Alan Tregilgas
Utilities Commission
GPO Box 915
DARWIN NT 0801

Dear Alan,

Regulatory Treatment of the Darwin to Katherine Transmission Line

The attached paper addresses matters raised in the Utilities Commission Issues Paper of Feb 2000, issued as a result of PAWA's acquisition of the 132 kV transmission line between Darwin and Katherine (DKTL) and associated facilities.

PAWA regards the DKTL as an integral part of its supply system for the northern region of the Northern Territory. As well as allowing grid connection to various load and generation locations along its length, it offers flexibility in selection of supply sources for these locations and improves reliability and security of supply to the overall system and hence to all customers connected to the grid.

The change in ownership arrangements does not, in PAWA's view, alter the importance of the DKTL or the benefits it offers. The only change arising from the acquisition should be to move from a regime where the costs associated with ownership of the DKTL were not included in the network revenue cap, to one where these costs are included within the revenue cap and recovered through approved user charges.

The main issues arising from the change of ownership are therefore:

(a) Should the DKTL be brought under the same regulatory regime as other PAWA network assets?

PAWA's response: yes.

(b) Should the same principles regarding valuation, return on, and return of, investment, as currently used in establishing the maximum allowable revenue for the regulated PAWA networks, be used?

PAWA's response: yes

(c) *Should the operation and maintenance costs allowed to be recovered be the amount contracted to be paid to the previous owner?*

PAWA's response: yes, and should include PAWA's cost of administration of that contract.

(d) *In what manner should the network charges recover the increase in allowable revenue?*

PAWA's response: no change to the current style of uniform charge for the remainder of the regulatory reset period.

PAWA supports the current regulatory position wherein costs for the DKTL are recovered as a uniform overall average cent rate per kWh added to all energy use associated with the northern system.

However, in the longer term, an alternative cost recovery mechanism may need to be developed in response to changes in regulatory approach as the structure and size of the Territory electricity market transforms as a result of large onshore industrial developments from the Timor Sea gas projects.

In this regard, PAWA also notes that in the larger national electricity market there is a current debate regarding the structure of transmission charges. PAWA will review its current position prior to the next regulatory reset period in 2003 in the context of circumstances existing at that time.

Should the Commission have any questions regarding this letter or its attachment, officers of the Authority will be available for discussions at any time.

Yours sincerely,

BARRY CHAMBERS
CHIEF EXECUTIVE OFFICER

MARCH 2001

Regulatory Treatment of the Darwin to Katherine Transmission Line

PAWA Response to UC Discussion Paper

2 March 2001

This paper addresses matters raised in Utilities Commission Issues Paper arising from PAWA's acquisition of the 132 kV transmission line between Darwin and Katherine and various associated facilities.

In principle, PAWA regards the Darwin – Katherine Transmission Line (DKTL) as an integral part of its supply system for the northern region of the Northern Territory. As well as allowing mains connection to various load and generation locations along its length, it offers flexibility in selection of supply sources for these locations and improves reliability and security of supply to the overall system and hence to all connected customers.

The change in ownership arrangements does not alter its importance or the benefits it offers. The only change arising from the acquisition should be to move from a regime where PAWA made regular payments to a separate owning entity, and recovered these as a cost of operation from its customers to a regime where regulated owning and operating costs of the DKTL become similar direct costs to PAWA, again to be recovered from electricity customers connected to the network.

PAWA supports the current regulatory position wherein costs for the DKTL are recovered as a uniform overall average cent rate per kWh added to all energy associated with the northern system.

However, in the longer term, an alternative cost recovery mechanism may need to be developed in response to changes in regulatory approach. In the regard, PAWA notes that in the larger national electricity market there is a current debate regarding the structure of transmission charges. PAWA will review its current position prior to the next regulatory reset period in 2003 in the context of circumstances existing at that time.

These matters are discussed further in response to the Commission's Items for Comment.

This response offers comments on several sections of the Issues Paper, as well as specific responses to those items highlighted for response.

It follows generally the sequence of the Issues Paper.

Timetable

PAWA notes the Commission's proposed timetable, and accepts it as appropriate to the determination of tariff rates for the period commencing 1 July 2001. PAWA does not anticipate difficulties in preparing its network tariff schedules for consideration in this timeframe.

PAWA presumes the Commission would publish the decision on DKTL treatment "in principle" as scheduled, and that PAWA would incorporate rates derived from those principles, and from the intentions in this submission in the interim period for preparation of network tariff schedules.

DKTL Recoveries under previous Determinations

In considering the previous periods where DKTL costs were initially not recoverable from other users but later were allowed as an overall "postage stamp" charge PAWA notes that an amount of $300,000 is included in the cost of the overall settlement as "Waiver of Power Facilities use of the Line from 1/4/2000 to 1/10/2000". [1]

This could be interpreted to some extent as acceptance by Power Facilities Group that such a charge was appropriate as claimed by PAWA at the time.

In so far as the previous contracts for use of the DKTL are no longer applicable, and this legal settlement has been reached, the first access period to October 2000 may be regarded as closed.

Recognition in the second access period that costs associated with the DKTL could be recovered is important in principle, and will now clearly extend to costs associated with the DKTL as a PAWA asset. PAWA recognises the Commission's wish for "competitive neutrality" as a dominant issue, in that the current DKTL charge is recovered as a "postage stamp" from all energy used in the northern system. While PAWA is prepared for this regime to continue for the current regulatory period, it is not convinced that this appropriately satisfies some of the other criteria in developing charges which are cost reflective.

The DKTL Acquisition

Whilst the Commission and the media have referred to PAWA purchasing the DKTL, in fact PAWA has, as part of the legal settlement, acquired all the units in a trust and the trust remains the owner of the DKTL. It is planned that prior to 30 June 2001, the trust will be collapsed and PAWA will become the owner of the assets. In keeping with this intention, PAWA, in this submission, will refer to ownership issues as though it is the owner, as it will be by the time any amended charges take effect.

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[1] Disclosed publicly at page 17 of the Auditor-General's February Report to the Legislative Assembly, including examination of the Acquisition of the Darwin to Katherine Transmission Line.

PAWA notes the statement at 3.1 of the Paper that "PAWA purchased the DKTL from the NT Power Group at a cost of $43 million." It draws attention also to the more specific phraseology of the Auditor-General [2] which notes that

> "The terms of the (Government's) settlement ….. included the acquisition by PAWA of the Line. The public and Parliamentary Debate interpreted the $43 million payment as the cost of purchasing the Line, and questioned whether it was a reasonable price."

It continues

> "The Government also announced that it would need to finance the $43 million settlement offer entirely through borrowing, and that it was PAWA which would make the payment and also carry the borrowing of $43 million as a liability."

In accepting this liability, PAWA has recognised this amount as an appropriate payment for the settlement including facility it will acquire.

Rather than simply attributing the $43 M payment as the value (a possibility discussed later as recognised by the Queensland Competition Authority [3]), PAWA is arranging for an independent valuation of the DKTL from a well recognised independent consultant active in such matters within Australia, and with associations and access to data from its overseas associates. PAWA has sought a Replacement Cost valuation, as well as on Optimised Replacement Cost, from which current valuations can be derived through the age and life expectancy of the DKTL. It is intended that this valuation will form the basis of PAWA's subsequent submission to the Commission for determination of a revenue cap for this asset.

PAWA intends to proceed with revaluation of the entire network assets in anticipation of the Commission's requirements for the next regulatory period.

PAWA presumes steps will be taken to formally include the DKTL in the regulatory regime, now that its ownership is with PAWA and irrespective of the Code's being certified as a "effective regime" by the Commonwealth.

DKTL Characteristics

As noted in the Paper, and previously here, the DKTL is a significant network asset, and one which serves a range of functions generally as outlined the Paper.

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[2] At page 11 of the above mentioned Report

[3] Electricity Distribution: Asset Valuation, Depreciation and Rate of Return – Issues Paper, December 1999 – Queensland Competition Authority. At page (14), the Commission indicates that: "Realisable or fair market value can be defined as the current price that a seller of an asset would accept from a buyer of an asset, each having pertinent knowledge of the facts, in an arm's length transaction where both the buyer and seller are 'willing but not anxious'. This method is often cited as an alternative economic valuation approach to that of net present value. However, net realisable value and net present value, when applied in the same context and circumstances, generally result in the same values."

Chapter 4 - Issues for consideration

> 4.8 The Commission invites network users, PAWA and other interested parties to respond to the following types of questions:
>
> *(1) Has the Commission correctly identified and characterised the relevant features of the DKTL?*
>
> *(2) Are there any additional features of the DKTL which the Commission should consider?*

While the general characterisation in para 4.6 and 4.7 of the Issues Paper is correct, the reference to "flows between the regions" should recognise the dispersed nature of generation connected to the DKTL at Mount Todd (Edith River) and at Pine Creek as well as the generation at the Darwin and Katherine extremities. Similarly, loads exist at these locations and at Manton. Hence, the DKTL is not a simple single entity as far as its use is concerned. Rather its various sectors serve various purposes for the various connected parties. These purposes vary over time according to load requirements and generation availability.

There is an argument that, without the offer of certainty and security of supply from the DKTL (albeit as alternative supply in some cases), operations at mines such as Mount Todd would have incurred extra costs, and may not have been regarded as viable.

> *(3) Is there any disagreement with the Commission's earlier assessment (cited in footnote 2 above) that:*
> • *the DKTL was not built with a view to enabling a power station located between Darwin and Katherine to connect to the line; and*
> • *the DKTL is a generation connection asset, rather than a system (or meshed network) asset?*

PAWA wonders if this interpretation of the footnote represents what was intended. Rather, it was interpreted at the time, not as representing the Commission's view that the DKTL *is* a generation connection asset, but rather offering the opinion that locationally differentiated cost recovery would *imply* that it was a generation asset. By its later adoption on postage stamp pricing, PAWA regards the Commission as having at this time rejected the generation asset implication.

While the initial intention may not have included specific facilitation of intermediate generation connection, the previously separate mines at Pine Creek Gold, Cosmo-Howley and Moline were able to connect to the DKTL and the connection of these mining loads and the later development at Mount Todd resulted in connection of loads with embedded generation, and hence of generation per se. The initial connections envisaged the mine generation largely supplying its local load, with the DKTL providing security of supply, and hence provided sufficient certainty to allow development to proceed.

Subsequently IPP generation was augmented at Pine Creek (with PAWA contracted to purchase all output) and the generation at Mount Todd has lost, regained and again lost much of the local mine load, so that it has export capacity and is seeking other customers.

The DKTL facilitated the installation of increased IPP generation at Pine Creek, offering PAWA a generation site remote from major tropical cyclone influence, and hence offering some assurance against coastal cyclone damage. It might be conjectured that cyclone damage to Darwin network assets could be rectified more quickly than damage to Darwin generation, so that remote generation would offer some safeguard against this threat.

In more recent times, the existence of the DKTL has allowed entry of the Mount Todd generation into the competitive electricity market, and thus has been vital in the introduction of effective competition in this market.

In these circumstances, specific characterisation of the DKTL, and more especially of its several segments, as either a “generation connection” or “network transmission” asset is not clear cut.

Reference to the DKTL as being part of a “meshed network” – phraseology common in other systems - is not really relevant to this system element.

Revenue Cap Issues

PAWA accepts the “building block” approach as being appropriate for revenue cap determination, even though this case is effectively a mid term incremental adjustment.

PAWA recognises the distinction between assets being based on “valuation” at major reviews, but being taken “at cost” between reviews. In this case, it would not insist on the “at cost” basis and is proceeding towards an independent valuation on which to base its submission. For this interim cap setting, it proposes recognising the DKTL as an independent item, even though it may be incorporated into the generality of assets for the next major review.

Similarly, for the interim, PAWA would propose that the same WACC be applicable as for the generality of its networks.

On the other hand, it would propose acceptance of the contracted operating and maintenance costs, being little different from the amount PAWA effectively paid under the previous ownership, and recognising the previous operator’s familiarity with the DKTL, and its access to whatever specialised equipment might be associated with those tasks. At the next review, PAWA would consider the most effective way of arranging these services.

Chapter 5 - Issues for consideration

> 5.21 In conjunction with network users, PAWA and other interested parties, the Commission must address what is an appropriate level of additional revenue for PAWA to receive for allowing third-party access to the DKTL.
>
> 5.22 The Commission therefore invites network users, PAWA and other interested parties to respond to the following types of questions:
>
> *(1) What value, if any, should be placed on the 'settlement benefits' component of the $43 million purchase price?*
>
> *(2) To what extent should network users – as opposed to (a) other power consumers, and (b) Territory taxpayers – pay for these settlement benefits?*

In determining the network charges that will result from the incorporation of the DKTL into the PAWA Network, PAWA anticipates that the Commission will follow the procedures established under the Code.

Network charges are based only on the value of physical assets and the cost of operating and maintaining them.

In view of the above, the questions raised by the Commission are about an issue that does not arise in this case.

> *(3) What factors should the Commission take into account when assessing whether the business risks facing a network business in the Territory are affected – up or down – by inclusion of a transmission line like the DKTL?*

For this interim revenue setting, PAWA would propose no alteration to the weighted average cost of capital (WACC) previously determined for the generality of its network assets.

For the next major review, there may be arguments advanced that certain of the DKTL's revenues (especially marginal revenues) suffer from greater uncertainty than those from its general network operations. Large, directly connected loads, such as mining operation etc, can have effective lives different from the general run of electricity customers (where one owner or occupier will likely require much the same electricity service over many years as the previous or next owner, tenant or operator) and different from that anticipated at the time of initial connection.

In future, these major loads would be expected to contribute in advance towards assets with short term effective lives. Thus the new load only influences the level of charges because of increased throughput for several years. This would have small and transitory impact.

> *(4) For depreciation purposes, are there any physical, climatic or market factors which mean that the asset life used with respect to the DKTL assets should be less than the asset lives typical for comparable transmission assets in other jurisdictions?*

PAWA would accept the independent valuer's assessment of asset lives but would expect little variation from the customarily applied lives for such assets. It would anticipate use of a service life of around 50 years [4] for this asset, even though contractual arrangements previously in place may have only covered a shorter period.

> *(5) Are there any features of the expected operating and maintenance arrangements associated with the DKTL which might see costs departing from appropriate efficiency benchmarks?*

For the present, PAWA would propose to accept the negotiated and agreed operation and maintenance charges as appropriate. Under the terms of the settlement, these services are to be provided for two years by the previous operator, who is familiar with the DKTL and its needs, and who will be operating and charging on a commercial basis.

This matter would be subject to further analysis at the time of the next full review.

PRICING

For this interim tariff setting, PAWA regards stability and continuity as important, and hence would support continuance of the existing "postage stamp" recovery of costs. It is therefore proposing continuance of what is effectively the DKTL surcharge as a common service to all customers connected to the network.

This would be reconsidered at the next major review, in so far as it may not be passing the most appropriate signals to users.

The recent comments in the ACCC draft[5] , representing a major change from the initial NEM basis, are noted, as is the requirement for a pre-determination conference to consider the proposals in the draft. PAWA will study the outcome of this debate with interest to determine whether there are findings relevant to the situation in the Territory.

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[4] Though coastal sections of the DKTL might be expected to have a shorter service life, as would associated communications / control equipment. The valuation will identify appropriate recommended life expectancies.

[5] Australian Competition and Consumer Commission , *Applications for Authorisation. Amendments to the National Electricity Code – Network Pricing and Market Network Service Providers,* 12 December 2000. This Draft is mentioned from Para 6.24 of the Issues Paper.

Chapter 6 - Issues for consideration

> 6.29 In conjunction with network users, PAWA and other interested parties, the Commission must address how the additional revenues available to PAWA for allowing access to the DKTL is best recovered as prices, who should pay and how should the prices relate to the prices that apply to other network assets.
>
> 6.30 The Commission therefore invites network users, PAWA and other interested parties to respond to the following types of questions:
>
> *(1) Should the additional revenues allowed to PAWA Networks on account of its ownership of the DKTL be recovered through a specific DKTL tariff, which could be characterised as equivalent to a TUOS tariff, or through a modified form of the existing tariffs that apply to the Darwin and Katherine distribution networks?*

PAWA questions the use of the phrase "additional revenues" in this context. Though the previous cost recovery method associated with the DKTL may not have derived from a regulatory determination of its appropriateness, the costs were in fact being recovered through charges for energy transport. Until the DKTL valuation is known and the consequences accepted into a revenue cap in its own right, the suggestion that revenues will be "additional" may not be well founded. In fact there may be some expectation that the amount of a direct revenue cap would not exceed the previous payments to the DKTL's private sector owner. PAWA would prefer to have the principles outlined earlier to be clear, and then applied against the established value.

As far as the matter of tariff format, PAWA supports the continuation of the previous "postage stamp" revenue recovery method for the remainder of this regulatory period.

> *(2) Is there any evidence of congestion problems on the line, or is there any prospect of such in the foreseeable future, that would warrant a separate TUOS tariff on account of the DKTL?*

While it is not clear that congestion per se warrants different pricing of such a connection, there are likely conditions under which constraints are likely to prudently limit the utilisation of the DKTL.

For example, the section between Pine Creek and Manton is likely to be congested under the following conditions:

- PAWA Katherine generation is running to supply the total PAWA load at Katherine (conceptually excluding any customers captured by another supplier) so that Mt Todd to Katherine segment is lightly loaded or may even be exporting power from Katherine north.
- Mt Todd generation is supplying minimal local load (following mine closure) and seeks to export full existing generator capacity towards a

group of its customers in Darwin and Katherine whose load matches that capacity. (Connection reinforcement would be necessary to allow transfer of this magnitude, but has been foreshadowed by the operator there.) The Edith River to Pine Creek segment would carry this generation northward.

- Pine Creek generation from the IPP contracted to PAWA is seeking to export full station capacity to PAWA northern loads. The Pine Creek to Manton Segment would be carrying Mt Todd's northern load as well as the Pine creek generation.
- The Manton to Darwin segment would be also carrying much the same flow, save for the relatively small load off-take at Manton.

While this combination might be rare, and has not occurred to date, it is possible. One limitation is that the Mt Todd generator cannot at present export its full capacity to the DKTL, and Pine Creek local load reduces the potential output there, while it is only occasionally that Katherine power station satisfies all of Katherine demand.

Another aspect of the scenario is that system losses would become economically intolerable, except in a crisis situation.

Should further generation plant be proposed which would require utilisation of the DKTL for access to remote loads, the issue would require more careful consideration.

It may be noted in the national electricity market that some of the load shedding which has occurred recently in Victoria and South Australia has been occasioned when interconnection load transfer limits (based on firm transfer capacity after a next failure) have become critical.

> *(3) Are specific usage charges warranted with respect to use of the DKTL, in order to send appropriate signals for the economic use of the line, and what importance should be attached to locational signals in this regard?*

As noted above, PAWA supports the continuation of the previous "postage stamp" revenue recovery method for the remainder of this regulatory period.

> *(4) Is there any disagreement with the Commission's earlier assessment (cited in footnote 2 above) that locational signals should be sufficiently met by:*
> • *the impact of energy losses on the effective energy charge imposed on end-use customers by the generators involved;*
> • *the charges for connection assets at the entry point to the network; and*
> • *any future augmentation of the DKTL directly resulting from a decision by a generator to connect new or additional generation capacity to the DKTL itself most likely attracting a capital contribution from that generator?*

PAWA does not in principle accept that sufficient locational signals are implicit in the locational line losses, and by the possibility of future capital contribution from a generator whose connection required augmentation of the DKTL capacity. Such

augmentation may be by direct changes to the DKTL, or may require installation of other associated equipment, or earlier installation than would otherwise be required.

With fuel from the same source, and with generation technology similar to that used by current generators, operating costs would be similar in any location, so that only the differential losses would offer a locational signal. PAWA does not accept in principle that such signals alone are adequate.

Charges for connection assets would in principle not differ significantly between selected generation or load siting and so would at most provide only very marginal locational signals.

> *(5) If specific usage charges appear to be warranted with respect to use of the DKTL, how should consistency with the price signals provided by existing network tariffs be best achieved?*

As noted above, PAWA supports the continuation of the present "postage stamp" charges for the current regulatory period.

> *(6) If the DKTL revenues are to be recovered through the existing types of network tariffs, which could be characterised as equivalent to a DUOS tariffs, should they be incorporated as an additional high voltage element or as an averaged charge?*

As noted above, PAWA supports the continuation of the present "postage stamp" charges for the current regulatory period.

As high voltage elements are "used" by all customers connected at high or lower voltages, and costs are either paid in the tariff at the high voltage connection location, or "passed down" to the lower voltage connections, there would be little difference in effect for an energy based charge as at present.

> *(7) How might competitive development of upstream and downstream markets be affected by the alternative forms which PAWA's recovery of the DKTL revenues might take?*

PAWA will address such matters at the next full regulatory review in the absence of any known current issue.