



Steel Wave Power
ABN: 72044918897

30 June 2014

State Development, Infrastructure and Industry Committee
QUEENSLAND PARLIAMENTARY SERVICE
Parliament House
Cnr George and Alice Streets Brisbane Qld 4000
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mailto: sdiic@parliament.qld.gov.au

Dear Chair, Deputy Chair and Members,

Steel Wave Power (SWP) welcomes the opportunity to comment upon the Electricity Competition and Protection Legislation Amendment Bill 2014.

SWP supports the modification of the existing Electricity Act 1994 (the Electricity Act) to remove retail price regulation in SEQ and establish an effective market monitoring regime. However, the proposed Bill goes significantly further than this, imposing unnecessary cost and risks to electricity customers on remote North Stradbroke Island.

SWP believes that PowerQ (30 year strategy) as a whole requires further review as the discussion and direction DEWS consultations combined with current work by AER has not gone far enough in creating a clear, equitable or consistent framework for “The Energy Cloud: Emerging Opportunities on the Decentralized Grid”. It appears that significant work has gone into removing retail price regulation in SEQ in the absence of a clear and straight forward economic argument linking the need to merger such into a regional QLD location e.g. North Stradbroke Island. SWP proposed “The Energy Cloud” framework, set out in Attachment A, which addresses regional QLD locations.

The merger of NSI with S.E. QLD has stymied the economic development of NSI by comparison with any area of Gold Coast, Bribie Island, SMBI or Sunshine Coast. Driving from Point Lookout on North Stradbroke Island to Brisbane CBD takes at least 2.5 hours by comparison with 2 hours from Coolool (near the edge of Energex zone). The status quo on North Stradbroke Island is regulated retail pricing of electricity. This is customer oriented end-point and its present-day means of delivery is via Energex. North Stradbroke Island should be zoned with regional QLD due to synergies (e.g. remoteness, population density, cost of fuels, mining, etc) and law harmonisation.

When it comes to discussing competition law policy in small economies (or merger policy for small and for micro economies) one must acknowledge Prof. Michal Gal’s immense contribution to the topic. She wrote the definitive book on the subject. She says small economies have three main characteristics. These are high market concentration levels,

high entry barriers and inefficient levels of production. All three exist in North Stradbroke Island and its markets are characterised by either monopolies or oligopolies.

1. One force of significance is “*Unique Characteristics Pull*” but harmonisation alone of NSI competition laws for S.E. QLD cannot guarantee pricing impartiality.
2. Other force of significance is “*The Follower Push*” and mere harmonisation of NSI competition with regional QLD guarantees regulated retail pricing of electricity.
3. Latent conditions include overall economic framework of North Stradbroke Island and changes inter alia, are justifiable basis for cost equalisation schemes.

Consistent with this view, SWP observes that North Stradbroke Island is an island micro-jurisdiction and so the movement of people and freight is heavily reliant on ferries services across Moreton Bay. The SMBI-Translink arrangement seems a promising example of a scheme that allows the shared provision of critical goods and services; water transport being a vital area to ensure that everyone has adequate and affordable access that with community consultation could extend to renewable energy and internet. A contextual framework in Attachment B addresses existing shortcomings and grounds for treating retail supply to North Stradbroke Island in line with other regional QLD areas.

SWP recommends and requests that the proposed changes go beyond those required for implementation of retail price regulation in SEQ with a further **Amendment of s 89A (Definitions for pt 2)** as follows:-

Amendment of s 89A (Definitions for pt 2)

Section 89A—

insert—

designated retail market area means—

(a) an area prescribed by regulation; or

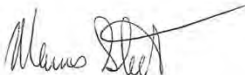
(b) if no area is prescribed — the distribution area described in the schedule to the distribution authority numbered D07/98 with excluded customers being entire North Stradbroke Island distribution area while not including the Sand Mining Company customer connection via Zone Substation IBIS and it's dedicated 110kV feeder F904 via Rocky Point Tee to Bulk Supply Substation Beenleigh.

Editor's note—

At the commencement of this definition, the distribution authority was held by Energex.

SWP is happy to discuss the issues identified in this submission, and please contact me on [REDACTED] should this be the case.

Yours Sincerely,

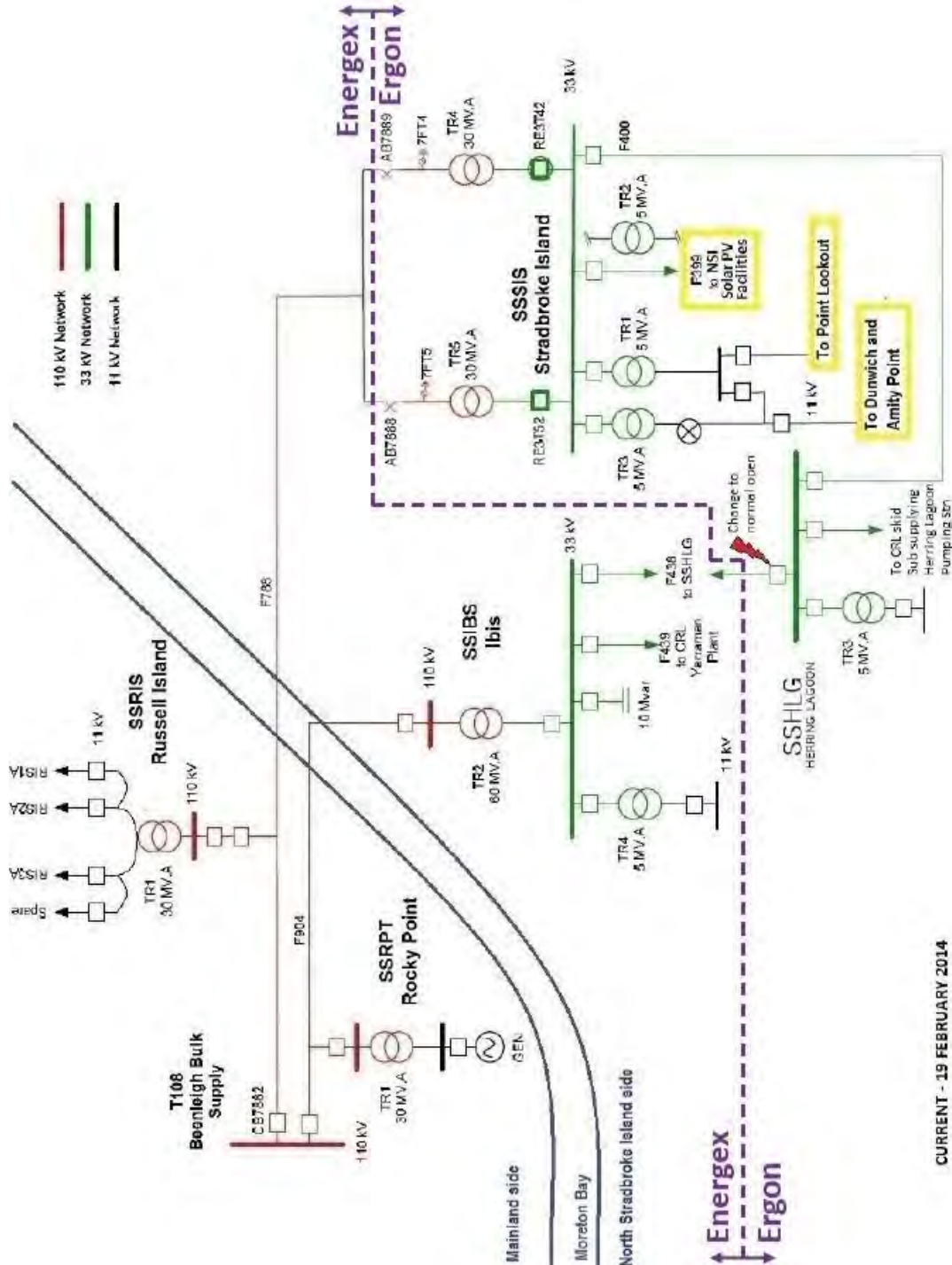


Marcus DW Steel

**Principal Application Engineer – SWP
(STEEL WAVE POWER)**

References:

- a) The CIGRE paper "Alternative Energy Development on North Stradbroke Island" by Marcus DW Steel
- b) Compendium of Abstracts from CIGRE 2013 Symposium Session 6.1 Integration of Renewables
- c) CIGRE's Closing Session summary B1/B2/B4/C6 at Symposium September 2013
- d) Steel Wave Power presentation "Middle Child Syndrome – Neglected Distribution Connection"
- e) "Provision of Ancillary Services by Distributed Generators, Technological and Economic Perspective" by Martin Braun - University of Kassel, Germany
- f) Electricity Transmission Corridor and Distribution System for NSI as per proposed Amendment of s 89A



ATTACHMENT A

From: [Marcus Steel](#)
To: ["30 Year Electricity Strategy"](#)
Cc: ["burdett@parliament.qld.gov.au"](#); ["Nanochydro Electric Office"](#); ["Aene Madden"](#); ["Narasago Electric Office"](#)
Subject: RE: PowerQ: a 30-year strategy for Queensland's Electricity sector
Date: Monday, 23 June 2014 6:48:00 AM
Attachments: [The Energy Cloud - Emerging Opportunities on the Decentralized Grid.pdf](#)
[Publications Guide to Connecting a Distributed Generator April 2013.pdf](#)
[20120717_121527_2084114.pdf](#)

Dear Mr Barr,

Steel Wave Power notes that DEWS 30-year strategy for Queensland's Electricity sector has accepted many comments in relation to Steel Wave Power submission.

Steel Wave Power urged DEWS to only progress changes necessary to allow "*The Energy Cloud*" to fast-track access the Queensland's Electricity sector. We note that the DEWS has chosen, however, to progress many other changes under the branding "Uniquely Queensland".

- a) Public interest is in democratisation of the energy grid which is an underlying theme of "*The Energy Cloud*" and a basic ecosystem therein is communities. Why aren't communities a class of customer? Why is electricity feudal autocracy the 30 year future for residential customers?
- b) The 30 year future leaves unanswered the important questions around reform in distribution connection process for example, 5 steps in "*Guide to Connecting a Distributed Generator in Victoria*", 7 steps in Figure 2 of EnergeX EX.03544 V2 which is technocratic with unproductive red tape.
- c) PowerQ is not really a basis for long term decisions compared with IEEE Power Energy Society T&D show in Chicago April 2014 for example, "*Meeting Utility Step Voltage Change Requirements by Providing Precise Voltage Control for a 15 MW PV Plant on a 12.47 kV Distribution Feeder*".

Steel Wave Power repeats its concern that extent to which PowerQ is intended to apply to "*The Energy Cloud*" emerging as a decentralised grid in Queensland remains a fundamental question, and is not yet satisfactory. We therefore consider that further review of PowerQ is required.

Best regards,

Marcus Steel
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From: 30 Year Electricity Strategy [<mailto:30YearElectricityStrategy@dews.qld.gov.au>]
Sent: Friday, 20 June 2014 2:52 PM
To: marcus.steel@bionond.com
Subject: PowerQ: a 30-year strategy for Queensland's Electricity sector



CTS No. 14183/14

Dear Mr Steel

I am pleased to announce the release of *PowerQ: a 30-year strategy for Queensland's electricity sector*. PowerQ builds on the government's commitment to stabilise electricity prices by delivering a resilient, cost-effective and consumer-focused industry to support the economic and lifestyle aspirations of all Queenslanders.

PowerQ sets a strong vision and direction to achieve a brighter energy future for all Queenslanders through a series of strategies and actions. Developed in consultation with Queensland consumers and industry participants, this long-term strategy sets out the equally important roles of consumers, the market and government in realising a better energy future.

You can download a copy of PowerQ from the Department of Energy and Water Supply website www.dews.qld.gov.au.

Sincerely

Benn Barr
Acting Deputy Director-General
Energy Division
Department of Energy and Water Supply
PO Box 15456, City East Qld 4002
Customer Service Centre 13 43 87

Great state. Great opportunity.



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Queensland Parliament State Development, Infrastructure and Industry Committee

Submission to the Inquiry into the Electricity Competition and Protection Legislation Amendment Bill (2014)

1. Summary of submission

This submission advocates that the supply of retail electricity to North Stradbroke Island occurs under the arrangements of regulated prices that will apply to regional areas outside South East Queensland. The submission does not apply to the supply of electricity to mining operations on North Stradbroke Island. Our understanding is that the mining operations have their own dedicated supply connection via Zone Substation IBIS and its dedicated 110kV feeder F904 via Rocky Point Tee to Bulk Supply Substation Beenleigh.

2. Proposed amendment

Clause 44 of the current Bill amends section 89A of the principal Act to insert a definition: '*designated retail market area*'. The designated retail market area is defined as '*an area described by regulation or, if no area is prescribed, the distribution area described in the schedule to the distribution authority numbered D07/98*'. The latter is the Energex area.¹

We think there are two ways of excluding North Stradbroke Island from the deregulated area. One is to insert appropriate words into the definition of the '*designated retail market area*' so that it is expressly Energex area minus North Stradbroke Island. The other is for Parliament to require a regulation that North Stradbroke Island is excluded from area D07/98 for the purposes of price deregulation.

3. Background

At the 2011 Census, the resident population of North Stradbroke Island was 2,026 with 858 households. These are predominantly, but not exclusively, in three townships; Dunwich (population 882 and 347 households), Point Lookout (population 678 and 289 households) and Amity (population 348 and 158 households). 40 per cent of the Dunwich residents are of Aboriginal heritage.

The Island is geographically within South East Queensland but is accessible only by daytime ferry services, the standard telephone link to the mainland is microwave and effective internet connections are through ADSL using the Telstra lines on the Island. There is no household mail delivery.

4. The policy position

Under the Electricity Competition and Protection Legislation Amendment, retail supply of electricity in South East Queensland will be 'open market' from 1 July 2015 with a light-hand 'market monitoring' of prices and services. Outside the South East, the Queensland Competition Authority (QCA) will continue to regulate electricity prices with Ergon as the retailer. The Government will further investigate expand competition in regional areas outside SEQ.

¹ Explanatory Notes p17 <https://www.legislation.qld.gov.au/Bills/54PDF/2014/ElecCompProtLegAB14E.pdf>

The Department of Energy and Water Supply argues that a number of pre-conditions need to be met to enable customers to benefit from the reforms. These include ensuring there is sufficient competition, implementing appropriate support mechanisms to protect vulnerable customers and developing a customer engagement strategy to improve consumer confidence.²

We accept that if the above conditions (among others stated by the Department) have been met, a competitive market for electricity could mean improved services and lower prices (or at least lower real growth in prices) for consumers. Our concern is that while the retail arrangements for the metropolitan and urban areas of South East Queensland may well have reached an adequate level of maturity, this is not the case for an Island with a small population.

5. The grounds for treating retail supply to North Stradbroke Island in line with other regional areas

Our argument is that North Stradbroke Island shares many more features with regional and remote Queensland than with South East Queensland. Like regional and remote Queensland, more time and investigation is required about how to provide real competition in the retail supply of electricity. Some of the features are

- There are physical barriers to competition with a basic and radial reticulation system from a single 110kV powerline that spans overhead from Russell Island to supply Island townships.
- The supply of electricity to Island townships attracts a cost equalisation scheme via uniform tariff. This is not the case for the metropolitan and urban parts of South East Queensland.
- The vulnerable nature of the reticulation system and the limited patchy internet and control systems available to Island townships mitigate against a more complex and urbane pricing and service packages the Department clearly envisages the competitive industry providing.
- The physical isolation and small population make it extremely unlikely that there will be any presence of electricity retailers on the Island. Similarly, even 'door-to-door' promotions are unlikely; this is particularly important since 23 per cent of those reported as investigating alternative suppliers did so after a 'cold call' from a door to door salesperson.³ This means that residents will be disadvantaged in getting information about the retail products available. They are also likely to be more vulnerable to less than full information.
- There is a high level of Island residents with low and insecure incomes and this will also militate against effective '*consumer engagement*'.

These features, we believe, indicate that North Stradbroke Island is not, on its own account, a mature electricity market. Moreover, it is qualitatively different from the metropolitan and urban South East Queensland.

We think our conclusion is not dissimilar from that presented to the Parliamentary Committee by the Department. In replying to a question about introducing competition into the Ergon region, the Deputy Secretary (Mr Barr) explained it depended on moving the subsidy to the network side and

*there is a lot of work to do to go through that to make sure that customers get value from that and also government, in terms of how much it subsidises, gets value as well.*⁴

² <http://www.dews.qld.gov.au/policies-initiatives/electricity-sector-reform/supply/market-monitoring>

³ SEQ Residential Electricity Consumer Engagement Quantitative Report, p23.

http://www.dews.qld.gov.au/_data/assets/pdf_file/0010/173629/seq-consumer-engagement-report.pdf

⁴ Public Hearing—Inquiry Into The National Energy Retail Law (Queensland) Bill 2014 and Electricity Competition and Protection Legislation Amendment Bill 2014, 4 June 2014, Transcript p6

Notably, the Deputy Secretary said, *Once you get to the isolated areas, which is Torres Strait Island, (and) really far west, it becomes very difficult.*⁵ While we do not argue that North Stradbroke is as acutely located as the Torres Strait, it shares the general direction and tenor of this remark.

6. Uncertainty about uniform tariff

As we understand the current arrangements the state-wide uniform tariff equates the price for householders and small business on the standard contract in South East Queensland and this will not apply after its deregulation when prices in regional QLD will be set by QLD Competition Authority.

Network and distribution costs are the major reason prices are higher in regional and remote locations. There are two effects; one is that the greater distance the network has to cover increase capital and maintenance costs and also the leakage of energy through distribution. The second is that the population of regional and remote locations is smaller and more dispersed so that the unit network costs per household are increased.

As noted, the supply distance for North Stradbroke Island is considerably higher than for metropolitan and urban areas in South East Queensland and the population is small and dispersed. Our impression is that these factors will mean that price increases stemming from the removal of the uniform tariff will outweigh any price reductions from competition between retailers.

7. Some specific North Stradbroke features

There are two specific features of North Stradbroke Island that need to be considered before moving to price deregulation. The first is the level of exposure to extreme weather and related events. There were very severe storm impacts at the turn of the years in 2011/12 and again in 2012/13. Three were serious bush fires east of Dunwich in 2013 and severe bush fires in 2014 that burnt out 80 per cent of the Island and cut the power supply to the entire Island. We believe that the resident population needs to have unequivocal guarantee that moving to deregulated pricing will not intensify the consequences of extreme events on reconnecting to electricity supply.

The second factor is how well the system can respond to seasonal demand. There are some 25,000 to 30,000 holiday-makers on the Island at the New Year and Easter holidays. This is 10 to 15 times the residential population. There are similar effects, though of lower scale, at other school holidays and, indeed between weekdays and weekends. The current network and local distribution caters for these peaks so there must be considerable under-utilisation outside the peaks when the system is supplying permanent residents. It appears to us that this is a further factor, along with the shift away from the uniform tariff that could lead to higher prices for resident households.

8. Possibilities for development of local supply arrangements

There is a marked trend around the world for local or community supply and distribution arrangements to be installed on Islands and other remote areas. One reason for this is the real costs of supplying such locations through central generation and bulk distribution are high and local generation and community distribution can be economic. The base power source can be one of the renewable or gas or oil or a combination.

We have no information from Energex that a community supply arrangement is envisaged or feasible for all or part of North Stradbroke. However, such schemes are intuitively attractive for parts of Queensland and North Stradbroke Island could provide a testing ground for such scheme. Since such schemes might need to 'smooth' quotidian cycles by buying and selling power from the wider network, they are likely to easier to investigate and establish in a regime of regulated prices.

⁵ *ibid*