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16 October 2014

The Secretary
Committee on the Northern Territory's Energy Future
GPO Box 3721
Darwin, NT, 0801

Dear Ms Knight,

RE: Inquiry into Electricity Pricing Options

I refer to the letter dated 25 August 2014 from the Chair of the Committee on the Northern Territory's Energy Future in relation to the Committees' Inquiry into Electricity Pricing Options.

Jacana Energy would like to thank the Committee for the opportunity to provide a submission on this extremely important issue related to the Northern Territory's Energy Future.

I am pleased to be able to provide the attached* submission on this subject as approved by the Board of Jacana Energy on 14 October 2014.

Yours faithfully

Noel K Faulkner
Chairman
Jacana Energy

Cc: The Honourable Gary Higgins, MLA
Committee on the Northern Territory's Energy Future

INQUIRY INTO ELECTRICITY PRICING OPTIONS
JACANA ENERGY'S SUBMISSION

A. EXECUTIVE SUMMARY

1. The Chair of the Committee on the Northern Territory's Energy Future has invited the Chairman of Jacana Energy to submit a response to its Inquiry into Electricity Pricing Options.

2. This submission includes:

   a. Paragraph B: background on Jacana Energy;

   b. Paragraph C: an assessment of the advantages and disadvantages of different electricity tariff designs;

   c. Paragraphs D – I: factors to be taken into consideration in the design and implementation of electricity tariffs;

   d. Paragraph J: options for feed-in tariffs for renewable electricity generation; and

   e. Paragraph K: conclusion.

B. BACKGROUND

3. Jacana Energy (Jacana) was established under the *Power Retail Corporation Act 2014.* It has been operating as an electricity retailer from 1 July 2014. Jacana is the largest electricity retailer in the Northern Territory with more than 89,000 customers ranging from small domestic consumers to large Industrial and Commercial customers. Jacana retails electricity to customers in Darwin/Katherine, Tennant Creek, Alice Springs, Daly Waters, Borroloola, Timber Creek, Elliot, Newcastle Waters, Yulara, Ti Tree and Kings Canyon.

4. The electricity value chain starts in power stations where electricity is generated. Electricity is then transported over long distances from power stations through high voltage transmission powerlines. The electricity is then transformed to lower voltages before being distributed to residences and businesses.

5. Retail costs make up a very small proportion of the value chain:

   a. Wholesale electricity, which is sourced through contracts with generators, makes up approximately 60% of costs;

   b. Network regulated charges, as set by the Utilities Commission every 5 years under the Network Price Determination process, comprise approximately 38% of costs;

c. System Control regulated charges, as set by the Utilities Commission, make up approximately 0.5% of costs; and

d. Retail costs and margins, and environmental charges account for approximately 1.5% of costs

6. Electricity retailers, such as Jacana, purchase wholesale electricity from generators and convert this to retail energy products. They also provide a range of customer services including: initiating customer connection to the network; providing timely and accurate billing; the provision of various payment options; and enquiry resolution across a range of convenient channels.

7. Before a retailer can sell energy in the NT, it must have a licence to retail electricity. Licences are issued by the Utilities Commission.

8. The NT Electricity Market is competitive and became fully contestable from 1 April 2010.

9. Jacana Energy's customers are covered under two different types of pricing arrangements. Large customers (>750MWh pa) are on individually negotiated contracts. These customers have significant choice and diversity in tariff structures.

10. For most customers consuming < 750 MWh per annum (residential and small to medium business customers), tariffs are set by the NT Government in Pricing Orders. The tariff options available to these customers include a flat (single rate) tariff or a Time Of Use (TOU) tariff. The majority of Jacana Energy's <750MWh pa customers are on flat tariffs.

11. In preparing this submission, Jacana Energy has focused on pricing and tariff options for customers consuming below 750 MWh per annum.

12. Key pricing principles that should be considered when designing new tariff structures are:

    a. Simplicity – tariffs should be structured in a straightforward manner that is readily understood by customers;

    b. Pricing signals – tariffs should provide cost reflective pricing signals where possible, to inform customers of the impacts of their behaviour on price outcomes;

    c. Stability – the process for setting tariffs should be stable and predictable; and

    d. Variety – tariffs should provide customer choice so that customers can choose a tariff structure that best suits their circumstances.

C. The advantages and disadvantages of different tariff designs

13. Electricity retail pricing structures typically fall into two broad categories, namely flat tariffs and dynamic tariffs.

14. Flat tariffs are constant regardless of the time of day, day of the week or season of the year. However, wholesale energy costs can vary significantly depending upon the time of day, the day of the week and the season. A common criticism of flat tariffs is that they are not cost reflective.

15. Flat tariffs include single rate tariffs and block tariffs. The rate varies for block tariffs depending upon the level of consumption.

16. In contrast to flat tariffs, dynamic tariffs vary with the time of day, the day of the week or the season. Dynamic tariffs include pricing designs such as TOU tariffs, Critical Peak Pricing (CPP) and Real Time Pricing (RTP).

17. RTP is sometimes used by very large industrial accounts, but not often with small customers. CPP is not in widespread use and has been mostly used in pricing trials. TOU pricing is probably the most widespread dynamic pricing design used in most jurisdictions and overseas energy markets for small to medium business and residential customers.

18. The table below summarises some of the advantages and disadvantages of these different pricing structures:

Type	Name	Description	Advantages	Disadvantages
Flat	Single rate	Rate is the same across the day, week and season	• simple to construct and administer • easy for customers to understand	• not cost reflective • limited price signal • can produce cross subsidies across customer classes
	Block rate	Flat rate for a given block of usage which increases (inclining block) or decreases (declining block) for the next level of consumption	• as above • can give a very basic price signal	• as above

Dynamic	TOU	Rates can vary with the time of day, day of week and season of the year	• relatively simple to construct and administer • can send a price signal • rewards consumers for load shifting	• can be confusing for consumers • requires supporting technology and infrastructure
	CPP	Very high rates for a small number of "critical peak periods" discounted rates for the rest of the time	• results from pilots can be impressive	• can be confusing • not proven beyond pilots • requires fairly advanced communications • may only appeal to a small segment of the market
	RTP	Rate varies from hour to hour	• very cost reflective	• generally too risky for most mass market customers • limited appeal

D. Factors to be taken into consideration in the design and implementation of electricity tariffs

19. There are a variety of factors which need to be taken into consideration in the design and implementation of electricity tariffs including:

    a. The outcome that the tariff is trying to achieve;

    b. The potential level of market acceptance;

    c. Supporting technology;

    e. Alignment with other costs; and

    f. Tariff setting process.

E. The outcome that the tariff is trying to achieve

20. One of the key trends in most jurisdictions and overseas electricity markets is a decline in overall energy usage with an increase in peak demand.

21. The decline in overall energy usage has been driven by the increased efficiency of appliances and the declining cost of competing technologies such as solar PV. The key contributing factor to the increase in peak demand is often cited as the increased penetration of air-conditioning. A consequence of this is an increase in the need for expensive peak generation plant which is only used for small number of hours on a small number of days in the year.

22. To try and reduce or shift peak demand, utilities have introduced dynamic tariffs, typically TOU prices, which send a price signal to consumers in an attempt to reduce the demand for peak energy or at least to shift it to shoulder or off-peak periods.

23. One of the other benefits of TOU pricing is that it unwinds many of the cross-subsidies which are inherent in flat pricing structures. With flat tariffs, customers with relatively flat load profiles generally subsidise the cost of energy for customers with peaky load shapes.

F. The potential level of market acceptance

24. Experience in other markets highlights the importance of engaging with consumers early to build understanding of the proposed new pricing arrangements. Without adequate engagement and consultation, proposed new arrangements can be extremely problematic to roll-out.

25. Whilst broad community engagement and education programs are useful, detailed engagement with key consumer groups is also an effective way to ensure that the proposed changes are understood and accepted prior to roll-out.

26. New pricing structures can often have redistributive effects across the customer base and so it is often advisable to undertake economic modelling and conduct impact assessments of proposed new structures prior to their introduction.

G. Supporting Technology

27. Flat tariff structures require very little in the way of supporting infrastructure when compared to dynamic pricing structures.

28. Dynamic pricing structures are increasingly supported by "smart" technology. In the context of electricity retailing this refers to a remotely read interval meter, which in turn is supported by a communications network and potentially complex backend network and retail IT systems.

29. The cost of these technologies is relatively expensive however large scale roll-outs are continuing to drive costs down.

30. As well as metering and communications networks, consumer feedback technologies have an important role to play with dynamic prices. Most Australian and overseas trials indicate that dynamic pricing structures work best when they are supported by consumer feedback technologies such as in-home displays, web-portals and mobile applications.

H. Alignment with other costs

31. As noted above, retail costs and margin make up only a very small component of the typical retail tariff and bill. For new retail pricing structures to be effective it is critical that other elements of the electricity value chain are aligned.

32. It is important that peak and off-peak time splits are in alignment and that the timing around price changes should align. Price signals can be muted if network, wholesale and retail rates are all set at different times of the year.

I. Tariff setting process

33. New pricing designs such as dynamic pricing structures require a structured and consistent price setting regime to be effective. The key features of this should include:

    a. Transparency - prices should be calculated and charged in a manner that is fair and reasonable and open to scrutiny;

    b. Stability – price increases should remain stable over the longer term permitting customers to make informed investment decisions and avoid price shocks. (Historically, Electricity Pricing Order prices have been frozen and then only increased by CPI, resulting in price shocks to customers when prices have to be increased in order to 'catch-up' to increased input costs);

    c. Equity – prices should be equitable for all electricity customers, ensuring no cross-subsidisation between customers;

    d. Efficiency - all electricity supply chain costs should be as efficient as possible whilst still meeting prescribed service standards; and

    e. Commercial sustainability – retailers are provided with a level of certainty that CSO funding will be provided by the NT Government to meet the shortfall between the cost reflective price and any price constraints imposed by government policy, such as the uniform tariff policy or any other such policies.

34. As mentioned earlier, Jacana only has direct control over 1.5% of costs and has very limited capacity to absorb any additional cost should any other cost inputs increase. The current Electricity Pricing Order sets the maximum price that may be charged, but does not allow for the pass-through of variations in the regulated charges.

35. An alternative solution to address revenue uncertainty (other than pass-through provisions in Pricing Orders) is alignment of the timing of the Network Price Determination and the Electricity Pricing Order development process. This would ensure that all costs are captured during the Electricity Pricing Order development process and provides customer certainty of tariff increases for the next five years. This is a very important consideration if new prices are being considered.

36. Final retail energy prices are largely influenced by wholesale energy costs (primarily driven by gas consumption costs), network charges and the cost of government renewable schemes. To the extent that these reflect actual costs, retail pricing can provide an efficient price signal to different customers. Jacana believes that where interval data is available for customers this can and should be used for product costing. In doing this, customers are more likely to receive a price which reflects the true cost of providing energy to them.

37. Other jurisdictions have an independent regulatory body that sets standing offer prices, which are the equivalent of pricing order charges in the Northern Territory. Further to this a number of interstate jurisdictions are phasing out retail electricity price regulations altogether. The Australian Energy Market Commission (AEMC) recommends if deregulation should occur based on reviewing the effectiveness of competition in jurisdictional retail energy markets. The reviews in Victoria, South Australia and New South Wales have found competition to be effective. One of the key components facilitating effective competition has been the adoption of independent price setting frameworks.

J. Feed-in-Tariffs Options

38. The principal driver for renewable energy is the Commonwealth Government's Renewable Energy Target (RET) scheme. This scheme places an obligation on liable electricity retailers to source a proportion of their supply from accredited renewable electricity generators.

39. There are many benefits of buy back schemes. For example, buy back tariffs can:

    a. provide ongoing support for renewable energy generation;

    b. encourage high quality installations and on-going maintenance, as financial benefit is determined by system output;

    c. complement rebate-style programs, but can exist in the absence of other support mechanisms;

d. enable households to manage their exposure to electricity price increases.

e. encourage energy efficiency, particularly during peak sunlight hours, which correlates reasonably well with commercial peak load;

f. provide long-term certainty for the renewable energy industry.

40. While the benefits of feed-in tariff schemes are numerous, the main challenge of such schemes is the cost, which would ultimately be borne by the community.

41. The cost of energy that the Utility supplies to the customer is only a portion of the total cost of supply. Also included in the Supply charge are the Network charges, System Control costs, Metering and billing, Retail's costs, etc. Rooftop PV systems only offset the energy component.

42. Jacana encourages the provision of a feed-in tariff as an option for those customers who have a preference for distributed generation. The adoption of rooftop PV also moves the NT's generation base to a more sustainable footing. Any feed-in tariffs should be cost reflective and avoid cross-subsidisation from non-rooftop PV customers. A standard metering setup should also be developed to ensure customers are treated equitably and that billing functions can be streamlined.

K. Conclusion

43. Jacana Energy fully supports the process to investigate the introduction of different electricity tariff designs. There are potentially considerable consumer and societal benefits from introducing different electricity tariff designs. However, the be fully effective it is important that the introduction of any new tariff designs is supported by extensive consumer consultation and education, modelling and bill impact analysis, alignment of other energy cost components (wholesale and network) and more transparent approach to price setting.