CASUARINA POWER OUTAGES

RECOMMENDATIONS REGARDING GUARANTEED SERVICE LEVEL (GSL) PAYMENTS

DECEMBER 2008

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Glossary

AER	means the Australian Energy Regulator
Casuarina power outages	means the unplanned interruptions that occurred in the vicinity of the Casuarina Zone Substation during September and October 2008, associated with the series of incidents identified in the preliminary report of the Davies Inquiry
the Commission	means the Utilities Commission of the Northern Territory, being the independent economic regulator established under the *Utilities Commission Act 2000*
customer	means an electricity customer of Power and Water
Davies Inquiry	means the independent inquiry headed by Mr Mervyn Davies examining the causes and implications of the Casuarina power outages, which issued a preliminary report on 10 November 2008
interruption	means any loss of electricity supply to a customer associated with an outage of any part of the electricity supply network, including generation facilities and transmission networks, of more than 0.5 seconds, including outages affecting a single premises. The customer interruption starts when recorded by equipment such as SCADA or, where such equipment does not exist, at the time of the first customer call relating to the outage. An interruption may be planned or unplanned, momentary or sustained. Does not include subsequent interruptions caused by network switching during fault finding. An interruption ends when supply is again generally available to the customer.
Power and Water	means the Power and Water Corporation established under the *Power and Water Corporation Act*, in its role as a licensed electricity retailer, generator and network service provider
premises	has the same meaning as "site" under the *Electricity Reform (Administration) Regulations (2000)*
unplanned event	means an event that causes an interruption where the customer has not been given the required notice of interruption
unplanned interruption	means an interruption due to an unplanned event

CHAPTER

1

SUMMARY AND RECOMMENDATIONS

1.1 In September and October 2008, a series of power outages occurred in the vicinity of the Casuarina Zone Substation.

1.2 In response to these outages, and growing concerns for the continued security of supply to the northern suburbs of Darwin, the NT Government commissioned an independent inquiry headed by Mr Mervyn Davies. In addition, the Minister for Essential Services canvassed the possibility of payments to affected customers in recognition of the service breaches involved.

1.3 The Commission has a service standards monitoring scheme in place which annually reports the service performance achieved by Power and Water during the financial year just ended against certain minimum standards. However, the Commission is not empowered to implement penalties as and when major breaches occur.

1.4 If the Government wishes customers significantly affected by the Casuarina power outages in September and October 2008 to receive a measure of compensation from Power and Water, it is the Commission's recommendation that this be based on the Australian Energy Regulator's (AER) **Guaranteed Service Level (GSL) scheme**.

1.5 On this basis, the Commission recommends that the payment amount for each qualifying customer be the *greater* of the following amounts:

(a) **$80** for *each* single unplanned interruption that was at least 12 hours in duration; and

(b) **$125** if the total duration of unplanned interruptions exceeded 20 hours.

1.6 To qualify for such payments, the customer should be:

(a) a customer with premises directly affected by one of the Casuarina Zone Substation 'incidents' identified by the Davies Inquiry as occurring during September and October 2008; and

(b) the named electricity account holder for a premises with an electricity meter.

1.7 Only one payment should be made per electricity account regardless of the number of account holders or premises listed on the account affected by the event.

1.8 Power and Water should take responsibility for identifying qualifying customers. However, a customer should be permitted to make a claim to Power and Water for the GSL payment where Power and Water does not make a payment.

1.9 The Commission's initial estimates are that the cost to Power and Water of these payments could be somewhere between $1 million and $2 million. A more precise estimate will only be possible once Power and Water provides the Government with the number of customers qualifying for each of the component payments.

1.10 The way in which such payments are to be funded by Power and Water, and the extent to which Power and Water can recoup these costs from its customers, is a matter to be settled between the Government and Power and Water.

1.11 The Commission acknowledges that such payments are not intended to directly compensate customers for financial losses suffered as a result of the Casuarina power outages. Rather, such GSL payments would serve as an acknowledgement by Power and Water of poor service.

1.12 The giving of such payments should only be authorised by the Government if it does not involve any admission of legal liability. Equally, the receipt of such a payment should not in any way alter or diminish any rights of customers under applicable legislation, common law or contract.

1.13 Once the Government approves such payments, Power and Water should make the GSL payment to each customer entitled to it by cheque, electronic funds transfer or a credit applied to the customer's electricity account. Power and Water should also use its best endeavours to process these payments promptly.

1.14 Finally, the Commission recommends that the Government take immediate steps to initiate the making of a regulation under the *Electricity Reform Act* to establish a Guaranteed Service Levels regime applying in the NT's electricity supply industry. The regulation should establish the Government's requirements regarding, in particular (but not limited to):

(a) the types of services subject to guaranteed service levels (which, beside unplanned interrruptions, could encompass planned interruptions, appointments, customer connections, customer reconnections and wrongful disconnections);

(b) with regard to unplanned interruptions, the NT-specific thresholds regarding single interruption duration, cumulative interruption duration and interruption frequency, distinguishing between the feeder type through which a site is supplied;

(c) the types of excluded events;

(d) the NT-specific payment amounts for each type of breach of the guaranteed service levels; and

(e) the method by which GSL payments are to be funded by Power and Water.

CHAPTER

2

NATURE OF THE OUTAGES

What happened?

2.1 In September and October 2008, a series of power outages occurred in the vicinity of the Casuarina Zone Substation. In response to these outages, and growing concerns for the continued security of supply to the northern suburbs of Darwin, the NT Government commissioned an independent inquiry headed by Mr Mervyn Davies.

2.2 The Davies Inquiry[1] has described the various outages in the following terms.

The Breaker Failure

2.3 At 4.29 pm on 19 September 2008, a circuit breaker at Casuarina Zone Substation failed explosively. Supply to customers was progressively restored between 8.43 pm and 6.45 am the following day. More than 11,000 customers were affected. The longest customer outage duration was fourteen hours, sixteen minutes.

The Endbox Failures

2.4 At 11.14 pm on 20 September 2008, the Nakara feeder cable endbox at Casuarina Zone Substation failed. 5,100 customers were affected. Supply to the bulk of these customers was restored within one hour, fifty four minutes. The longest customer outage duration was four hours, four minutes.

2.5 At 8.23 pm on 2 October 2008, the Nakara feeder cable endbox again failed. More than 4,500 customers were affected and the maximum outage duration time was ten hours, thirty seven minutes.

The Cable Failures

2.6 Subsequent to the Breaker failure, three 11kV cable failure incidents also occurred within the supply area of the Casuarina Zone Substation.

2.7 At 11.36 am on 20 September 2008, a feeder cable failed approximately 500 metres from the Casuarina Zone Substation. The 81 affected customers were restored by field switching with a maximum outage duration of two hours, fourteen minutes.

2.8 At 4.46 pm on 7 October 2008, a small capacity cable remote from the Casuarina Zone Substation failed. The 2,000 or so affected customers were restored by field switching with a maximum outage duration of two hours, forty four minutes.

2.9 At 4.18 pm on 12 October 2008, another small capacity cable remote from the Casuarina Zone Substation failed. The approximately 2,600 affected customers were restored by field switching with a maximum outage duration of one hour, two minutes.

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[1] *Independent Enquiry into Casuarina Substation Events and Substation Maintenance Across Darwin: Preliminary Report*, Chairman: Mervyn Davies, November 2008

Regulatory implications

2.10 From a regulatory perspective, a specific outage is of concern if it indicates:

- a failure of the service provider to comply with specific regulatory requirements; or
- a weakness in the design and/or implementation of the system of regulation.

2.11 While the first question is a relatively straightforward matter of assessing compliance, it is a much more complex matter to translate the circumstances of a specific event into the broad context of the system of regulation. The information requirements begin with the particular outage and progressively extend to the general:

- What happened – the nature of the outage and its consequences?
- Why did it happen – was it essentially random and unpredictable (unavoidable), or avoidable and within the scope of management due to, for example, deficiencies in network maintenance, operation or design (planning)?
- Why were the consequences so large – in terms of the scale (what protection systems and/or back-up capacity were available) and duration (were the response actions appropriate/effective)?
- If the outage and/or consequences were avoidable, was it a specific or systemic operational problem? Did the causes originate in discretionary actions by management, or in constraints/requirements imposed by the system of regulation (e.g., funding constraints)?
- If management discretion is responsible, does the system of regulation support/incentivise good management practices?

2.12 The focus of this report is on the issue of 'compensation' payments to affected customers. It is therefore concerned primarily with the nature of the outages and their consequences for customers.

2.13 The Commission will consider whether there are broader implications for the system of regulation in its next *Annual Power System Review*,[2] which is timed to follow release of the final report of the Davies Inquiry. The final Davies report is expected to provide an expert opinion on:

- whether the outages, their scale and consequences were just bad luck (unavoidable) or the result of deficiencies in network maintenance, operation and/or planning (in some combination and to varying degrees);
- whether the causes are likely to be present across other network elements, creating a broader risk to the reliability of the network; and
- what changes are necessary to Power and Water's operations to minimise the risk of a reoccurrence of this type of outage.

2.14 Once the Davies final report is published, the Commission will consider its own response to the following questions:

- To what extent do the causes of the Casuarina power outages originate in (i) discretionary actions by management, or (ii) constraints/requirements imposed by the system of regulation (e.g., funding constraints)?
- If management discretion is (largely) responsible, does the current institutional/regulatory environment within which Power and Water operates support/incentivise good management practices?

[2] The Commission undertakes its annual power system reviews pursuant to section 45(1)(e) of the *Electricity Reform Act 2000* under which it must "submit to the [Regulatory] Minister, and publish, an annual review of the prospective trends in the capacity and reliability of the Territory's power system relative to projected load growth".

CHAPTER

3

NATURE OF POSSIBLE 'COMPENSATION'

3.1 This chapter examines the nature and level of any 'compensation' that could be payable to customers affected by outages like those that occurred around Casuarina in September/October 2008.

3.2 The issue of compensation payments to affected consumers was raised by the Minister for Essential Services in the following statement made in the Legislative Assembly:

> *"Finally I will deal with the issue of compensation to residents. Just over three years ago the government required the Power and Water Corporation to be responsive to a service standard agreement. If service standards were not met, penalties such as payments to customers could be made. We placed that system in the hands of the independent umpire, the Utilities Commissioner, to devise the system and work through its implementation. I understand he is doing this. He will examine the issues of these outages against that standard. Government will be guided by his view and we have made it clear that we are happy for the outages flowing from the Casuarina Zone sub-station failure on 19 September to be considered for compensation."*[3]

Liability for losses incurred

3.3 It is important to be clear that, under current legislation, compensation for losses incurred as a result of power outages is a matter for the courts.

3.4 Section 107(1) of the *Electricity Reform Act 2000* limits Power and Water's liability as follows:

> *"An electricity entity, or an officer or employee of the electricity entity, is not liable for damages or any penalty arising out of a partial or total failure to supply electricity to a customer unless the failure is due to an act or omission done or made by the electricity entity or the officer or employee in bad faith or through negligence." {emphasis added}*

3.5 At this stage, and subject to the findings of the Davies Inquiry, the Commission is not aware of any evidence or any suggestion that the Casuarina power outages were the result of an act or omission by Power and Water or an employee "done or made … in bad faith or through negligence".

Guaranteed service level (GSL) schemes

3.6 Besides compensation that might arise out of any legal liability, it is becoming increasingly common for network service providers to be required to make payments to customers when service performance falls below guaranteed levels. This is the nature of "guaranteed service level" (or GSL) schemes.

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[3] *Daily Hansard: Parliamentary Record No.2*, 21 October 2008, Minister for Essential Services, Ministerial Statement - Casuarina Zone Substation and Power Outages.

3.7 In a competitive market, there is an incentive for a business to ensure efficient levels of service. A reduction in service standards without a corresponding reduction in price may lead to reduced market share and a subsequent reduction in profits. Conversely, an increase in service levels may lead to increased prices and profits.

3.8 Electricity network service providers are natural monopoly service providers. They therefore face little risk of losing customers if they provide a poor level of service. In recognition of this, governments and regulators typically monitor the performance of network service providers to ensure they provide acceptable levels of service.

3.9 GSL schemes set a floor to the level of service that a customer is entitled to receive. This is done by setting a threshold level for a particular aspect of service performance. If the actual level of service falls short, the network service provider is required to make a payment to the affected customers. The guaranteed service levels and the related customer payments are set in advance, so that customers know the standard of service they are entitled to receive, and the network service provider knows what is at stake if those service levels are not met. Primarily, GSL schemes are designed to provide an incentive to improve service to the worst served customers.

3.10 All jurisdictions in Australia except the NT have established GSL schemes. GSL schemes generally provide for monetary penalties for poor service to be paid directly to customers soon after incidents of poor service. The situation in the NT is examined in chapter 4.

3.11 Typically, GSL payments are set at a level that, in most cases, would fall short of the monetised value of the actual cost imposed on customers by the poor service. Therefore, the payment is seen as a recognition of poor service rather than as compensation. In this regard, it is significant that nowhere are GSL payments scaled according to the dollar size of a customer's electricity account.

3.12 The schemes currently in place in other jurisdictions are generally funded as an operating cost of the network service provider. The cost of these schemes is therefore borne by the service provider's wider customer base.

3.13 There are different ways that a GSL scheme can operate, and the level of penalty payments varies widely across jurisdictions. In some jurisdictions, penalty payments are restricted to 'unplanned' interruptions to supply. In other jurisdictions, beside unplanned interruptions, penalty payments also encompass planned interruptions, appointments, customer connections, customer reconnections and wrongful disconnections. Where a number of events can trigger a GSL payments, several jurisdictions place an annual cap on the total of GSL payments to each customer. Some jurisdictions (for example Queensland) limit payments to 'small' customers rather than all affected customers.

3.14 The service level thresholds also vary across jurisdictions. Because the acceptable level of service performance can vary between customer groups or geographical areas, the threshold performance for making a GSL payment is sometimes set at different levels, for instance, for urban customers and for rural customers. Alternatively, several threshold values can be set so that additional or increasing payments are made as each threshold value is exceeded. GSL schemes generally require the payment to be made to the customer either automatically or on application once the threshold level has been exceeded.

3.15 Other common features of GSL schemes include the following:[4]

- Only one payment is made per electricity account for each event regardless of the number of account holders or premises listed on the account affected by the event.
- Certain types of supply interruptions are excluded, most notably: an interruption of a duration of one minute or less; an interruption resulting from load shedding due

[4] The following features are evident in the Queensland GSL scheme, as set out in clause 2.5 of the Queensland *Electricity Industry Code*, fourth edition.

to a shortfall in generation or a direction by the system operator; a planned interruption; and an interruption within a region in which a natural disaster has occurred.

- The giving of such payments is predicated on it not involving any admission of legal liability.
- The receipt of such a payment is not taken in any way to alter or diminish any rights under applicable legislation, common law or contract.
- The service provider is required to pay the GSL payment to each customer entitled to it by cheque, electronic funds transfer or a credit applied to the customer's electricity account, and is expected to use its best endeavours to process these payments promptly.

The AER's GSL scheme

3.16 Under the *National Electricity Rules*,[5] the Australian Energy Regulator (AER) has the discretion to develop a GSL scheme notwithstanding that GSL schemes already exist under jurisdictional arrangements. However, the AER's scheme is only to apply where and when a jurisdiction withdraws its own scheme.

3.17 The AER published its GSL scheme.[6] in June 2008 after extensive consultations. This scheme is part of the package of measures contained in the AER's *Service Target Performance Incentive Scheme*.

3.18 The following Table sets out the types of parameters that may be applicable under the AER's GSL scheme as it relates to unplanned interruptions.

Type of service shortfall	**Threshold: CBD and urban feeders[(a)]**	**Payment amount ($A including GST where applicable)**
Duration of a single interruption	12 hours	$80
Cumulative duration of interruptions over the year	Level 1 – 20 hours Level 2 – 30 hours Level 3 – 60 hours	Level 1 – $100 Level 2 – $150 Level 3 – $300
Frequency of interruptions over the year	9 interruptions	$80

(a) The AER's thresholds are different for rural (short and long) feeders.

3.19 There are a number of features of the AER's scheme that give rise to issues were that scheme to be applied in the context of the Casuarina power outages.

Duration thresholds

3.20 First, some might argue that the more extreme weather conditions in the NT mean that individual outages are likely to cause a greater level of inconvenience to customers than in more moderate climates, justifying use of a shorter duration threshold than the AER's 12 hours.

3.21 The 12 hour threshold for the duration of single interruptions chosen by the AER was the threshold applying in Victoria, Western Australia, South Australia and the ACT.

[5] Clause 6.6.2(a) of the *National Electricity Rules*.

[6] Clause 6 of Australian Energy Regulator, *Electricity Distribution Network Service Providers, Service Target Incentive Scheme*, June 2008.

However, the jurisdictional regimes in NSW and Tasmania currently apply shorter thresholds for (metropolitan) urban feeders, being 10 hours in NSW and 8 hours in Tasmania. In Queensland, the threshold is currently set at 8 hours for a CBD feeder but 18 hours for both urban and short rural feeders. Recently, the Victorian regulator has moved away from allowing payments for single interruptions, opting instead to base GSL payments on the cumulative duration of interruptions over the year, using a 20 hour minimum threshold.

3.22 In the Commission's view, adopting a lower threshold, say 10 hours, as the single interruption duration threshold would set too high a hurdle for Power and Water. 12 hours is reasonable given its adoption by the national regulator (the AER) and given the threshold for single interruptions in metropolitan Brisbane currently is 18 hours and in Perth is 12 hours.

'Major event day' exclusion

3.23 Secondly, under the AER's GSL scheme, a service provider is not required to make a GSL payment when the unplanned interruption occurs on a day that qualifies as a '**major event day**'.

3.24 All GSL schemes exclude events that are totally beyond the control of the service provider such as extreme events like major storms or cyclones. The definition of such exclusions nevertheless aims to be not so broad as to exempt the service provider when the event is not outside its control or influence.

3.25 The AER has taken a 'quantitative' approach to defining a 'major event day' exclusion event by adopting the statistical criteria developed in the US for exclusions for reliability of supply reporting.[7]

3.26 However, such a statistical approach can result in the exclusion of major events that are not clearly outside the control of the service provider. For this reason, it is not currently applied in any of the State GSL schemes.[8]

3.27 In the Commission's view, it seems that this statistical method is preferred by the AER because GSL payments are funded by a service provider's entire customer base, for the benefit of those suffering poor performance. GSL schemes are essentially directed at those customers who receive well below-average service. The view seems to be that service impacts on 'major event days' are either outside management control, or are of a scale that ensures they receive the full attention of the service provider without the need for penalties. Under this approach, the incentives provided by GSL payments are, in effect, reserved for more localised service failures.

3.28 Ultimately, the approach to exclusions is a matter for the Government when devising its own GSL scheme. However, if the Government – as the 100% shareholder of Power and Water – is prepared to accept the cost of GSL payments rather than pass it on to all customers, one of the principal reasons for excluding 'major event days' from a scheme intent on recognising poor service is removed. Only if such a major event is due

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[7] US Institute of Electrical and Electronics Engineers Standard (IEEE) 1366-2003. This standard involves the use of a "2.5 beta exclusion method" based on daily average interruptions.

[8] Some States (e.g., NSW and Queensland) use the 2.5 beta exclusion method to identify major event days which are to be excluded when setting minimum service standards. However, they do not use this statistical approach as a basis for exclusions in their GSL schemes. In their relevant documents, each quote from Std. 1366-2003 "IEEE Guide for Electric Power Distribution Reliability Indices" by the IEEE:

> *"The following process ("Beta Method") is used to identify major event days which are to be excluded from the minimum service standards... Its purpose is to allow major events to be studied separately from daily operation and, in the process, to better reveal trends in a daily operation that would be hidden by the large statistical effect of major events."*

The approach most States use in their GSL schemes is to provide for a limited set of excluded events (e.g., transmission and generation failures, disconnections in emergency situations, momentary interruptions, interruptions due to a natural disaster, and so on).

to reasons clearly beyond the control of the service provider (e.g., a cyclone) would major unplanned outages not be the result of 'poor performance'.

Interruption frequency GSLs

3.29 Thirdly, under the AER's GSL scheme, a service provider is required to make a payment at the end of the year on account of the *frequency* of interruptions, separate from the *duration* of those interruptions.

3.30 Such 'interruption frequency' GSLs logically apply when an annual period is being looked at as a whole, rather than in the case of specific outages like the Casuarina power outages covering just a month or two. In the Commission's view, GSL payments made in regard to specific outage events do not lend themselves to include a component related to the frequency of interruptions. Interruption frequency GSLs are a matter to be considered instead at the end of a financial year.

Single and cumulative durations: alternative or additional

3.31 Fourthly, under the AER's GSL scheme, it remains to be seen whether GSL payments would be made on account of *both* the duration of single outages *and* the cumulative duration of all associated outages measured annually.

3.32 This is unlike any of the jurisdictional schemes, which provide for GSL payments on account of *either* the duration of single outages *or* the annual cumulative duration of all associated outages, but not both.

3.33 In the Commission's view, the purpose of the 'cumulative duration' GSL is to ensure that customers affected by repeated outages that individually may not qualify for a 'single interruption duration' GSL are nevertheless recognised as suffering from poor service.

3.34 The Commission sees no problem with the cumulative duration threshold chosen by the AER (20 hours), which aligns with that recently adopted in Victoria. However, because the period being covered is less than 12 months, the payment amount deserves to be adjusted in recognition that payments could be higher were the duration of other interruptions elsewhere in the year also considered. On this basis, the Commission suggests an amount of $125, being the mid-point between the AER's $100 for interruptions totaling 20 hours per annum and $150 for interruptions totaling 30 hours per annum.

Possible GSL payments as a consequence of the Casuarina power outages

3.35 On balance, the Commission considers that, if the Government decides it is appropriate for affected customers to receive GSL payments as a consequence of the Casuarina power outages, the AER's GSL scheme provides the most suitable basis for determining the payments to be made.

3.36 It is notable that the $80 payment level set by the AER for the 'single interruption' event is the same payment level as adopted by all the jurisdictional schemes at the time the AER's scheme was settled. This payment level remains in place in all jurisdictions that allow a 'single interruption duration' GSL payment.

3.37 In the Commission's opinion, the only variations from the AER's scheme that would seem justified by the current circumstances are as follows:

(a) the possibility of a 'major event day' exclusion should be disallowed;

(b) GSL payments should be made only on account of the duration of the outages rather than also the frequency of the outages; and

(c) GSL payments should be on account of *either* the duration of single outages *or* the cumulative duration of all associated outages, but not both.

3.38 On this basis, the payment amounts for each qualifying customer would the *greater* of:

(a) $80 for *each* single unplanned interruption experienced by the customer associated with the Casuarina power outages in September and October 2008 that was at least 12 hours in duration; and

(b) $125 if the total duration of unplanned interruptions experienced by the customer associated with the Casuarina power outages in September and October 2008 exceeded 20 hours.

3.39 To qualify for such payments, the customer should be:

(a) a customer with premises directly affected by one of the Casuarina Zone Substation 'incidents' identified by the Davies Inquiry; and

(b) the named electricity account holder for a premises with an electricity meter.

3.40 Only one payment should be made per electricity account regardless of the number of account holders or premises listed on the account affected by the event.

3.41 The way in which such payments are to be funded, and the extent to which Power and Water is allowed to recoup these costs from its customers, is also a matter to be settled between the Government and Power and Water.

3.42 Once the Government approves any GSL payments in relation to the Casuarina power outages, Power and Water should use its best endeavours to pay the GSL payment to each customer entitled to it by cheque, electronic funds transfer or a credit applied to the customer's electricity account, and to process these payments promptly.

3.43 Power and Water should take responsibility for identifying qualifying customers. However, a customer should be permitted to make a claim to Power and Water for the GSL payment where Power and Water does not make a payment.

3.44 The Commission's initial estimates are that the cost to Power and Water of these payments could be somewhere between $1 million and $2 million. The Government will need to seek information from Power and Water about the precise numbers of customers falling into each of the above categories.

CHAPTER

4

ADOPTING A GSL SCHEME IN THE NT

4.1 This chapter examines what performance incentive schemes operate in the NT, and what needs to be done if a GSL scheme is to be established.

What service incentive schemes are in place in the NT?

4.2 GSL schemes are one type of a broader set of schemes known as "service target performance incentive schemes" (STPIS). In fact, service target performance incentive schemes can be grouped into three categories:

- public reporting schemes;
- financial incentive (s-factor) schemes; and
- guaranteed service level (GSL) schemes.

4.3 In the NT, the Commission is only empowered to implement the first two types of schemes.

Public reporting schemes

4.4 The Commission has established a service standards monitoring scheme pursuant to section 92 of the *Electricity Reform Act 2000*, which sets the minimum standards of service applying for non-contestable customers.

> *"92. Minimum standards of service for non-contestable customers*
>
> *(1) The Utilities Commission must from time to time make provisions imposing minimum standards of service and safety for non-contestable customers.*
>
> *(2) The minimum standards are –*
>
> *(a) to be at least equivalent to the actual levels of service and safety for those customers prevailing during the year before the commencement of this section; and*
>
> *(b) to take into account relevant national benchmarks developed from time to time.*
>
> *(3) If a electricity entity's licence authorises the selling of electricity to non-contestable customers, it is a condition of the licence that the electricity entity monitor and report on the levels of compliance with the minimum standards."*

4.5 The purpose of 'minimum standards' is to provide a standard against which Power and Water's performance can be assessed across the supply network and enables year-to-year comparisons of that performance. The minimum standards do not constitute standards which are enforceable against Power and Water by individual customers, and so do not constitute 'guaranteed' standards.

4.6 Public reporting is generally carried out to inform customers and other interested parties of the actual service levels that are being achieved by the regulated business. It can shame a poor performer into improving service levels and promote competition between businesses through comparison which may in turn encourage a business to improve service performance to improve its ranking. Public reporting aids transparency in the relative service levels of service providers, although it is noted that

geographical, environmental and other factors need to be considered when comparing businesses.

4.7 Currently, most States monitor and report on service quality information which they collect for the purposes of monitoring compliance with obligations contained in law, licences or codes.

4.8 The Commission has been publishing standards of service monitoring reports in relation to the NT electricity supply industry annually since 2006.[9] Under the monitoring regime that the Commission has in place, any slippage below set minimum performance standards would be clearly highlighted.

Financial incentive (s-factor) schemes

4.9 The Commission also has the power, under the *NT Electricity Network Access Code*, to incorporate what is generally termed a "financial incentive (s-factor) scheme" into the price control mechanism applying to Power and Water's regulated electricity network operations.

4.10 Financial incentive (s-factor) schemes provide a direct financial incentive for a network service provider to maintain or improve service standards. They typically operate in a symmetrical way by rewarding good performance as well as penalising bad performance. They do this by providing a financial reward if service improves above a predetermined measurable standard (resulting in higher revenues or customer prices) and a financial penalty if service declines (resulting in lower revenues or customer prices). In this way, it provides a direct link between the service provider's revenue and the standards of service it provides.

4.11 The reward or penalty is applied by including an s-factor in the price control formula giving it the form CPI – X + S, where CPI is the consumer price index, X is the efficiency factor and S is the service incentive factor. In practice, it is usual for an s-factor scheme to include more than one measure of service performance. Where a number of measures are used then each measure is individually weighted to provide an appropriate incentive.

4.12 In general, s-factor schemes are aimed at maintaining and improving *average* network performance whereas GSL schemes are aimed at maintaining minimum service levels to worst served customers. In addition, the aspects of service covered by GSL type schemes can be more targeted than the average measures typically used by s-factor schemes.

4.13 Only Victoria and South Australia currently operate s-factor schemes.

4.14 New South Wales, ACT and Queensland currently do not have s-factor schemes. However, a 'paper trial' is being conducted in NSW. The NSW regulator previously determined that placing revenue at risk under the s-factor scheme was not yet appropriate, mainly due to the lack of robust historical data.

4.15 An s-factor scheme operated for a while in Tasmania, but the regulator decided to discontinue the scheme for the 2008-2012 price determination period.

4.16 An s-factor scheme does not yet operate in the Northern Territory. However, the Commission has been considering such a scheme for some time.[10] In its recent Draft Determination for the 2009 network pricing reset, the Commission stated the following:

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[9] Utilities Commission, *Electricity Standards of Service 2005-06*, December 2006; and Utilities Commission, *Electricity Standards of Service 2006-07*, March 2008.

[10] Service incentive schemes were canvassed in the extensive consultation process undertaken by the Commission during 2004 and 2005 when establishing a standards of service monitoring framework (http://www.nt.gov.au/ntt/utilicom/electricity/standards_of_service.shtml) and also as part of the current 2009 Regulatory Reset (http://www.nt.gov.au/ntt/utilicom/electricity/networks_pricing.shtml).

> *"6.90 All that the Commission could contemplate additionally at this stage is requiring an s-factor based scheme that adjusts the allowed price path for under- (and over-) service performance by Power and Water. However, only two States (Victoria and South Australia) currently have s-factor schemes in place. Some other jurisdictions are working towards such schemes, which require both careful calibration to avoid perverse incentives and consultation with end-users about their willingness to fund such schemes. For its part, the Commission considers that implementing service performance target incentive schemes should not be rushed or ill-considered. It therefore will continue with its planned 'paper trial', involving a process similar to that undertaken in NSW's 2005-09 regulatory period.*
>
> ***Commission's revised draft decision***
>
> *6.91 As Power and Water did not propose a service target performance incentive scheme in its regulatory proposal, no such scheme will apply for the third regulatory period. Unless Power and Water proposes such a scheme, the Commission will instead institute a 'paper trial' of a service incentive (s-factor) scheme covering the third regulatory period before introducing actual monetary incentives at the next reset."*[11]

What needs to be done to put a GSL scheme in place in the NT?

4.17 Under current legislation the Commission is not empowered to develop and implement a GSL scheme.

4.18 By their nature, GSL schemes require an explicit legislative basis. For example:

- in NSW, GSLs are imposed by design reliability and performance licence conditions determined by the NSW Minister for Energy and Utilities;
- in Victoria, GSLs are imposed by the Electricity Distribution Code (2007);
- in Queensland, GSLs are imposed by the Queensland Electricity Industry Code (2008), made under the *Electricity Act 1994*;
- in Western Australia, GSLs are imposed by the Electricity Industry (Network Quality and Reliability of Supply) Code (2005) established by the Minister for Energy under the *Electricity Industry Act 2004*;
- in South Australia, GSLs are imposed by the standard connection and supply contract between customers and the DNSP under the South Australian *Electricity Act 1996*, and
- in the ACT, GSLs are imposed by the Consumer Protection Code (2007).

4.19 The Commission does not consider that it has the powers to impose such a scheme via licence conditions. Moreover, the powers conferred on the Commission by section 92 of the *Electricity Reform Act* are limited to setting minimum standards and monitoring Power and Water's performance against those minimum standards.

4.20 Responsibility for establishing a GSL scheme in the Northern Territory therefore lies with the Government.

4.21 If the Government decides that a GSL scheme is appropriate, there appear to be two options for providing the necessary authorities.

4.22 Either it could make a regulation under the *Electricity Reform Act* to establish a GSL regime applying to the electricity supply industry in the Northern Territory.

4.23 Or it could develop and promulgate an industry code to establish a GSL regime in the Northern Territory, in a similar manner to the arrangements in Queensland.

4.24 Either way, the Government would need to make "the rules" in relation to the GSL scheme, with particular emphasis on:

[11] Utilities Commission, Network Pricing: 2009 Regulatory Reset - Draft Determination, November 2008 pp.84-85.

(a) the types of services subject to guaranteed service levels (which, beside unplanned interrruptions, could encompass planned interruptions, appointments, customer connections, customer reconnections and wrongful disconnections);

(b) with regard to unplanned interruptions, the NT-specific thresholds regarding single interruption duration, cumulative interruption duration and interruption frequency, distinguishing between the feeder type through which a site is supplied;

(c) the type of excluded events;

(d) the NT-specific payment amounts for each type of breach of the guaranteed service levels; and

(e) the method by which GSL payments can be funded by Power and Water.

4.25 Once such rules were made, the Commission could be charged with administering those rules.