



24 October 2014

The Hon. Dr Mike Nahan  
Minister for Energy  
Level 13, Dumas House  
2 Havelock Street  
WEST PERTH WA 6005

Dear Minister

### **Network Coverage Application**

Please find enclosed an application from Alinta Energy ('Alinta'), pursuant to section 3.8 of the Electricity Networks Access Code 2004, for coverage of the Horizon Power-owned and operated electricity transmission and distribution network assets in the Port Hedland and Karratha region – these are the Horizon Power assets that form part of the North West Interconnected System ('Horizon NWIS Network').

As you are aware full retail contestability exists in the NWIS. Alinta has obtained a retail licence and possesses the requisite access to generation capacity to supply customers in the Horizon NWIS Network. Access to the Horizon NWIS Network is the only impediment to Alinta's entry to the market.

Alinta first approached Horizon Power in April 2014 to obtain proposed terms and conditions, including price, for access to its network. Whilst Horizon Power has provided draft contract terms and conditions to Alinta, Horizon Power has not provided access pricing despite early indications that it would. In more recent times, Horizon Power has indicated that there are substantial obstacles in providing access and determining pricing for Alinta or indeed any party.

Alinta therefore wishes to utilise the processes existing within the Electricity Networks Access Code 2004 and makes this application to you for coverage.

The network coverage application enclosed sets out in detail Alinta's reasons for seeking coverage and addresses the applicable coverage criteria, as required by the Electricity Networks Access Code 2004.

If you wish to discuss this matter further please don't hesitate to contact [REDACTED]

Yours sincerely

**Jeff Dimery**  
Chief Executive Officer

# Coverage Application under the Electricity Networks Access Code 2004 (WA)

An application by Alinta Energy for coverage of network assets owned and operated by Horizon Power

24 October 2014



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## 1. Introduction

Alinta Sales Pty Ltd ('Alinta'), a wholly owned subsidiary of Alinta Holdings ABN 52 148 012 471, makes this application to the Minister for Energy of the State of Western Australia for coverage of an electricity network under section 3.8 of the Electricity Networks Access Code 2004 ('the Code'), made under Part 8 of the *Electricity Industry Act 2004* (WA) ('the Act').

Section 3.8 of the Code provides that:

*A coverage applicant may make a coverage application to the Minister requesting that the whole or any part of a network be covered.*

The network the subject of this application is located in the Pilbara region of Western Australia and is owned by Horizon Power ('Horizon') and is described in this application as the 'Horizon NWIS Network'.

This application is structured as follows:

- Section 2 provides background about Alinta, its business and the context in which it is seeking coverage of the Horizon NWIS Network;
- Section 3 describes:
  - the Horizon NWIS Network, and the network infrastructure facilities comprising it, that is the subject of this coverage application; and
  - the services provided by means of the Horizon NWIS Network that Alinta seeks to acquire;
- Section 4 addresses the Code objective and section 3.6 of the Code and sets out the reasons that each of the coverage criteria is satisfied; and
- Section 5 contains the conclusion.





## 2. Background

This section provides background to this application, namely:

- a description of Alinta's business and its operations in the North West Interconnected System ('NWIS')<sup>1</sup>; and
- Alinta's reason for making this coverage application.

### 2.1 Alinta's business

Alinta is a vertically integrated energy business, supplying gas and electricity to around 800,000 homes and businesses across Australia. This coverage application relates to Alinta's operations in the Pilbara region of Western Australia, and centres on Alinta's Port Hedland Power Station.

The Port Hedland Power Station is a large gas-fired power station comprised of generating units at two sites described as 'Port Hedland Power Station' and 'Boodarie Power Station', indicated in blue on Figure 1.

Alinta currently supplies electricity from the Port Hedland Power Station to a small number of large use customers in the Port Hedland region, including Horizon.

Alinta also owns and operates three high voltage transmission lines (indicated in red in Figure 1) that connect the Boodarie and Port Hedland generation sites and transmit power to the Wedgefield and Murdoch Drive substations (indicated in green in Figure 1). The Wedgefield and Murdoch Drive substations, and the transmission and distribution lines extending from them, are part of the Horizon NWIS Network.

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<sup>1</sup> The NWIS is an extensive system in the Pilbara consisting of interconnected electricity facilities and infrastructure owned and operated by various private and government interests. See for example the definition below from section 2 of the *Electricity Transmission and Distribution Systems (Access) Act 1994* (WA):

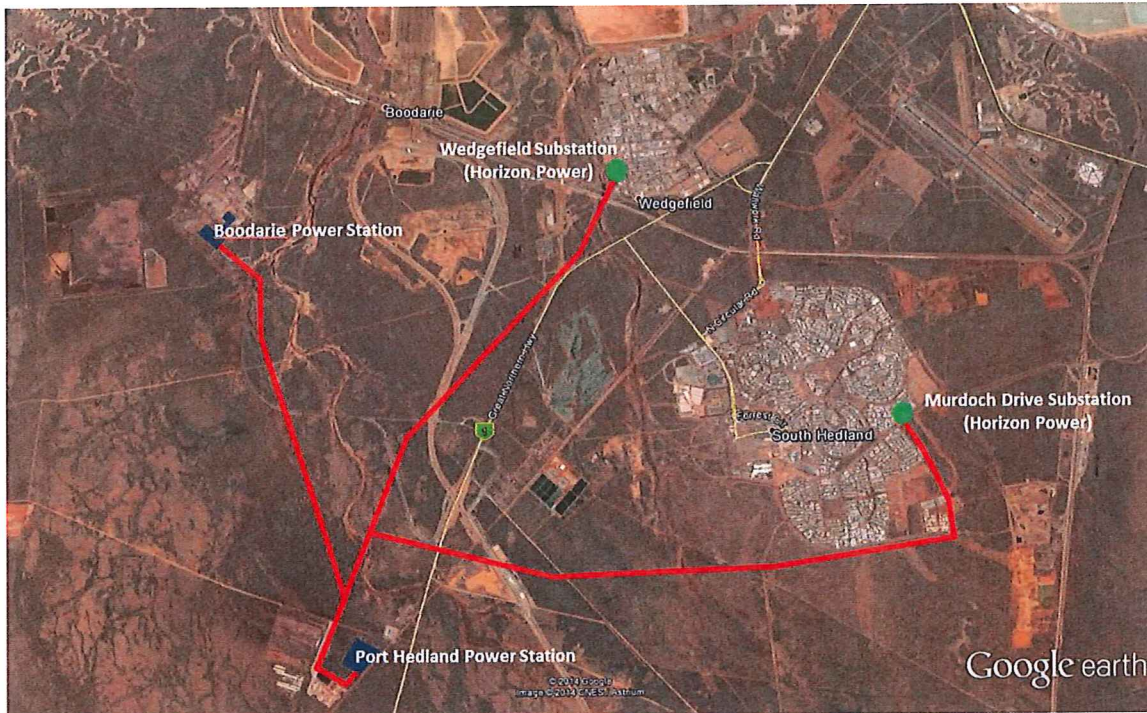
*North West interconnected system means the interconnected transmission and distribution systems, generating works and associated works —*

(a) *located in the Pilbara region of the State; and*

(b) *into which electricity is supplied by one or more of the electricity generation plants at Dampier, Port Hedland and Cape Lambert, as expanded or altered from time to time.*

Horizon owns and operates a specific portion of the NWIS, described in this application as the 'Horizon NWIS Network'. Alinta seeks coverage of the Horizon NWIS Network only, not the broader NWIS.

Figure 1 – Alinta’s Port Hedland infrastructure



Source: Google earth with Alinta Energy mapping overlay.

## 2.2 Reason for coverage application

Alinta is seeking to enter the market to supply electricity to customers connected to the Horizon NWIS Network, supported by generation from the Port Hedland Power Station and potentially other sources. Currently, Horizon is the electricity retailer to almost all customers in the NWIS.

Despite the existence of full retail contestability in electricity in the NWIS, a competitive market has not been able to develop in relation to customers supplied using the Horizon NWIS Network due to Horizon’s control of the Horizon NWIS Network and the consequent need for any prospective new entrant to enter into an access agreement with Horizon.

Alinta has identified that electricity customers supplied using the Horizon NWIS Network are very interested in the opportunities that competition delivers: price differentiation, innovative and focussed product offers and enhanced customer service.

Alinta currently has access to only limited services on a specific section of the Horizon NWIS Network in the Port Hedland region under an existing agreement which is for the sole purpose of supplying a single large use customer.

Alinta does not have access to Horizon’s NWIS Network to enable it to retail electricity to any other customers. Without access to Horizon’s NWIS Network, Alinta *cannot* retail electricity to those customers and create a competitive market.



Alinta has approached Horizon to obtain proposed terms and conditions, including prices, for access to Horizon's NWIS Network. Whilst Horizon has provided proposed draft contract terms and conditions to Alinta, Horizon has indicated that there are substantial obstacles to determining prices at which Alinta, or indeed any party, might gain access to the Horizon NWIS Network.

Alinta therefore makes this application under section 3.8 of the Code to the Minister for coverage of Horizon's NWIS Network.





### 3. Description of network and services

This section describes:

- the Horizon NWIS Network (i.e. the network infrastructure facilities that are the subject of this coverage application); and
- the services provided by means of the Horizon NWIS Network that Alinta seeks to acquire.

#### 3.1 Description of the network

The Code states that the term 'network' has the meaning ascribed to 'network infrastructure facilities' in the Act, namely:

*'network infrastructure facilities means:*

*(a) the electrical equipment that is used only in order to transfer electricity to or from an electricity network at the relevant point of connection including any transformers or switchgear at the relevant point or which is installed to support or provide backup to that electrical equipment as is necessary for that transfer; and*

*(b) the wires, apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity,*

*which together are operated by a person ... for the purpose of transporting electricity from generators of electricity to other electricity networks or to end users of electricity'*

Alinta seeks access to the network that comprises the electricity transmission and distribution assets currently owned and operated by Horizon that form part of the NWIS, which in this application is described as the Horizon NWIS Network. For the avoidance of doubt, this is the Horizon-owned transmission and distribution network assets in the Port Hedland and Karratha region, including the 220 kV line connecting Port Hedland and Karratha and **does not** include the infrastructure of the following parties and their related bodies corporate:

- BHP Billiton Iron Ore Pty Ltd;
- Rio Tinto Limited; and
- The Pilbara Infrastructure Pty Limited.

Alinta requests that the whole of the Horizon NWIS Network be covered.

#### 3.2 Description of services

The Code defines a covered service as follows:

*"covered service" means a service provided by means of a covered network, including:*

*(a) a connection service; or*

*(b) an entry service or exit service; or*

*(c) a network use of system service; or*



*(d) a common service; or*

*(e) a service ancillary to a service listed in paragraphs (a) to (d) above.*

*but does not include an excluded service.*

If the Horizon NWIS Network is covered, Alinta proposes to acquire at least the 'covered services' (a) to (d) stated above on the Horizon NWIS Network. None of these services will constitute "excluded services",<sup>2</sup> including because (as described in section 2.2 above and section 4 below) the supply of those services is not subject to effective competition.

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<sup>2</sup> Relevantly, "excluded service means a service provided by means of a covered network ... which meets the following criteria:  
(f) the supply of the service is subject to effective competition; and  
(g) the cost of the service is able to be excluded from consideration for price control purposes without departing from the Code objective." (See section 1.3 of the Code).



## 4. Coverage Criteria

Section 3.5 of the Code mandates that the Minister must make a decision that a network be covered if the following three questions are answered in the affirmative:

- (a) *Would access (or increased access) to covered services provided by means of the network promote a material increase in competition in at least one market (whether or not in Western Australia) other than the market for the covered services provided by means of the network?*
- (b) *Would it be uneconomic for anyone to develop another network to provide the covered services provided by means of the network?*
- (c) *Would access (or increased access) to the covered services provided by means of the network not be contrary to the public interest?*

In making the decision, the Minister must have regard to the objective of the Code in section 2.1:

*The objective of this Code (“Code objective”) is to promote the economically efficient:*

*(a) investment in; and*

*(b) operation of and use of,*

*networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the networks.*

In addition, section 3.6 of the Code states that:

*The Minister must when exercising the Minister’s functions under this Chapter 3 have regard to the geographical location of the network and the extent (if any) to which the network is interconnected with other networks.*

This section addresses the Code objective generally, each coverage criterion and section 3.6 of the Code.

### 4.1 The Code Objective

The Code objective is to promote competition in upstream and downstream markets through the economically efficient investment in, operation of and use of networks and network services in Western Australia.

Alinta’s application for coverage of the Horizon NWIS Network, to enable it to enter and compete for customers supplied using that network meets precisely the objective of the Code. Specifically, Alinta seeks:

- network coverage as it is not economically efficient for Alinta to invest in developing and constructing additional networks given the existing Horizon NWIS Network; and
- network coverage in order to acquire covered services at economically efficient prices resulting in the efficient operation and use of the Horizon NWIS Network,

to promote competition in the retail electricity market downstream of the Horizon NWIS Network.





## 4.2 Criterion (a)

Criterion (a) of section 3.5 of the Code asks:

*Would access (or increased access) to covered services provided by means of the network promote a material increase in competition in at least one market (whether or not in Western Australia) other than the market for the covered services provided by means of the network?*

Alinta submits that access to covered services provided by means of Horizon's NWIS Network would promote a material increase in competition in the market for the retail supply of electricity to customers supplied using Horizon's NWIS Network.

For the most part, this market is currently served by a single, vertically integrated business, Horizon. Alinta possesses a retail licence and has electricity available to supply to customers connected to the Horizon NWIS network, but its ability to do so depends on having an entitlement to access Horizon's NWIS Network. Access to services provided by Horizon's NWIS Network is essential to supply those customers.

### 4.2.1 Examples of energy market competition in other jurisdictions

Full retail contestability (FRC) exists in the NWIS, including in respect of customers supplied using the Horizon NWIS Network. Thus there is no regulatory prohibition on an outside retailer entering the market to supply retail loads of any size.

Access to covered services provided by means of the Horizon NWIS Network would allow Alinta to compete to supply the market of customers that are connected to the Horizon NWIS Network. The ability to generate electricity (or buy it wholesale), network access and a retail licence are the key requirements to retail electricity in the Horizon NWIS Network. In addition, a range of regulatory instruments are in place to facilitate the retailing of electricity, including the:

- Electricity Industry Customer Transfer Code 2004
- Electricity Industry (Metering) Code 2012.

Access to the Horizon NWIS Network is the impediment to Alinta's entry to the market.<sup>3</sup>

In other locations in Australia, retail markets have been opened in order to increase competition.

Figure 2 below illustrates the impact that new entrants had on the market share held by incumbent retailers (also referred to as host retailers) in the Victorian retail electricity market after the market was opened to competition. Figure 2 shows that new entrants acquired around 30% market share over the ten year period between 2003 and 2012.

Similarly, in the NSW gas market, following seven years of competition the incumbent retailer's (AGL's) share of the market was reduced to 71%.<sup>4</sup>

Kleenheat's entry into the small-use customer segment of the WA gas retail market is a more recent Western Australian example. REMCo reports that, 'Kleenheat has managed to increase its market

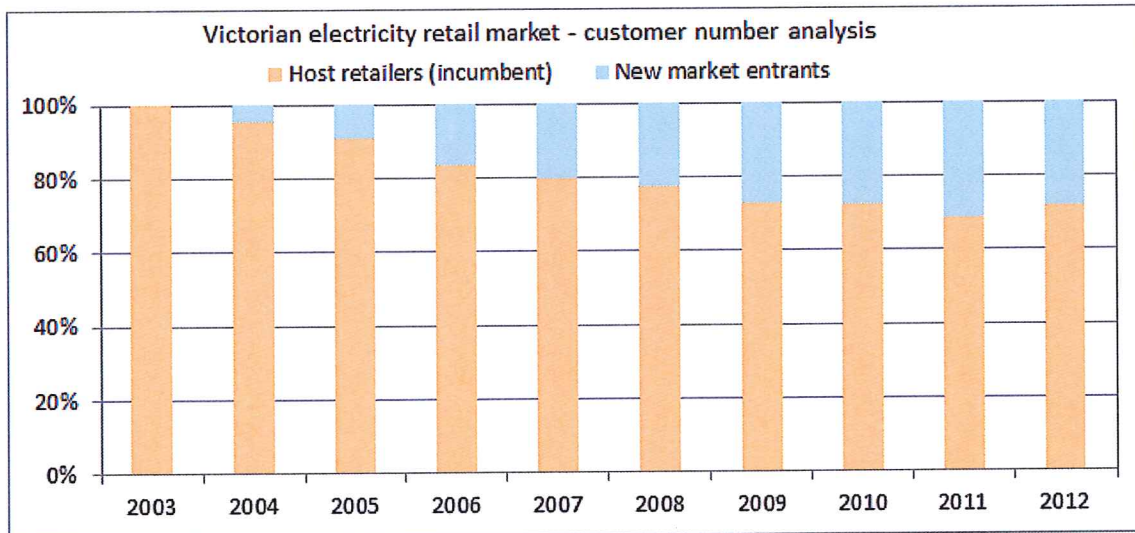
<sup>3</sup> Note that Alinta's Retail Licence (EIRL8) permits it to retail electricity to customers with loads of 160 MWh per annum or greater.

<sup>4</sup> IPART (2010), Review of regulated retail tariffs and charges for gas 2010 – 2013, Draft Report, p18.



share to over 4% ... over the last 18 months'. REMCo concluded that this is a 'strong level of competition for a market where contestability is a new phenomenon'.<sup>5</sup>

**Figure 2 – Victorian Electricity Retail Market Example**



Note: Host retailers include AGL, Origin Energy and Energy Australia.

Data source: ESC (2013), *Progress of Electricity Retail Competition in Victoria: Research Paper*, table 3.1.

#### 4.2.2 Estimated impact of competition for electricity customers supplied using the Horizon NWIS Network

Electricity consumers supplied using the Horizon NWIS Network have voiced their interest in the opportunity to choose between electricity retailers. Alinta is a strong proponent of competition and the benefits that it offers retail electricity markets. Alinta has obtained a retail licence and is committed to seeing the benefits of competition reach electricity consumers in the NWIS.<sup>6</sup> Furthermore, Alinta notes that should access be facilitated through coverage of the Horizon NWIS Network, this will create opportunities for retailers other than Alinta to enter the market and compete, as additional generation is commissioned.

Based on the experience in Australian energy markets, including the insights gained from the examples cited above, Alinta believes that the acquisition by new entrants of a 30% market share in Horizon's 'large use' L4, P2 and M2 Horizon NWIS Network tariff categories over a 15 year period is a reasonable estimate.<sup>7</sup>

Based on this estimate of market share, new entrants (including Alinta) could be expected to acquire a market share of close to 80 GWh per annum in the first ten years of competition. After 15 years of

<sup>5</sup> REMCo, Gas Matters – Newsletter, Issue 13, 30 September 2014, p2.

<sup>6</sup> Note that Alinta's Retail Licence (EIRL8) permits it to retail electricity to customers with loads of 160 MWh per annum or greater.

<sup>7</sup> Horizon's large use NWIS tariff categories are the L4 Tariff (medium / large business tariff), P2 Tariff (State, Commonwealth and Foreign Government bodies) and M2 Tariff (high voltage, high energy use business customers).





competition, the new entrants' combined market share would be close to 110 GWh per annum. This analysis assumes a linear rate of acquisitions growth and a contestable load in the L4, P2 and M2 Horizon tariff categories of 363 GWh per annum.<sup>8</sup>

The estimated load acquisition by new entrants of 80-110 GWh per annum would comprise a significant portion of the electricity customers supplied using the Horizon NWIS Network. This would represent a material increase in competition in that market as compared with the circumstance where Horizon effectively remains the monopoly retailer, with no realistic prospect of new entry from a retail competitor.

Alinta considers that competition facilitated under coverage will result in an overall reduction in retail prices to customers in areas serviced by the Horizon NWIS Network, including by Horizon responding to the introduction of competition by reducing its prices to its own customers.

#### 4.3 Criterion (b)

Criterion (b) of section 3.5 of the Code asks:

*Would it be uneconomic for anyone to develop another network to provide the covered services provided by means of the network?*

Criterion (b) is expressed in virtually identical terms to section 44G(2)(b) in Part IIIA of the *Competition and Consumer Act 2010* (Cth) ("**CCA**"), i.e. that the National Competition Council ("**NCC**") cannot recommend that a service be declared unless it is satisfied:

*'(b) that it would be uneconomical for anyone to develop another facility to provide the service....'*

The extensive case law on the interpretation of section 44G(2)(b), including (relevantly) the High Court's interpretation of that section in *The Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* [2012] HCA 36, is relevant to interpreting the meaning of criterion (b) in the Code. This is for two interrelated reasons.

First, the Code is certified as an effective access regime under Division 2A of Part IIIA of the CCA, with the consequence that Part IIIA of the CCA does not apply to services covered by the Code. The legal effect of the Code therefore derives from both the CCA and the Act.

Second, given that criterion (b) in the Code is in virtually identical terms to section 44G(2)(b) of the CCA, it follows that the drafters of the Code intended criterion (b) in the Code to have a consistent meaning to that of section 44G(2)(b) of the CCA. As such, absent strong reasons to the contrary, the legal interpretation of criterion (b) in the Code should be consistent with the legal interpretation of section 44G(2)(b) of the CCA.

##### 4.3.1 Meaning of 'uneconomical' in Part IIIA

As noted above, the precise meaning of the term 'uneconomical' in section 44G(2)(b) of the CCA has been the subject of a ruling by the High Court in *The Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal*. The High Court ruled that:

<sup>8</sup> Alinta estimates a total load for Horizon of 550 GWh per annum. Of this amount, Alinta estimates that two thirds would fall into Horizon's large use NWIS tariff categories, L4 Tariff, P2 Tariff and M2 Tariff.



*The better view of criterion (b) is that it uses the word 'uneconomical' to mean 'unprofitable'. It does not use that word in some specialist sense that would be used by an economist.*

Further, the High Court stated that:

*... criterion (b) is to be read as requiring the decision-maker to be satisfied that there is not anyone for whom it would be profitable to develop another facility. It is not to be read as requiring the test of an abstract hypothesis: if someone, anyone, were to develop another facility. When used in criterion (b) "anyone" should be read as a wholly general reference that requires the decision maker to be satisfied that there is no one, whether in the market or able to enter the market for supplying the relevant service, who would find it economical (in the sense of profitable) to develop another facility to provide that service.*

The NCC has provided guidance on the application of section 44G(2)(b) of the CCA in light of the High Court's finding that it is a test of private profitability, including the following relevant items:

*(a) A declaration applicant needs to be able to demonstrate the basis on which it is unprofitable for it or anyone else to develop a new facility to provide the service.*

...

*(f) The consideration of profitability of a new facility involves, at least in part, an assessment of the ability of such a facility to successfully compete to supply the service for which declaration is sought and thus attract sufficient revenue to be profitable.*

...

*(h) Where it appears that the only party likely to be in a position to develop a new facility is the existing service provider/incumbent, the assessment of the profitability of the new facility should:*

*(i) be based upon the development of a separate, new facility, and*

*(ii) examine why an existing service provider would develop an alternative facility where there is the prospect that additional capacity could be provided at a lesser cost through augmentation of the service provider's existing facility.<sup>9</sup>*

For the reasons set out in section 4.3 above, the High Court's decision in *The Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* sets out the legal principles applicable to the interpretation of criterion (b) in the Code. Accordingly, for the purposes of this coverage application, Alinta proceeds on the basis that criterion (b) of the Code requires the application of a private profitability test. Alinta further considers that the NCC's guidance on section 44G(2)(b) of the CCA is relevant to the application of the private profitability test in the context of criterion (b) of the Code.

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<sup>9</sup> National Competition Council, *Declaration of Services – A guide to declaration under Part IIIA of the Competition and Consumer Act 2010* (Cth), February 2013.





#### 4.3.2 Private profitability test for duplicating the Horizon NWIS Network

The development of a separate, new facility (by anyone) is infeasible due to existing physical barriers, such as access rights and tenure in congested urban areas.

Setting this point aside, the costs incurred (by anyone) to develop a new facility would simply be prohibitive. The enormity of the costs required to duplicate a transmission and distribution network, to enable access to compete against an incumbent provider in order to supply only a portion of the existing market with lower (competitively priced) energy charges, clearly renders duplication unprofitable, and therefore uneconomic. The calculation presented in Figure 3 is used indicatively to demonstrate this point.

The Figure 3 example involves a hypothetical third party new entrant who develops a duplicate network to supply customers in the Port Hedland and Karratha region. Figure 3 presents the estimated costs and revenues of the hypothetical third party seeking to supply electricity generated from gas to customers connected to the Horizon NWIS Network. The estimates of gas price, heat rate and other power generation costs, as well as network development costs, have been taken from various independent sources in order to develop a model that reasonably represents the costs that would be faced by any hypothetical third party entrant into the market. Accordingly, the power generation costs are not necessarily the same as Alinta's actual costs. Note that, for the purposes of the exercise, the inputs used have erred on the conservative side.

The example demonstrates that a duplication of the network cannot possibly be considered profitable or economic. Given duplication of the network would be so highly unprofitable and uneconomic, it is clear that the conclusion reached is not sensitive to the inputs used.

The estimate of market share acquisition by new entrants developed in section 4.2.2 above, i.e. 30% market share of large use electricity customers over a 15 year period (following a two year construction period), is adopted and it is assumed that the hypothetical third party acquires the entire 30% share itself. It is also assumed that the third party sets prices at the current Horizon M2 tariff level (at no discount).

Under this scenario, at a 10% cost of capital discount rate over a 15 year period, the investment incurred by the third party in years 1 and 2 to duplicate the subject network (\$1.69 billion) is not economically recoverable through energy sales revenue. The scenario results in a negative net present value (NPV) of \$1.57 billion. Therefore, such duplication of the Horizon NWIS Network (by anyone) is in no way close to being profitable or economic.

The key conclusion reached from the Figure 3 example is that the revenue earned by the hypothetical third party cannot achieve an amount anywhere close to what is required to fund the costs required to duplicate the Horizon NWIS Network.

As such, the duplication of the Horizon NWIS Network by construction of a separate new facility (by anyone) is infeasible and cannot be expected to be profitable or economic.



Figure 3 – Quantitative demonstration of the unprofitable / uneconomic nature of network duplication

	2005	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
NPV calculation		363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000	363,000
Horizon's NWIS load (estimate of L4, P2, M2)	units	0%	0%	2%	4%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	26%	28%	30%
Market share acquired (assumed)	%	0	0	7,260	14,520	21,780	29,040	36,300	43,560	50,820	58,080	65,340	72,600	79,860	87,120	94,380	101,640	108,900
Load acquired	MWh	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21	322.21
Horizon Power M2 tariff ex GST	\$/MWh	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69	180.69
Energy cost (inc. capacity charge)	\$/MWh	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848
Network development cost	Real \$'M	0	0	2	5	7	9	12	14	16	19	21	23	26	28	30	33	35
Energy revenue	Real \$'M	0	0	-1	-3	-4	-5	-7	-8	-9	-10	-12	-13	-14	-16	-17	-18	-20
Energy cost	Real \$'M	0	0	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848	-848
Gross revenue	Real \$'M	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Net Present Value	Real \$'M	0	0	-770	-770	-770	-770	-770	-770	-770	-770	-770	-770	-770	-770	-770	-770	-770
NPV sum	Real \$'M	0	0	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573	-1,573

	units	input	source / comments
Network development cost	units	input	source / comments
HP total line length across WA	KM	7,843	Horizon Power, Annual Report 2013/14, p2
NWIS percentage of HP total state investment	%	43%	ERA (2010), Inquiry into the Funding Arrangements of Horizon Power - Draft Report, p4 & p91. Where 43% represents the reported RAB ratio of \$113.67M / \$264.1M
HP NWIS Tx & Dk line length	KM	3,372	Based on HP's total line length and ERA's reported percentage of NWIS versus total state investment
Tx percentage of total line length	%	20%	Assumption
HP NWIS Tx line length	KM	674	Calculated based on assumed Tx line length
HP NWIS Dk line length	KM	2,698	Calculated based on assumed Dk line length
220 kV transmission line length	KM	240	Google Maps - distance between Karatha and Port Hedland ~240 KM
220 kV transmission line cost	\$/KM	0.70	AEMO (2012), Electricity Transmission Cost Assumptions, p4 - single circuit 220 kV
66 kV transmission line length	KM	494	Calculated as the residual Tx after allocating the 220 kV
66 kV transmission line cost	\$/KM	0.40	AEMO (2012), Electricity Transmission Cost Assumptions, p4 - aligns with the costs of single circuit 132 kV
Distribution line length	KM	2,698	Calculated
Distribution line cost	\$/KM	0.40	AEMO (2012), Electricity Transmission Cost Assumptions, p4 - aligns with the costs of single circuit 132 kV
Substations	no.	10	Assumption
Substation cost (per substation)	\$/M	10.00	AEMO (2012), Electricity Transmission Cost Assumptions, p5 - based on site area of 10,000m2
Switchyard cost (per switch yard)	\$/M	2.00	AEMO (2012), Electricity Transmission Cost Assumptions, p4 - based on 220 kV, 2 Breaker Diameter, 2CBs
Transformers & associated equipment	% of costs	10%	Percentage estimate to calculate associated network investment as a percentage of total network costs
Network development cost (estimated)	\$/M	1,695	Calculated

	units	input	source / comments
Calculation Inputs	units	input	source / comments
Plant heat rate	GJ/MWh	12.5	SKM MMA (2012), Margin Peak & Off-Peak Review 2013/14, table 4.5 - indicative HR
Gas price	\$/GJ	6.25	SKM MMA (2012), Margin Peak & Off-Peak Review 2013/14, p.18 - 'new gas' price
Gas transport	\$/GJ	1.00	Input assumption
RECS costs	\$/MWh	7.56	← IGC 9.87%*\$55.00 plus STC 10.48%*\$39.20
Variable O&M	\$/MWh	7.50	Input assumption
Cost of energy (ex. return)	\$/MWh	105.69	Calculated
Cost of energy (inc. capacity charge)	\$/MWh	180.69	Calculated
Horizon Power M2 tariff ex GST	\$/MWh	322.21	Assumes uniform per annum usage

Source: Alinta Energy modelling.





#### 4.4 Criterion (c)

Criterion (c) of section 3.5 of the Code asks:

*Would access (or increased access) to the covered services provided by means of the network not be contrary to the public interest?*

There is no reason that access to covered services provided by means of the Horizon NWIS Network would be contrary to the public interest.

On the contrary, the promotion of competition in the market for supply of electricity to customers connected to the Horizon NWIS Network, brought about by Alinta's (and possibly other retailers') entry, would have substantial benefits through the provision of choice to customers, and should drive lower price outcomes. Lower prices are a characteristic of competitive markets and would be particularly beneficial to consumers that are already operating in a high cost regional environment. A competitive market should decrease costs and increase productivity, contributing to higher output and growth for the region, and so would be in the broader public interest.

Furthermore, increased competition in this market would result in better customer service for consumers and more innovative and responsive retail products as retailers, such as Alinta, compete to acquire and retain customers. It would bring greater understanding and more active participation by consumers in the electricity sector. Ultimately, increased competition would incentivise efficiency improvements and produce tariffs that more accurately reflect the cost to supply customers.

#### 4.5 Geographical location and the extent of interconnection with other networks

Section 3.6 of the Code states that:

*The Minister must when exercising the Minister's functions under this Chapter 3 have regard to the geographical location of the network and the extent (if any) to which the network is interconnected with other networks.*

In terms of the geographical location of the Horizon NWIS Network, Port Hedland and Karratha are located within the broader Pilbara region. The Horizon NWIS Network is predominantly coastal and extends to the townships of Port Hedland, South Hedland, Goldsworthy, Karratha and Dampier, among others. The port infrastructure in this vicinity is used for exports by the major iron ore miners BHP Billiton, Rio Tinto and Fortescue Metals Group and will be used by the soon to be operational Roy Hill Iron Ore project.

The area generally is a resources and energy hub, with the Pilbara Development Commission reporting that exports from the Pilbara comprise:

- 90% of Australia's iron ore exports (Australia's largest export);
- 85% of Australia's LNG exports; and



- 80% of Australian's crude oil and condensate production.<sup>10</sup>

To put this in economic context, Gross Regional Product (GRP) for the Pilbara represents 38% of Western Australia's Gross State Product (GSP) and 5.5% of Australia's Gross Domestic Product (GDP).<sup>11</sup>

In terms of interconnectedness, as noted earlier, the Horizon NWIS Network is part of the broader NWIS, and is interconnected within the meaning of the Code with network infrastructure owned by the following parties and/or their related bodies corporate:

- BHP Billiton Iron Ore Pty Ltd;
- Rio Tinto Limited;
- The Pilbara Infrastructure Pty Limited; and
- Alinta.

The broader NWIS (non-Horizon owned) spans a significant part of the Pilbara and much of the power infrastructure extends inland to provide power for the iron ore mining operations of Rio Tinto and BHP Billiton. As stated above, Alinta seeks coverage only of that portion of the NWIS which is comprised by Horizon's network infrastructure.

The Pilbara Development Commission has noted that:

*Overall cost of living is highest in the State at +18.6% ... Housing costs are 39.8% above Perth prices. The construction cost multiplier is 1.7. People in the Pilbara also pay the most in WA for health and personal care, 29.6% higher than Perth.*<sup>12</sup>

Competition through the provision of lower costs to customers operating in a high cost regional environment should be paramount. As stated previously, competition in the retail market will arguably decrease costs and, therefore, increase productivity, contributing to higher output and growth for the region. Given the substantial output and economic significance of the geographical region, increased productivity through lower energy costs will deliver an economic multiplier, providing material benefits to the West Australian economy.

#### **4.5.1 Horizon's submission on Alinta's application for an integrated regional licence**

As noted, Alinta has been granted Electricity Integrated Regional Licence No 8 ('Retail Licence') that entitles it to sell electricity to large use customers within the Pilbara region. Horizon made a submission to the Economic Regulation Authority ('ERA') on Alinta's application for its Retail

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<sup>10</sup> Pilbara Development Commission (2014), Transforming the Pilbara – Presentation by Dr Ken King (CEO), available at [www.pdc.wa.gov.au](http://www.pdc.wa.gov.au).

<sup>11</sup> Pilbara Development Commission (2013), The Pilbara, Australia's Global Economic Hub – Presentation by Dr Ken King (CEO), available at [www.pdc.wa.gov.au](http://www.pdc.wa.gov.au).

<sup>12</sup> Pilbara Development Commission (2014), Transforming the Pilbara – Presentation by Dr Ken King (CEO), available at [www.pdc.wa.gov.au](http://www.pdc.wa.gov.au).



Licence<sup>13</sup> in which several issues were raised that Alinta considers appropriate to address in the context of section 3.6 of the Code.

Three of the issues raised within Horizon's submission to the ERA are addressed below:

- (a) No formal electricity market structures;
- (b) Horizon cannot meet technical services standards due to interconnection with other networks; and
- (c) Load imbalances and sharing meter data.

***(a) No formal electricity market structures***

Horizon noted:

*There are no formal electricity market structures in the Pilbara.*<sup>14</sup>

Under the *Electricity Industry Act 2004* (WA), there is no requirement that formal electricity market structures exist in a particular market in order for either:

- the ERA to grant a retail licence in respect of that market; or
- the Minister to make a decision that a network supplying customers in that market be covered.

On the contrary, licensing, network coverage and establishment of formal market structures are each treated separately.

In addition, under the Code, an access arrangement must deal with 'supplementary matters'.<sup>15</sup> Supplementary matters are:

- (a) balancing;
- (b) lines losses;
- (c) metering;
- (d) ancillary services;
- (e) stand-by;
- (f) trading;
- (g) settlement; and

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<sup>13</sup> Horizon Power (2014), Submission on Alinta Energy's Application for an Integrated Regional Licence, available at: <http://www.erawa.com.au/cproot/12832/2/Horizon%20Power%20submission%20on%20Alinta%20Sales%20EIRL%20licence%20applicat%20ion.pdf>.

<sup>14</sup> Horizon Power (2014), Submission on Alinta Energy's Application for an Integrated Regional Licence, available at: <http://www.erawa.com.au/cproot/12832/2/Horizon%20Power%20submission%20on%20Alinta%20Sales%20EIRL%20licence%20applicat%20ion.pdf>.

<sup>15</sup> Section 5.1(k) of the Code.





- (h) any other matter in respect of which arrangements must exist between a user and a service provider to enable the efficient operation of the covered network and to facilitate access to services.<sup>16</sup>

In the case of Horizon's NWIS Network, the access arrangement will need to deal with each supplementary matter in a manner which, to the extent that the supplementary matter is dealt with in a written law, is consistent with and facilitates the treatment of that supplementary matter in the written law.<sup>17</sup> This complements the current practice in the NWIS of using contractual arrangements to manage these matters. Accordingly, any lack of formal market structures in the Pilbara is not expected to present issues arising from compliance with these matters.

Given Alinta's estimates in section 4.2.2 in relation to the volume of load that new entrants could acquire in 10-15 years if they could access the Horizon NWIS Network, the existing legislative and regulatory framework adequately provides for competitive market outcomes without the need for formal market structures. At this point, formal market structures would be inappropriately costly for the State as well as the electricity industry, and the costs would be passed through to customers, including the resources and energy industry and small businesses. They can be introduced at a later time if the market develops to a point that justifies their introduction.

**(b) Horizon cannot meet technical services standards due to interconnection with other networks**

Horizon noted:

*Horizon Power is connected to other networks in the Pilbara that are subject to neither economic nor technical (licence) regulation. These networks are maintained and operated independently of Horizon Power but can affect the power supply service standards on the Horizon Power network. As such, as a network service provider, Horizon Power cannot meet the technical service standards inherent in an Access Arrangement under the ENAC.<sup>18</sup>*

Several points arise here, which are addressed below.

*Technical regulation does currently exist*

Whilst a number of the networks in the NWIS are exempt from being licensed under the Act, they are all still subject to technical regulation under a number of instruments, including:

- Chapter 12 of the Code (Technical Rules) – in particular, sections 12.59 and 12.60 apply to service providers of all networks, whether covered or not; and
- the *Electricity Act 1945 (WA)* and the various regulations made under it, in particular the *Electricity (Supply Standards and System Safety) Regulations 2001 (WA)*.

In addition, it is the practice in the NWIS for parties to manage compliance with technical standards through inclusion of clauses in their bilateral agreements. This approach can work effectively,

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<sup>16</sup> Section 5.27 of the Code.

<sup>17</sup> Section 5.28 of the Code.

<sup>18</sup> Horizon Power (2014), Submission on Alinta Energy's Application for an Integrated Regional Licence, available at: <http://www.erawa.com.au/cproot/12832/2/Horizon%20Power%20submission%20on%20Alinta%20Sales%20EIRL%20licence%20application.pdf>.



however, as set out below, may become problematic due to confusion as to what technical standards should apply.

*Approved technical rules under the Code if the Horizon NWIS Network is covered*

If the Minister decides to cover the Horizon NWIS Network, then under section 12.10 of the Code Horizon must submit proposed technical rules for its network to the ERA at the same time that Horizon submits its draft access arrangement.

Given that the Horizon NWIS Network is part of an interconnected system, the ERA would be required to establish a technical rules committee including representatives of the operators of interconnected networks to assist the ERA in assessing and approving the technical rules for the Horizon NWIS Network.<sup>19</sup>

The approved technical rules will need to comply with the Code objective and:

- (a) be reasonable;
- (b) not impose inappropriate barriers to entry to a market;
- (c) be consistent with good electricity industry practice; and
- (d) be consistent with relevant written laws and statutory instruments.

In addition, the approved technical rules must work in an integrated fashion with the technical rules governing all of the interconnected networks and reasonably accommodate the interconnection of new networks in the future.<sup>20</sup>

It would be of great benefit to the Pilbara for ERA-approved technical rules to apply to the Horizon NWIS Network, compared to the current arrangements. Presented chronologically:

1. Horizon was required under the *Electricity Transmission Regulations 1996 (WA)* to prepare and make publicly available a Technical Code in respect of its network on or before 1 May 2006. No such Technical Code was ever prepared and made publicly available.
2. A document prepared by Horizon which is entitled the 'North West Interconnected System Electricity Network Access Technical Rules' marked 'Version 6 – as of September 2005' has been in circulation since at least 2008 and has to some extent become the de facto standard for technical matters in the NWIS ('**2008 Technical Rules**'). This document is in draft form, is incomplete and contains many inconsistencies. It does not appear to have been developed in consultation with other NWIS network operators, nor does it appear to have been made publicly available. However, at least there has been a set of Technical Rules that can be incorporated into power supply agreements and used in developing technical standards for design and construction of power infrastructure.
3. Recently, Horizon has published a document on its website entitled 'Technical Rules – Standard Number HPC-9DJ-01-0001-2012'. This document:

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<sup>19</sup> Sections 2.3, 12.1 and 12.11(e) of the Code.

<sup>20</sup> Section 12.2 of the Code.





- appears to be dated 30 October 2013 and to have been approved on 13 November 2013;
- confusingly, is expressed to have come into operation on 1 July 2007; and
- does not appear to make any mention of Horizon's 2008 Technical Rules and accordingly does not deal with transitional matters for existing plant, facilities and contracts arising in relation to those rules.

It is not apparent whether there has been any consultation with other NWIS stakeholders in the development of these new rules. Alinta was not consulted.

Clearly this is suboptimal for such an economically important region.

If ERA-approved technical rules applied to the Horizon NWIS Network, the problems described above would be resolved. Even though the ERA-approved technical rules would not apply directly to all NWIS stakeholders by force of law, at least there would be certainty about what technical rules to adopt in contracts, and assurance that the technical rules have been approved according to appropriate criteria by an independent third party through a consultative process. This would be a big step forward for the region, and would serve as an approved standard available to be used by parties under current power supply contracts and in developing future network infrastructure to a common technical standard.

As the law stands, if the Horizon NWIS Network was covered and thus was subject to ERA-approved technical rules, Alinta DEWAP Pty Ltd's interconnected network would also be required to have ERA-approved technical rules.<sup>21</sup> Alinta DEWAP Pty Ltd would be pleased to participate in the Technical Rules Committee under the Code and adopt the same ERA-approved rules for its own network.<sup>22</sup>

*Horizon cannot control its power supply service standards and cannot meet the technical service standards inherent in an Access Arrangement under the Code*

Horizon is in the same position as many other network operators, in terms of operating a network which is interconnected with other networks. Alinta DEWAP Pty Ltd is an example in the NWIS and Western Power is an example in the SWIS.

As noted above, laws such as the *Electricity Act 1945 (WA)* and the various regulations made under it, in particular the *Electricity (Supply Standards and System Safety) Regulations 2001 (WA)*, impose power service supply standards on all network operators already.

In addition, for network operators licensed under the Act such as Horizon and Alinta DEWAP Pty Ltd, the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005 (WA)* applies to impose an additional layer of power supply service standards.

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<sup>21</sup> This is because Alinta DEWAP Pty Ltd's network is both interconnected with the Horizon NWIS Network and licensed under the Act (section 12.6(b) of the Code). There is no requirement that the other NWIS network operators, who are exempt from requiring a licence under the Act, have ERA-approved technical rules.

<sup>22</sup> Alinta notes that Code amendments are currently under consideration which would remove the requirement for Alinta DEWAP Pty Ltd to have approved technical rules – see: Public Utilities Office (2014), *Electricity Networks Access Code 2004 amendments: Technical rules for licensed non-covered networks*, Consultation Paper. Even if these are implemented, Alinta DEWAP Pty Ltd would voluntarily participate in the process of improving and standardising technical regulation for its own network and the NWIS generally.





If any operator, including Horizon, has difficulty in complying with the basic supply standards within these laws, that is all the more reason to implement ERA-approved technical rules for the Horizon NWIS Network.

Finally, it should be noted that access arrangements under the Code do not in fact prescribe any specific technical service standards. As discussed above, Chapter 12 contains a process in relation to technical rules. Separately, each reference service under an approved access arrangement will have service standard benchmarks, but these are proposed by the service provider and approved in accordance with the Code.

**(c) Load imbalances and sharing meter data**

Horizon noted:

*The Horizon Power access arrangement has limited ability to manage load imbalances or the sharing of meter data.*<sup>23</sup>

Alinta reiterates its comments at section 4.5.2(a) above generally, and notes that balancing and metering are specifically included in the Code as 'supplementary matters' that an access arrangement must deal with.<sup>24</sup>

Additionally for metering, Horizon is bound to comply with the *Electricity Industry (Metering) Code 2012* (WA).

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<sup>23</sup> Horizon Power (2014), Submission on Alinta Energy's Application for an Integrated Regional Licence, available at: <http://www.erawa.com.au/cproot/12832/2/Horizon%20Power%20submission%20on%20Alinta%20Sales%20EIRL%20licence%20application.pdf>.

<sup>24</sup> Section 5.1(k) of the Code.



## 5. Conclusion

This application has demonstrated that the granting of coverage will promote competition in the retail electricity market downstream of the Horizon NWIS Network. This will occur through Alinta's economically efficient use of the network and its services, and so aligns with the Code objective.

Further, the benefits provided through lower energy costs and enhanced productivity will support and grow the contribution made by the NWIS geographical region, to benefit those in the region and the State more broadly. Given the foregoing and in circumstances where all three coverage criteria are satisfied, Alinta submits that the Minister should decide to cover the Horizon NWIS Network in accordance with the Code.