

Record No: D2011/412053

Container No: F2010/7271

Mr Andrew Reeves
Utilities Commissioner
Utilities Commission
GPO Box 915
Darwin NT 0801

Dear Andrew

**Re: Review of Electricity System Planning, Monitoring and Reporting –
Power and Water’s Response to Draft Report**

Thank you for the opportunity to comment on the Utilities Commission’s (Commission) Draft Report of its Review of Electricity System Planning, Monitoring and Reporting. Power and Water’s response to the Draft Report is at Attachment A, where each of the Commission’s recommendations have been individually addressed.

Power and Water has implemented many of the planning, monitoring and reporting elements proposed by the Commission, and is further developing and documenting existing practices in light of findings from SKM’s Review of Capital and Maintenance Programs, and Evans & Peck’s recommendations from last year’s Power System Review.

The Commission has not sufficiently justified the benefits to Northern Territory electricity customers of adopting some of the regulatory arrangements in the National Electricity Market that are not presently undertaken by Power and Water. Furthermore, in the absence of detailed implementation plans, it is likely that the Commission has under-estimated the effort, costs and time associated with implementing its proposed recommendations.

If you would like to discuss any issues arising from this response, please contact Ms Djuna Pollard, Manager Regulation, Pricing and Economic Analysis, on (08) 8985 8431.

Yours sincerely

Andrew Macrides

Managing Director

September 2011

**REVIEW OF ELECTRICITY SYSTEM PLANNING,
MONITORING AND REPORTING**

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

SEPTEMBER 2011

1. INTRODUCTION

As stated in its response to the Issues Paper, the Power and Water Corporation (PWC) anticipates that the Utilities Commission's (Commission's) purpose in recommending any new or revised approaches to system planning, monitoring and reporting will be premised on benefits to electricity customers, rather than simply creating additional collection of data sets, reports, and regulatory obligations, some with overlapping information and requirements.

In framing its proposals to revise the regulatory arrangements, the Commission has not adequately considered the dramatic differences between the scale and configuration of the Northern Territory (NT) electricity system and that of the interconnected National Electricity Market (NEM).

In the NT context, a regulatory compliance requirement that requires one additional employee would impose a material price increase on such a small customer base. The Commission has neither costed its proposals nor sought PWC's view on what the cost of its proposals would be, simply relying on a statement that this assessment is "...qualitative...and based on the Commission's knowledge of experience and practice elsewhere in Australia". PWC believes that the experience elsewhere in Australia cannot be translated directly to the NT.

The Commission's recommendations are not sufficiently specific for PWC to properly estimate their costs. However, PWC believes the Commission has an obligation to properly assess the costs and benefits of its final recommendations, including the Regulator's costs, and should seek information from PWC on the nature of the changes it would be required to make and their cost impact.

2. POWER SYSTEM PLANNING

Draft recommendation 1(a)

The Commission recommends the development and implementation of planning instruments that replicate the purpose and characteristics of the NEM planning instruments released by AEMO. The key components of these instruments are:

- credible and dependable forecasts of future electricity demand and supply to identify possible future generation and transmission capacity constraints;
- assessments of system adequacy, taking account of maintenance and outage plans;
- based on clearly defined security and reliability standards that reflect the customer price and service level outcomes of the regulatory bargain; and
- authoritative data on the current and future capability and condition of infrastructure to inform decisions about the most economic future options for augmentation and expansion of infrastructure to maintain security and reliability standards across the supply chain on a cost effective basis.

This planning information should be updated regularly to provide a program of information collection, analysis and disclosure of power system security and reliability of supply prospects. The NEM approach appears appropriate, with an annual and comprehensive update of longer term demand forecasts and supply prospects, and supported by a more regular update of the shorter term supply-demand balance (i.e. a medium term PASA document).

PWC already undertakes forecasts of future electricity demand and supply to identify possible generation and network capacity constraints, as well as assessments of system adequacy. These are undertaken as part of PWC's existing business planning practices, with the findings from SKM's Review of Capital and Maintenance Programs, and Evans & Peck's recommendations from last year's Power System Review also being incorporated where appropriate.

PWC does not accept that the development and implementation of some of the planning instruments used in the NEM is appropriate for the far smaller isolated systems of the Northern Territory. For example, the National Transmission Network Development Plan prepared by AEMO covers the development of the main interconnected transmission network between NEM regions and is clearly inappropriate for the Northern Territory's circumstances. PWC does not differentiate between transmission and distribution, and furthermore, PWC's network demand loads are much smaller than any of the distribution businesses in the NEM, and the total generating capacity in the Northern Territory is less than half that of one of the larger generating units on the eastern seaboard.

Network planning at both transmission and distribution levels should remain the responsibility of PWC Power Networks. PWC Power Networks is currently developing a Network Management Plan, modelled on the plans in place in other jurisdictions. This is proposed to cover a broad range of network responsibilities including the condition of infrastructure, demand growth and economic development options.

The production of an annual document by the Commission, for public dissemination, setting out the total system forecast supply-demand balance and system adequacy is appropriate. The annual Power System Review published by the Commission (using information predominantly provided by PWC) currently contains much of this information. The information request template prepared by the Commission for the Power System Review now seeks a much broader range of information, including technical information that is in line with requirements in the NEM.

The System Controller has commenced establishing the additional resources within the System Control structure to focus on areas such as technical envelope assessments, statement of opportunities analogous to that prepared by AEMO which serves to indicate any opportunities for potential investors in independent generation plant, and adequacy assessments (NEM like PASA – short, medium and long term).

Draft recommendation 1(b)

The Commission recommends the development and application of clearly defined power system (generation and transmission) reliability standards and performance targets to support system planning.

The Commission's Review of Electricity Standards of Service proposed that reliability performance outcomes be established for generation, transmission and distribution networks, including establishing a Territory Reliability Standard (based on a certain level of unserved energy) and network feeder reliability targets.

PWC acknowledges the desirability of developing and applying reliability standards and performance targets for its generation and network infrastructure. Further detailed analysis is required by PWC and the Commission regarding the target level of unserved energy.

PWC Power Networks has undertaken a fundamental review of the Network Planning Criteria, which are the major determinant of network reliability. The new standards have been developed to support network planning. By now specifying the planned operational response for given supply situations, these criteria facilitate the consideration of a full range of alternatives to meeting the network demand in individual situations, such as:

- demand management;
- local generation;
- network augmentation;
- strategic spares placement; and
- enhanced operational response.

The standards of supply security afforded by the revised Network Planning Criteria are broadly in line with those in place in other jurisdictions for equivalent local and large scale supply areas. They recognise the impact of loss of supply on customers and are scaled to the cost of providing additional security in different situations.

For the first time, the Network Planning Criteria propose a planned response to a second supply contingency in the CBD area of Darwin, in line with the arrangements in place other capital cities in Australia.

Generation planning is based on an N-2 reliability criterion applied to a forecast demand growth in Darwin and Alice Springs, modified by known additional blocks of industrial load, and to ensure additional suitable generation capacity is available during high load periods and to undertake planned maintenance.

Monitoring and reporting against the reliability performance standards recommended by the Review of Electricity Standards of Service will be staged from 2011-2015.

Draft recommendation 1(c)

The Commission recommends the development of a regulatory mechanism for procuring generation of last resort services, and determining who might be responsible for being generator of last resort.

Options for the development of the regulatory mechanism envisaged by the Commission for procuring generation of last resort services have not been provided in the Draft Report.

The generation market in the Northern Territory is open to competition. However in the absence of sustainable competition, PWC Generation has, by default, been required to be generator of last resort, adding costs to its business. Funding constraints, rather than poor planning or unwillingness to invest, has been the major influence on generation investment in the past.

PWC supports the generator of last resort responsibilities being included within the regulatory framework and the costs associated with such investment being recognised.

3. POWER SYSTEM MONITORING

Draft recommendation 2(a)

The Commission recommends that all electricity entities be required to develop and maintain a robust compliance process for the power system (generation and transmission). The monitoring of compliance against standards is an important feature of system monitoring. PWC is working to establish processes consistent with good compliance practice based on AS3806. These efforts are supported. The Commission will continue to make compliance a priority.

As acknowledged by the Commission, PWC has undertaken significant investment in the development of a robust corporate-wide compliance framework, through the establishment of additional staffing resources supported by a new information management system. The Compliance Management Strategy and Compliance Policy align PWC's practices with AS3806, and will allow the Corporation to meet new licence requirements to establish and maintain a compliance process, including the broadened and more prescriptive annual Compliance Audit.

System Control is the appropriate entity to monitor and maintain compliance with technical standards, insofar as they may affect the security, reliability or economic operation of the power system. The System Controller has already started performing some of these tasks, and subject to having appropriate resources, will further enhance its technical compliance monitoring activities.

Draft recommendation 2(b)

The Commission recommends the development and implementation of a mechanism for the investigation of power system incidents.

In working with the Commission to develop a more formal approach to the investigation and reporting of power system incidents, PWC and the System Controller sought to ensure that thresholds and triggers for reviews be set to ensure that only relevant incidents be reviewed and reported. In this regard, it is appropriate that System Control, as the entity responsible for undertaking such

investigations and reports, also be given the discretion to determine major versus minor power system incidents.

The System Controller is in the process of initiating amendments to the System Control Technical Code to implement formal incident investigation and reporting arrangements.

Draft recommendation 2(c)

The Commission recommends the development of a clear process for oversight and the regular review of technical obligations and parameters for the power system established through the regulatory framework.

System Control is the appropriate entity to oversight and review technical obligations and parameters, and the technical compliance activities of system participants.

A clear process already exists to monitor these functions and activities. The annual Compliance Audit (a requirement of PWC's licences) has been expanded to include examination of PWC's and the System Controller's compliance with requirements under the System Control Technical Code and the Network Connection Technical Code.

4. POWER SYSTEM REPORTING

Draft recommendation 3(a)

The Commission recommends the development and implementation of a framework for the reporting of comprehensive and authoritative power system information. This information would support acceptable reliability performance in the Territory's power systems. Information that should be reported includes:

- system planning information, including demand forecasts, the adequacy of system capacity relative to forecast demand, adequacy of fuel supplies and other major security risks, and knowledge of planning and investment commitments. The planning instruments should replicate the purpose and characteristics of the AEMO ESOO/PSA and NTNDP instruments for the NEM;
- health of the system information, including on system performance trends, regulatory and technical compliance and the findings of investigations into power system incidents; and
- the reliability outcomes experienced by customers.

It is recommended that the Territory's regulatory framework require a similar suite of instruments or reports as is available in the NEM. The important criteria are that the content of the reports is consistent with those available in the NEM, and that the data are available at a convenient time in the planning cycle.

As stated in its response to the Issues Paper, PWC provides information and reports to the Commission that allows it to monitor, and where appropriate report, on the performance of the Territory's electricity systems. These include the annual Power System Review which meets a majority of the requirements of this recommendation; the annual Standards of Service Report; six monthly System Performance Reports by System Control; and investigation reports by System Control of major system faults and incidents.

The Commission's annual Power System Review is prepared in accordance with the *Electricity Reform Act* [s45], which requires the Commission to:

- report forecasts of electricity load and generating capacity;
- report on the performance of the Territory's power systems;
- advise on matters relating to the future capacity and reliability of the Territory's power systems relative to forecast load;
- advise on other electricity supply industry and market policy matters; and
- review the prospective trends in the capacity and reliability of the Territory's power systems relative to projected load growth.

PWC's interpretation of s45 of the *Electricity Reform Act* is that the Commission is required to conduct its own independent review covering matters such as load forecasts and power system capacity and reliability. This is to ensure that the Power System Review is accepted as being independent, whereas it is likely that, despite best endeavours, a power system report by the System Controller will be perceived to be not independent.

The Commission has not clearly articulated the need for additional reports above those currently in place. PWC Generation, PWC Power Networks and PWC Retail are subject to existing regulatory reporting arrangements imposed by the Commission concerning the reliability of the network.

Draft recommendation 3(b)

The Commission recommends that the reporting framework ensure appropriate independence in the preparation of reporting instruments. To ensure that reporting is both comprehensive and accurate there needs to be considerable independence in the preparation of reports, with parties held accountable for the information reporting. The responsible entity could be required to certify that the material presented is accurate (on a best endeavours basis). The data reported should be subject to oversight by an appropriate body to confirm that assumptions and forecasts are reasonable.

PWC considers that its accountabilities, reporting arrangements and internal control and auditing processes provide sufficient assurance of the accuracy of system reporting.

Any concerns the Commission may have regarding the accuracy and reasonableness of data and forecasts provided by PWC may be reviewed and tested by the Commission and its consultants through the annual Power System Review, the annual Compliance Audit, or specific audits as occurred with PWC Power Networks 2009-10 Standards of Service data.

5. DISTRIBUTION NETWORK – PLANNING, MONITORING AND REPORTING

Distribution network planning

Draft recommendation 4(a)

The Commission recommends the development and implementation of a framework that requires the routine publication of network planning data that replicates the purpose and characteristics of the annual planning instruments required of DNSPs in the NEM. The key components of these instruments would be:

- credible and dependable forecasts of future electricity demand and supply to identify possible future sub-transmission and distribution network capacity constraints;
- based on clearly defined security and reliability standards that reflect the customer price and service level outcomes of the regulatory bargain; and
- authoritative data on the current and future capability and condition of infrastructure to inform decisions about the most economic future options for augmentation and expansion of infrastructure to maintain security and reliability standards across the supply chain on a cost effective basis.

Planning information should be updated regularly to provide a program of information collection, analysis and disclosure of power system security and reliability of supply prospects.

PWC accepts that some aspects of the NEM regulatory arrangements for distribution networks would be appropriate for its network business.

PWC Power Networks has taken a number of recent initiatives which address many of the issues raised by the Commission. These include:

- the development of a draft revised spatial demand forecasting process. This incorporates improvements to the existing arrangements, designed to ensure PWC Power Networks demand forecast is as sound as the practices in other jurisdictions and is reconciled both at intermediate levels and with the demand on the associated system;
- a substantial review of the Network Planning Criteria, which establish the supply security standards for customers in different situations and play a large part in defining the inherent reliability of supply. The Network Planning Criteria have also been integrated with the Network Connection Technical Code to ensure their mutual compatibility. This document is in an advanced draft stage; and
- the proposed development a comprehensive Network Management Plan, based on plans prepared by distributors in other jurisdictions. This plan would include the following elements:
 - the current and future capability of equipment;
 - reliability performance;

- forecasts of spatial network demand;
- meeting supply security criteria; and
- future augmentation options and the preferred development plan.

Draft recommendation 4(b)

The Commission recommends the development and application of clearly defined distribution network reliability standards and performance targets to support network planning. The Commission's Review of Electricity Standards of Service proposed that reliability performance outcomes be established for generation, transmission and distribution networks, including establishing a Territory Reliability Standard (based on a certain level of unserved energy) and network feeder reliability targets.

Reliability and security of supply standards and planning criteria should be regularly reviewed to ensure that planning criteria reflect the desired reliability and price outcomes.

A Regulatory Investment Test should be introduced to ensure that network developments are subject to a cost-effectiveness evaluation.

PWC strongly supports this recommendation. Revised Network Planning Criteria outlined in response to Draft Recommendation 1(b) have been prepared in order to support network planning.

PWC supports the establishment of appropriate reliability standards, provided they are based on a realistic expectation of:

- the value that customers place on continuity of supply; and
- the preparedness of customers to pay for those reliability levels.

In the normal course of events, PWC does not consider that supply standards and planning criteria should be reviewed regularly, as they are used to establish long term plans and programs of activities.

A five year review cycle, some time prior to the regulatory reset, is proposed. This would enable the incorporation of revised standards and criteria into the forecast capital and operating plans submitted to the Commission.

With regards to the introduction of Regulatory Investment Tests (RIT's), PWC again highlights the nature of the networks in the Northern Territory and their fundamental difference from the networks that comprise the NEM.

The RIT's have two principal objectives:

- to provide notice to market participants and interested parties of upcoming augmentations, for the primary purpose of eliciting a non-network response to meeting a capacity shortfall; and
- to specify the type of cost analysis and thereby ensure a least cost or cost-effective solution.

In relation to the former point, PWC does not consider that the public notification of upcoming network augmentations will have any material benefit. There may be some limited value in this in the NEM jurisdictions where there is a

concentration in the proponents of non-demand alternatives to network augmentation. However, there are no such proponents known to practice in the Northern Territory.

PWC prepares business cases for all of its significant network augmentations. These business cases consider the most prudent and efficient supply option and the associated timing of the augmentation. The financial parameters are consistent with those used at the prior regulatory determination.

PWC therefore does not consider there is a need to introduce the RIT process for the NEM in the Northern Territory.

Distribution network monitoring

Draft recommendation 5(a)

The Commission recommends that the DNSP continue efforts to develop and maintain a robust compliance process.

PWC supports this recommendation and will continue efforts to establish compliance processes consistent with good compliance practice based on AS3806.

Draft recommendation 5(b)

The Commission recommends the implementation of a mechanism for the investigation of relevant distribution network incidents.

PWC Power Networks has responsibility for investigating distribution network incidents, with procedures and processes for network investigations well progressed.

Under the proposed incident reporting arrangements, the System Controller will only be required to review major incidents.

Draft recommendation 5(c)

The Commission recommends a review of the processes and triggers for oversight and review of the technical obligations and parameters for the distribution network established through the regulatory framework (i.e. the Network Connection Technical Code).

Monitoring the operating practices and processes of the DNSP is essentially focused on compliance and the review of events affecting the reliability or security of the distribution network. Regular review and reporting on compliance with technical obligations and parameters is necessary.

PWC are close to finalising a substantial review of the Network Connection Technical Code and Network Planning Criteria, which have been consolidated into a single document.

The process for the review of this document is established. The revised document will be submitted to the Commission in due course, following public consultation. PWC agrees that the trigger for review of the document is not well established and proposes that a suitable trigger mechanism should be included in the revised document.

This recommendation would indicate the Commission is contemplating a much heavier-handed approach to its compliance monitoring of PWC Power Networks, but such an approach has not been justified. The Commission would be aware of the technical compliance regime established by the Australian Energy Regulator, which in the case of distribution networks comprises a 'spot check' of a Rule obligation, generally carried out annually. The expanded scope of the annual Compliance Audit sufficiently addresses this recommendation.

While PWC Power Networks should be responsible for distribution network compliance against standards, the System Controller should be responsible for technical compliance of the transmission system and its relevant participants.

Distribution network reporting

Draft recommendation 6(a)

The Commission recommends the development and implementation of a framework for the reporting of comprehensive and authoritative distribution network information to support acceptable reliability performance outcomes in the Territory's distribution networks. Information to be reported should include:

- a network planning and performance report, with the contents reflecting the purpose and characteristics of national arrangements; and
- reliability outcomes experienced by customers.

There has been considerable work on reporting arrangements for the NEM. The Commission considers that the national network reporting requirements (the national annual planning reports and AER network performance reports) provide a sound basis for arrangements in the Territory.

The Network Management Plan described in the response to Draft Recommendation 4(a), and the annual Standards of Service reporting, would satisfy this proposal by the Commission.

PWC again notes the dramatic differences between the scale of the NEM and the scale of the power supply systems in the Northern Territory. The unjustified adoption of NEM practices in the Northern Territory is not appropriate and not supported, as it would add materially to the costs that must be borne by a much smaller number of customers.

Draft recommendation 6(b)

The Commission recommends that the reporting framework ensure appropriate independence in the preparation of reporting instruments. To ensure that reporting is both comprehensive and accurate there should be appropriate independent oversight of the reports, with the ability to test the accuracy of statements and assumptions. The responsible entity could be required to certify that the material presented is accurate (on a best endeavours basis).

PWC is of the view that its accountabilities and internal processes provide adequate assurance of the accuracy of its regulatory reports. Audits may be undertaken to address any concerns regarding the comprehensiveness and accuracy of data, which occurred with PWC Power Networks 2009-10 Standards of Service data.

6. IMPLEMENTATION CONSIDERATIONS

Requirements of the terms of reference

5.1 The terms of reference require the Commission to recommend a course of action and provide detailed plans for implementation of that recommendation.

PWC notes that the Commission has not fully justified its recommendations in this Draft Report and has not provided detailed implementation plans. Providing implementation details after finalisation of a report is not standard regulatory practice, particularly when any structural change will take some time to implement and is an important consideration when determining commencement dates of any new arrangements.

Options for implementing draft recommendations

5.3 The options for implementing the draft recommendations include:

- to establish a planning, monitoring and reporting framework using existing heads of power, such as those contained in the *Electricity Reform Act*, s45, and potentially the heads of power existing to apply a standards of service framework;
- to introduce the proposed arrangements through an Electricity Industry Code requiring the development of a planning, monitoring and reporting framework consistent with the Commission's proposals.

5.5 However, arrangements of this nature are probably more appropriately established through explicit and specific instruments, such as an Electricity Industry Code. This approach would reflect the policy intent of the regulatory framework, and would create more certainty about the form and nature of the arrangements.

PWC supports the use of the existing legislation and regulatory framework to establish any necessary changes in reporting arrangements.

This approach would provide greater flexibility to meet emerging requirements, particularly at this early stage in the development of contestability arrangements in the Northern Territory.

PWC would support combining the three existing statutory documents (the System Control Technical Code, Network Connection Technical Code and Network Planning Criteria) into an Electricity Industry Code, as an improvement to reduce overlap and remove any ambiguity. The latter two of these constituent documents have already been combined and are close to being finalised.

Assessment of costs and benefits of proposed arrangements

5.7 This assessment of the costs and benefits of the proposed arrangements is necessarily qualitative as the data to quantify the costs and benefits is not currently available to the Commission.

PWC would be pleased to assist the Commission by estimating the costs imposed by its proposed regulatory changes, when those requirements have been defined in sufficient detail. When recovered from the 70,000 customers in the Northern

Territory, changes to administrative and reporting costs could potentially have a material impact.

5.8 The Commission recognises that the draft recommendations will increase the level and cost of planning, monitoring and reporting by the Territory electricity industry. However, the proposed arrangements are not for the sake of information gathering but, in line with good industry practice, as a necessary means to ensure a well run electricity sector that delivers an appropriate level of service at an appropriate price to customers. The obligations are no more than should already be in place in a well-governed industry providing essential services.

PWC can agree only in part with these comments. It has indicated some Commission recommendations with which it concurs and some actions which it has already initiated to improve the effectiveness with which it meets the needs of its customers. However, the Commission's adoption of NEM practices and reporting for the Northern Territory is not appropriate in many cases, and would add materially to the costs borne by customers for no material benefit. What may be good practice in the NEM is not necessarily the most appropriate practice in the Northern Territory's electricity industry.