient investment to meet that need. The content of the assessment is whether the TNSP objectively and competently analysed the investment to a standard that is consistent with good industry practice; and*
- *Third, assess whether the project that was analysed to be the most efficient was indeed developed, and if not, whether the difference reflects decisions that are consistent with good industry practice. The analysis in this third step examines in detail the factors that caused changes in the project design and/or delivery and assesses how the TNSP responded to those factors in comparison to what could be expected of a prudent operator.*

The AER further elaborated on these principles in its Draft Decision SP AusNet Transmission Determination 2008-09 to 2013-14, stating that prudent costs are those that:

*a "prudent operator in similar circumstances (would incur), and without the benefit of hindsight".*

This means that the AER considers that in order to assess the efficiency of expenditure it must, amongst other things:

- Assess in detail the individual cost components of the total forecast to determine whether the expenditure is required, that is whether there is a "justified need for the expenditure";
- Understand whether activities/items that underpin the operating expenditure forecast could not have been deferred, avoided or substituted for other activities and are for the minimum quantity/amount/levels of these activities/items; and
- Assess whether the costs would also be required by a prudent operator in similar circumstances to the DNSP and in accordance with good industry practice.

Importantly, this approach cannot be achieved by a top down benchmarking assessment of a business's operating expenditure forecast as GHD Meyrick has conducted.

Indeed the AER's view, as per the SRP, that a bottom up cost assessment is the most appropriate method for assessing efficiency and prudence remains relevant. The AER, in its recent submission to the Victorian Department of Primary Industries in relation to its Chapter 6 Rule Change to introduce Total Factor Productivity (TFP) as a control setting mechanism to be applied to distribution services, stated that<sup>7</sup>:

*...one important pre-condition for the use of any TFP-based approach is the development of a full national cost data-base for DNSP's. Such a cost data-base is currently under development by the AER...but will take some time to be completed. The AER considers that the effective development and implementation of a TFP approach to network regulation is critically dependent on the collection of robust, consistent and reliable long term information about electricity distribution network costs and operational parameters, from a broad range of electricity DNSPs. As a practical matter it would be most desirable for such a framework to be in place prior to the actual use of a TFP approach.*

The AER further stated that:

*...it is preferable to apply TFP in a relatively steady state environment (i.e. where the future profile of expenditure and demand is relatively smooth compared to historical levels). This in stark contrast, however to emerging trends in distribution network expenditure forecasts, particularly those emanating from NSW DNSPs in relation to their upcoming 2009-14 distribution regulatory periods. These indicate that expenditure over the 2009-14 period is forecast to be typically between 50-100 percent higher than current periods. While it is unclear to the AER whether forecasts by DNSPs in other jurisdictions, such as Queensland, South Australia and Victoria, which are next due for price reviews, will show a similar step change in proposed expenditure, the potential impact of any such large shift in costs on the use of a TFP approach will need to be considered carefully.*

While Power and Water appreciates that the decision on the TFP method has been made in the Final Methodology Paper, and then confirmed by the Draft Determination, it is worth noting that the above statements by the AER make clear its view that:

- TFP should not currently be applied to Australian DNSP on the basis that there is not yet robust, consistent and reliable long term information available about electricity distribution network costs and operational parameters, from a broad range of electricity DNSPs; and

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<sup>7</sup> AER, Rule Change Proposal – Total Factor Productivity, August 2008. Found at: <http://www.aemc.gov.au/pdfs/reviews/Total%20Factor%20Productivity%20for%20Distribution%20Network%20Regulation/submissions/009AER.pdf>

- TFP should apply only to those DNSP's in a steady state, not to those DNSP that have forecast large increases in future expenditure and consequently a large Po such as the NSW businesses.

Importantly, notwithstanding the:

- Rule requirements, in particular 6.5.6(c) that in assessing the efficiency and prudence of forecast operating expenditure the Commission must have regard for the costs that a prudent operator in Power and Water's circumstances would incur to achieve the operating expenditure objectives;
- AER's stated approach to determining efficiency and prudence of expenditure forecasts in its SRP;
- AER's recent stated caution against using top down assessments to determine the efficiency before a robust data base of information is available and where a large step change is forecast in its Rule Change Submission,

GHD Meyrick did not undertake a detailed bottom up cost assessment of Power and Water's 2008-09 operating expenditure, and further, did not note in its Report that this approach might not be sufficiently reliable to reduce Power and Water's operating and maintenance costs from its forecasts by such a significant amount.

Accordingly, in assessing the efficiency of Power and Water's forecast operating expenditure and in recommending the  $X_2$  to apply in the third regulatory control period, GHD Meyrick do not appear to have:

- Assessed in detail the individual expenditure components that comprise Power and Water's total operating expenditure forecast to determine whether the expenditure is required to deliver standard control services in 2008-09;
- Sought to understand whether activities/items that underpin the operating expenditure forecast could not have been deferred, avoided or substituted for other activities and are for the minimum quantity/amount/levels of these activities/items;
- Sought to understand the nature and impact of the specific cost drivers of Power and Water's operating expenditure;
- Assessed whether the costs would also be required by a prudent operator, in similar circumstances to Power and Water;
- Assessed the demand forecast that underpin the expenditure forecast; or
- Sought to understand the relationship between Power and Water's 2008-09 capital and operating expenditure forecasts. This is important because there is the potential to artificially reduce operating expenditure by undertaking activities/services for which the associated costs could be capitalised rather than expensed in order to lower the operating expenditure forecast but that would not be either efficient or prudent.

This means that in accepting GHD Meyrick's recommendation in relation to the efficiency adjustment factor to apply to Power and Water's 2008-09 operating expenditure forecast, per paragraph 5.82 of its Draft Determination, the Commission has not assessed and considered:

- What Power and Water's operating expenditure forecast relates to including the services and activities required to operate and maintain its network in the third regulatory control period;
- Why Power and Water's 2008-09 operating expenditure forecast is required in order to provide standard control services; and
- The impact of approving such a large reduction in Power and Water's 2008-09 operating expenditure. In particular the impact on service standards, quality of supply, or reliability in the third regulatory control period. This is particularly significant considering that expenditure relating to:
  - Repairs and Maintenance accounts for around one third of Power and Water's total forecast 2008-09 operating expenditure (per its IRP); and
  - Personnel Direct accounts for around 45% of Power and Water's total forecast 2008-09 operating expenditure (per its IRP).

*This means that cutting back on expenditure may potentially have serious performance, reliability, and system security implications for Northern Territory electricity customers.*

### ***Documented shortcomings of benchmarking***

There is extensive regulatory documentation acknowledging the shortcomings of benchmarking, which support benchmarking being part of a broader suite of assessment tools rather than the sole determinant of efficiency.

ActewAGL outlines these arguments to the AER in its 2009-10 - 2013-14 Regulatory Proposal. In particular it states that<sup>8</sup>:

*Comparison against other DNSPs is often used to gain insight into the efficiency of a business's operating expenditure. However, the conclusions that can be drawn from such comparisons are often limited as no two distribution networks are identical. It is important to recognise the unique cost environment in which different utilities operate.*

*Operating costs are influenced by the number and types of assets in service and the condition of those assets. Age is often used as a de facto measure of asset condition. The link between operating*

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<sup>8</sup> ActewAGL Distribution Determination 2009-14 Regulatory Proposal to the Australian Energy Regulator, June 2008, page 183

*expenditure and output measures such as energy supplied or system demand is relatively weak. ActewAGL Distribution therefore believes that benchmarking operating expenditure against these measures provides limited insight into the efficiency of a distribution entity.*

*To compare ActewAGL Distribution's comparatively small Electricity Networks business, which has many unique attributes, with much larger DNSPs will inevitably give rise to flawed outcomes. The ActewAGL Distribution Electricity Networks business has to maintain core functions such as Regulatory Affairs, Billing, Financial Management, Systems and Procedures, the cost of which has to be carried by a much smaller network, customer base and revenue base than other DNSPs. ActewAGL Distribution is subject to significant planning and operating restrictions and inherent network issues not applicable to other utilities.*

*In past benchmarking exercises, there has been an attempt to 'normalise' the results by adjusting for the unique pressures affecting ActewAGL Distribution. However, the process of normalisation has been necessarily very subjective requiring identification and quantifying the impact of the unique attributes. As a consequence, the benchmarking results were flawed and of very limited usefulness.*

*ActewAGL Distribution believes that there is no single indicator that would provide a meaningful benchmark outcome and that benchmarking would have limited merit in establishing the prudence of ActewAGL Distribution's cost forecasts.*

These statements highlight that:

- The conclusions drawn from benchmarking are limited because businesses have different characteristics, requirements, cost structures and cost drivers and operating environments;
- Even when adjusting for the "unique" business differences, benchmarking cannot provide an entire method of determining efficiency. This is because normalisation is subjective requiring identification and quantifying the impact of the unique attributes;
- Comparing comparatively small DNSPs with much larger DNSPs "will inevitably give rise to flawed outcomes" and financially disadvantage smaller DNSPs by preventing them from the opportunity to recover efficient and prudent costs; and
- There is no single indicator that provides a meaningful benchmark outcome.

Overall, these observations suggest that benchmarking should not be the sole means of determining Power and Water's efficiency.

## 2.6.4 GHD Meyrick's Methodology

As noted previously, there are several issues with the calculation of the benchmarking levels by GHD Meyrick, which place into doubt the accuracy of the report's findings. These are set out below.

### 2.6.4.1 Process for De-Escalating to Base Year 2003 Costs

GHD Meyrick used actual 2003 operating expenditure cost data from 13 DNSPs to assess the efficiency of Power and Water's 2008-09 operating expenditure on a benchmarking basis<sup>9</sup>. While the Commission requested GHD Meyrick to include Power and Water's expenditure data adjusted for operating environment effects in its more recent 2005a study, this was not undertaken because<sup>1011</sup>:

*....undertaking a full update of the Meyrick electricity distribution database covering all Australian electricity distribution businesses would involve a disproportionate commitment of resources, [and therefore]<sup>12</sup> PWP's adjusted opex for 2009 will be compared with the other EDBs' actual opex for 2003.*

The use of 2003 data in establishing the benchmark index against which to compare Power and Water's efficient 2008-09 operating expenditure forecast is not a sufficiently robust assessment methodology, because:

- DNSPs are now spending at much higher levels than they were in 2003, over and above the deflator used by GHD. This is attributable to a range of reasons including that:
  - They now have significantly larger asset bases to operate and maintain; and
  - Ageing infrastructure is driving greater expenditure.

Deflating Power and Water's 2008-09 operating expenditure to 2003 dollar prices, by applying the ABS 2008 Electricity, gas and water (EGW) sector labour price index, will not normalize this impact and consequently Power and Water's 2008-09 operating expenditure will be comparatively higher against the 2003 operating expenditure levels of any peer group; and

- Despite GHD Meyrick's comments in its Report, there is in fact 2008-09 expenditure and output information readily available for most businesses,

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<sup>9</sup> GHD Meyrick and Associates, Electricity Distribution X Factors for the NT's Third Regulatory Control Period, Report prepared for the Utilities Commission, 23 September 2008 page 27.

<sup>10</sup> Ibid, page 26

<sup>11</sup> Power and Water understands, but seeks clarification that the output data used in the analysis, being kilometre of network, gigawatt-hours and customers, is also as of 2003. This is important because 2003 expenditure relates to a DNSP's asset base, customer base and level of demand, as at 2003. Therefore any assessment of 2003 cost data should be undertaken in respect of output specifications as at 2003.

<sup>12</sup> Words in brackets added by Power and Water.

including for the final comparator set chosen by GHD Meyrick. More recent available operating expenditure data includes:

- 2008-09 operating expenditure forecasts for SP AusNet, CitiPower and Powercor as approved by the Essential Services Commission of Victoria (ESCV) in its 2006-13 Electricity Distribution Price Determination Report (EDPR)<sup>14</sup>;
- 2008-09 operating expenditure forecasts for Aurora Energy as approved by the Office of the Tasmanian Energy Regulator (OTTER) in its 2007 Price Determination entitled "Investigation of Prices for Electricity Distribution Services and Retail Tariffs on Mainland Tasmania Final Report and Proposed Maximum Prices"; and
- 2008-09 estimated operating expenditure for Country Energy, Energy Australia and Integral Energy. Each of the NSW DNSP's provided 2008-09 estimated operating expenditure in their 2009-10 to 2014-15 Regulatory Proposals to the Australian Energy Regulator (AER).

Power and Water considers that the Commission should re-calculate the benchmark operating expenditure index on the basis of 2008-09 available data, rather than rely on the benchmark index calculated by de-escalating Power and Water's 2008-09 operating and maintenance costs.

#### 2.6.4.2 Choice of Comparators

As noted above, while GHD Meyrick firstly assessed Power and Water's 2008-09 operating expenditure data against the following measures for 13 Australian DNSPs:

- Operating expenditure per kilometre of network;
- Operating expenditure per gigawatt-hour; and
- Operating expenditure per customer.

GHD Meyrick then limited the dataset to four of the 13 DNSPs, being Ergon Energy, Country Energy, Powercor and SP AusNet, in order to determine the  $X_2$  to apply to Power and Water in the next regulatory control period, stating that<sup>15</sup>:

*"We adopt the conservative policy of taking the average of the four rural EDBs that have the most similar customer densities to PWP as the relevant benchmark. These EDBs are Ergon Energy, Country Energy, Powercor and SP AusNet"*

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<sup>13</sup> Found at: <http://www.esc.vic.gov.au/NR/rdonlyres/C9D582D3-3C20-4CFD-9B9D-687D0063472A/0/EDPRDeterminationVol1Amendedinaccordancewithappealpaneldecision.pdf>

<sup>14</sup> Electricity Distribution Price Review 2006-10 October 2005 Price Determination as amended in accordance with a decision of the Appeal Panel dated 17 February 2006 Final Decision Volume 1 Statement of Purpose and Reasons Found at: <http://www.esc.vic.gov.au/NR/rdonlyres/C9D582D3-3C20-4CFD-9B9D-687D0063472A/0/EDPRDeterminationVol1Amendedinaccordancewithappealpaneldecision.pdf>

<sup>15</sup> GHD Meyrick and Associates, op cit page 32

GHD Meyrick further stated that:

*"Using the average of the efficient scores of these four EDBs [Ergon Energy, Country Energy, Powercor and SP AusNet] is again a conservative choice in favour of PWPN".*

Power and Water does not agree that either Ergon Energy or Country Energy have a customer density which is similar to Power and Water.<sup>16</sup> In any event, Power and Water's own assessment of its operating expenditure against other businesses does not support GHD Meyrick's findings that its operating expenditure should be reduced by 27%.

Power and Water's benchmarking outcomes are shown in Attachment 1. These use publicly available information for the 2008-09 year and provide more up-to-date information than was used in the GHD Meyrick Report. The data shows that GHD Meyrick's recommendation that Power and Water's expenditure be reduced by 26.9% will likely not be supportable if updated benchmarking analysis was conducted.

#### **2.6.4.3 The Multi-Unit Index**

Power and Water notes that GHD Meyrick have not explained how they have undertaken the multilateral unit analysis or derived the multilateral unit operating expenditure index.

As noted, GHD Meyrick refers to two previous reports undertaken by Meyrick and Associates. These reports are referred to as the 2003a Report and the 2005a Report. In particular GHD Meyrick state that:

*Proceeding in a similar fashion to Meyrick (2003a), we use the comprehensive output index of Meyrick (2005a) in comparing multilateral unit operating expenditure for the 13 EDBs taking account of the component of PWPN's operating expenditure attributable to the adverse conditions it faces.*

It is not clear from this statement what information or calculations are drawn upon by GHD Meyrick in their analysis of the efficiency of Power and Water's 2008-09 operating expenditure.

GHD Meyrick goes on to state that:

*"by combining the major output dimensions [kilometer of network,, gigawatt-hours and customers] in a rigorous and objective manner, multilateral unit opex provides a more reasonable basis for identifying both the best practice and subsequent efficiency gaps".*

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<sup>16</sup> Power and Water's benchmarking exercise shows that Ergon Energy and Country Energy have customer densities (measured by dividing customer numbers by km of lines) of 4 and 4 respectively. Power and Water has a density of 10, whereas Aurora Energy for example has a density of 11 and United Energy a density of 50.



However, GHD Meyrick does not explain:

- What multilateral unit operating expenditure analysis is and how it is derived/calculated to determine the efficiency of Power and Water's 2008-09 operating expenditure. In particular, GHD Meyrick do not clarify whether it has taken account only of 2003 expenditure data and 2003 output data or whether it uses time series output data. Power and Water notes that it provided time series data for the period 2000-2008 to GHD Meyrick for the purposes of determining the efficiency of its operating expenditure and more particularly the  $X_2$  factor. It is not clear how this information has been used in the calculations.
- What "combining the major output dimensions in a rigorous and objective manner" means and what it involved;
- Whether any adjustments were made to the dataset, in particularly to the output data to account for differences between businesses that might unduly affect the benchmark outcome;
- Whether any assumptions were made in undertaking the analysis and calculating the multilateral unit operating expenditure index;
- Whether weights have been allocated to each of the outputs (i.e. by revenue shares); and
- Whether there were gaps in the data set, particularly in relation to the output data set and whether and how these have been addressed.

The lack of detail on the multilateral unit operating expenditure calculations means that it is difficult for Power and Water, stakeholders and other interested parties to:

- Understand the nature of the analysis and the data used in the analysis;
- Review the analysis and the resultant recommendations; and
- Determine whether they agree with GHD Meyrick's recommendation in relation to the efficiency of Power and Water's 2008-09 forecast operating expenditure and the  $X_2$  factor that will apply to Power and Water in the third regulatory control period.

Power and Water therefore recommends that GHD Meyrick provide the data used in the calculations as well as the detailed calculations undertaken to derive the multilateral operating expenditure index used to assess the efficiency of its 2008-09 operating expenditure and the  $X_2$  factor to apply in the third regulatory control period.

### **2.6.5 Summary of Concerns**

In summary, Power and Water considers that the Commission should reassess Power and Water's 2008-09 operating expenditure forecast before making its Final Determination in relation to this matter. This is because:

- Power and Water's own benchmark analysis for the comparators chosen by GHD Meyrick, as well as a wider set of comparators, shows that there is little basis to recommend a reduction of 27% based on the benchmarking data. Power and Water therefore recommends that the Commission:
  - Verify GHD Meyrick's benchmarking analysis with a bottom up cost assessment; and
  - Re-do the benchmark comparison using the current 2008-09 data that is publicly available.
- Secondly, as noted previously, it is difficult for Power and Water to support the GHD Meyrick recommendation to reduce Power and Water's expenditure because GHD Meyrick has not assessed any information on Power and Water's assets, maintenance profiles or programs, operational arrangements, or depot location to enable it to have a view on these matters. Given this, Power and Water considers that it would be prudent either for the GHD Meyrick assessment to be significantly broadened or for the Commission to take other matters into account in relation to determining the correct value of  $X_2$ ; and
- Thirdly, the outcomes are significantly less than Power and Water's past, current or forecast operating and maintenance expenditure budgets and it is difficult to see what part of Power and Water's activities GHD Meyrick considers are inefficient, imprudent or unnecessary. It would be impossible for Power and Water to operate and maintain its network for the cost that GHD Meyrick has recommended that it be constrained to given that all scenarios give rise to negative cashflows in present value terms.

### **2.7 Concerns in relation to 2008-09 Tariff Revenue Forecasts**

Power and Water does not support the Commission's decision to increase its tariff revenue forecast for 2008-09 by 5%. This issue will be dealt with further in Power and Water's RRP.

### **2.8 Examinations and Explanations Sought by the Commission**

The Commission, in paragraph 5.133 of its Draft Determination, required Power and Water to submit:

- An examination and explanation specifically addressing the main factors accounting for the disparities documented in tables 5-17 and 5.18 of the Draft Determination. These tables compared Power and Water's 2004 forecasts of

operating and maintenance expenditure between 2004-05 and 2008-09, and 2004 forecasts of capital expenditure over the same period, with actual expenditure; and

- A statement as to:
  - Which of these main explanatory factors were the result of actions or decisions of the owner of board or management of Power and Water, along with a summary of those actions or decisions and the main reasons why such actions or decisions were considered necessary; and
  - Which were outside the control (i.e not a result of the actions) of the owner or board and management of Power and Water.

The Commission, in paragraph 5.134, makes clear to Power and Water that failure to comply with this requirement, or to provide explanations and statements that the Commission considers satisfactory, will result in the Commission re-considering the Po value suggested by the Commission's estimates.

Power and Water interprets paragraphs 5.133 and 5.134 to mean that:

- If Power and Water does not provide an explanation of why its actual expenditure for the second regulatory period did not match the forecasts that it developed in 2004, allocating responsibility for each variance, then
- The Commission will "re-consider" the positions that it has developed in accordance with the Rules and the Code, and use its discretion to make a ruling in relation to certain aspects of the methodology that moves these parameters in a downward direction. Power and Water does not assume that the Commission's re-consideration could include an upwards revision of the Po.

Paragraphs 5.133 and 5.134 are therefore designed to require Power and Water to provide additional information to that required in either the Rules or in any instrument under the Northern Territory Access Regime, under the threat of non-specific reductions in network revenue.

Power and Water does not understand the basis of the Commission's request, specifically it does not understand:

- Why the Commission requires the information that it has requested in paragraph 5.133;
- How the information will assist the Commission in determining the appropriate Po for the third regulatory period; and
- How the information will be used by the Commission.

Power and Water has no issue with providing the Commission with all information that it reasonably requires to make a determination on the efficient level of revenue that Power and Water should be able to receive through network tariffs. Power and Water has endeavoured throughout the process to ensure that it has met, where it could, each of its responsibilities and obligations as set out in the Final Methodology Paper. Where these could not be met, for example in relation to the SKM Asset Valuation, it has made its non-compliance extremely transparent and sought to explain why this is so.

Power and Water did not intend in its IRP to suggest that the shortfall between revenue and costs in the second regulatory period was either (a) "all the Commission's fault"<sup>17</sup> or (b) "due to the Commission's myopia at the time of the 2004 Reset"<sup>18</sup>. The revenue proposal instead sought to make clear that inflexibility in the control mechanism – specifically the TFP based method – and the Commission's view that it did not require forecast costs in order to estimate required revenue, combined to cause a large required increase in 2008-09 network tariffs.

Further, Power and Water's comments in the revenue proposal were intended to justify a position that the Commission should err on the side of providing Power and Water with more revenue rather than less, in an environment where costs have risen more than forecast and where the use of a control mechanism that de-links costs and revenues is being used. Power and Water's comments are particularly relevant given the Commission's decision to update the same benchmarking study used in 2003, and to use this as the only assessment criteria to reduce operating and maintenance costs.

Power and Water does not intend, at this stage, to provide the information requested by the Commission. Should the Commission require this information to satisfy a need under the Code or the Rules, then Power and Water will comply.

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<sup>17</sup> Paragraph 5.112 of Draft Determination.

<sup>18</sup> Paragraph 5.112 of Draft Determination.

# Attachment 1 – Operating and Maintenance Benchmarking

Figure 1 – 2008-09 Operating expenditure per kilometre of network

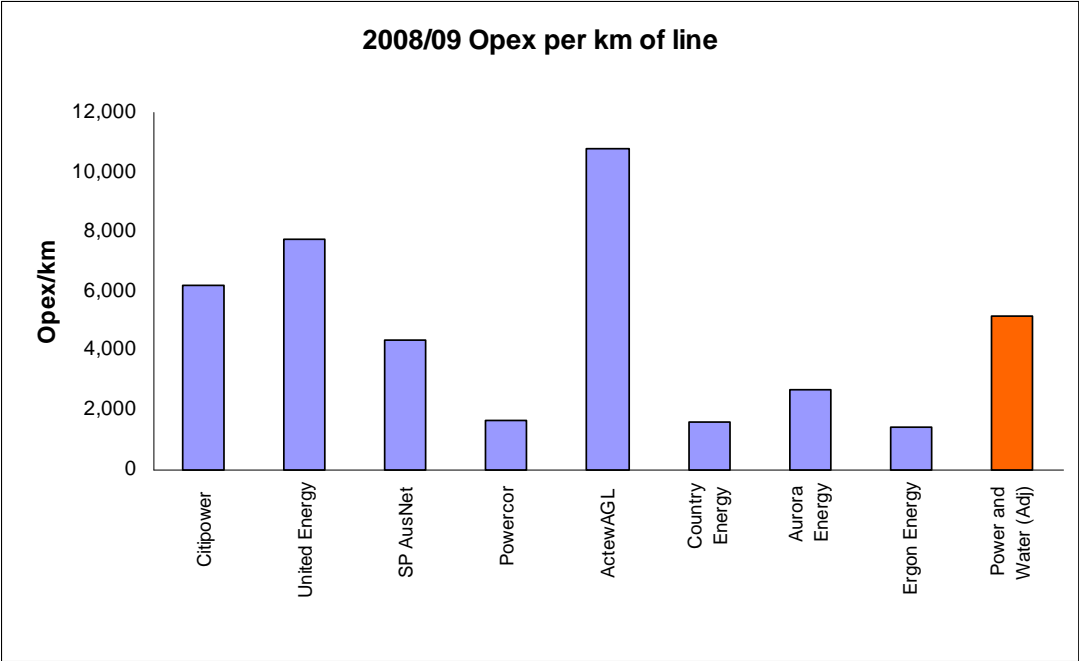
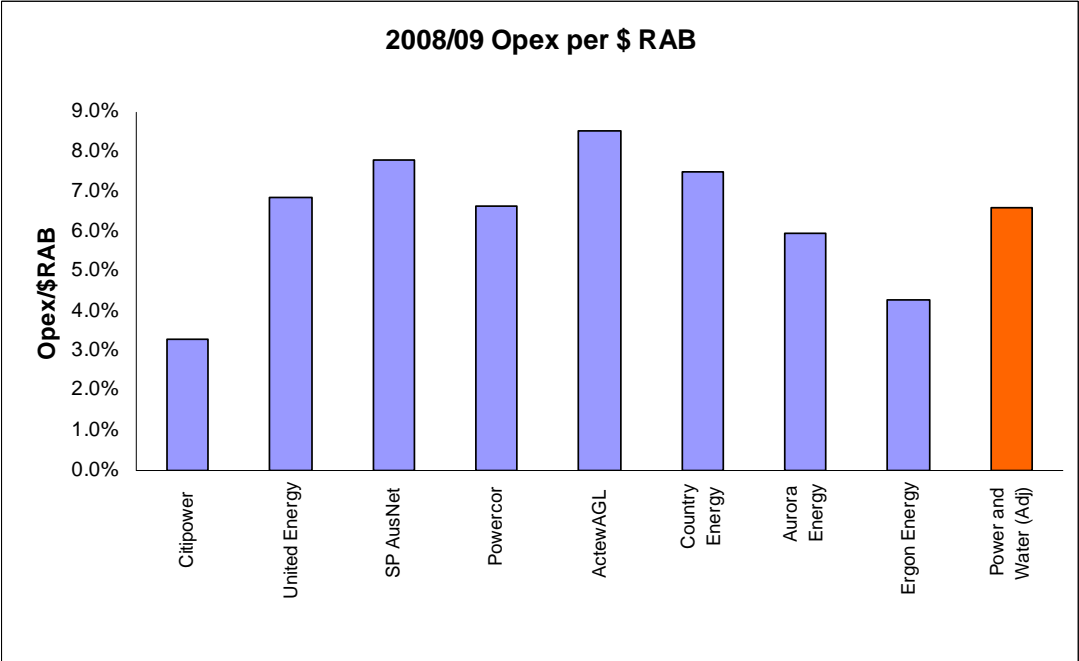


Figure 2 - 2008-09 Operating expenditure as a percentage of average RAB



**Figure 3 - 2008-09 Operating expenditure as a percentage of GWh**

