Horizon Power's submission in response to the Issues Paper – Coverage Alinta's application for coverage of the Horizon Power transmission and distribution network in the Pilbara – 16 October 2017

Contents

1. BACKGROUND

Pursuant to section 3.8 of the *Electricity Networks Access Code 2004* (WA) (**Code**), any person may apply for the whole or any part of a network to be covered under the Code. Pursuant to section 3.21 of the Code, the Minister must make a decision that the network be covered or not be covered.

On 4 August 2017, Alinta Sales Pty Ltd (Alinta) made a coverage application (Alinta's Application) pursuant to section 3.8 of the Code in respect of Horizon Power's transmission (66kV and above) and distribution (below 66kV) network infrastructure facilities in the Pilbara (Horizon Power Network).

In considering Alinta's application for coverage of the Horizon Power Network, in addition to being satisfied of the coverage criteria in section 3.5 of the Code, the Minister is required under section 3.4 of the Code to consider whether any coverage decision should extend beyond the Horizon Power Network and the extent to which the Horizon Power Network is interconnected (section 3.6).

This document is Horizon Power's submission in response to Alinta's Application.

1.1 Structure of document

This submission has six parts:

I. Background and structure

II. Summary, and why coverage of the Horizon Power Network alone does not satisfy the tests for coverage in section 3.5 of the Code because, amongst other things, the adverse financial effects on the majority of Horizon Power's customers in the North West Interconnected System (NWIS) and customers in the South West Interconnected System (SWIS) mean the public costs outweigh the benefits of coverage

III. Setting the scene for NWIS Networks, including:

   a. background on Horizon Power and its network
   b. other networks in the Pilbara
   c. current matters facing the NWIS, including:
      i. those affecting economic efficiency
      ii. deficient and fragmented regulatory regime
      iii. operational and technical matters
      iv. TEC (subsidy) matters

IV. Background on Horizon Power's previous agreements and negotiations with Alinta in relation to Alinta's access to the Horizon Power Network

V. Discussion of the application of the tests within section 3.5 of the Code to the proposed coverage of the Horizon Power Network, and why coverage of the Horizon Power Network alone does not satisfy the test of:

a. promoting a material increase in competition in at least one market in section 3.5(a), or
b. the public interest test in section 3.5(c), because the net public costs outweigh the net public benefits.

VI. Summary of specific responses to questions raised in the Issues Paper dated 15 September 2017.

2. SUMMARY OF SUBMISSION

Horizon Power is a State Government-owned, vertically-integrated generation, transmission and retail energy corporation established under the *Electricity Corporations Act 2005* (WA), providing electricity across regional and remote Western Australia.

Horizon Power supports the evolution of the electricity supply industry in the Pilbara to an increasingly competitive market with improved efficiency and cost outcomes for local customers. However, Horizon Power believes that coverage of the Horizon Power Network alone, as detailed in Alinta's Submission, will not achieve this objective.

For the following reasons, Horizon Power submits that Alinta's application for coverage of the Horizon Power Network does not satisfy the criteria for coverage in the *Electricity Networks Access Code 2004* (WA) (**Code**) and should not be granted at this time:

(a) Coverage of the Horizon Power network only will not materially increase competition in the Pilbara.

It is important to understand the subsidised nature of the NWIS market and the obstacles it presents to achieving a competitive market. Pursuant to the government's uniform tariff policy (**UTP**), small-use customers in Western Australia have access to regulated retail tariffs, which means all of these customers are charged the same price for electricity, irrespective of whether the costs of supply are higher because of their regional location. Because the UTP means Horizon Power cannot recover its actual costs of supply from its customers, Horizon Power receives subsidies equal to the difference between its actual costs and revenues; this difference is ultimately borne by SWIS customers and WA taxpayers. Horizon Power receives this subsidy for costs attributable to supplying UTP customers only; it does not receive subsidy for non-UTP customers. The UTP and existing subsidies paid to Horizon Power will make it uncommercial for new entrant retailers (without existing generation assets) to compete for Horizon Power customers.

Further, Horizon Power has a statutory obligation to its shareholder, the State Government, to act in accordance with prudent commercial principles, consistent with maximising long-term value1. Under the existing subsidy arrangements, it would not be commercially prudent for Horizon Power to compete with Alinta for UTP customers because Horizon Power stands to lose its total subsidy for any customers it supplies at a price below the UTP. It does not lose this support if it maintains the customer pricing offer at UTP. The effect of this loss of subsidy is that Horizon Power is subject to a perverse incentive not to compete with Alinta on price for UTP customers with an equivalent service.

(b) The public costs of coverage of the Horizon Power Network outweigh the public benefits.

As a result of the UTP, additional Horizon Power costs and revenue losses resulting from coverage are likely to be passed on to customers in the SWIS and to taxpayers, via an increase

[1] Section 61 of the *Electricity Corporations Act 2005*

in the Tariff Equalisation Contribution (**TEC**), in order to maintain equal pricing for small-use customers in the SWIS and the NWIS. In addition, the demands of coverage will increase Horizon Power's costs in a manner that cannot be fully transferred to Pilbara customers and will therefore also increase TEC. Horizon Power estimates that for every $1 of benefit in cost savings for customers in the Pilbara, there will be a $5-7 cost increase to non-uniform tariff SWIS customers and to taxpayers.

This cost benefit relationship is illustrated in Figure 1 below. The benefits to Pilbara customers are calculated for the 65% loss case. This case is the highest benefit case and is considered likely by Horizon Power under the existing subsidy arrangements. The public costs are: an increase in funding of Horizon Power's fixed costs by SWIS customers and by taxpayers; the cost of ancillary services and additional investment pertaining to disconnecting Rio Tinto's network from Horizon Power's network; the incremental costs to Horizon Power of the network coverage.

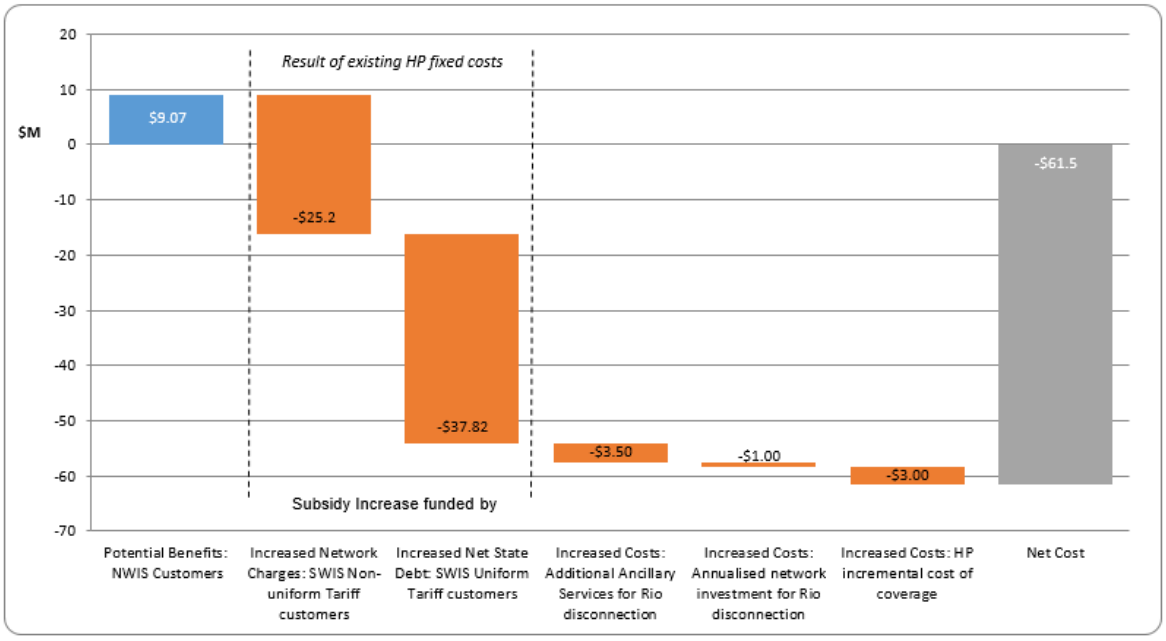

Figure 1: Expected benefits vs cost of coverage of Horizon Power Network for maximum Pilbara customer benefit (equating to a 65% transfer to Alinta)

Government could choose to directly deliver the same benefit to customers in the Pilbara through a reduction in the UTP rates. This approach would result in a 70-85% lower impact on SWIS customers and taxpayers in delivering the stated benefits compared to coverage of Horizon Power's network only. It would also likely deliver benefits to customers in towns not supplied by Horizon Power that coverage of Horizon Power's network only will not.

It is also important to note that revising the operation of subsidy regime can improve the public benefit outcomes but is unlikely to reduce the net public cost to zero or below, if only Horizon Power's network is covered.

(c) **Coverage of the Horizon Power Network alone will not resolve fundamental technical and operational challenges that prevent the NWIS from operating efficiently.** These are discussed in detail in section 4.3 of this submission and are best addressed through the introduction of specific, light-handed regulation.

To address the matters above, Horizon Power suggests the following approach to electricity industry reform in the Pilbara.

(a) Introduce “light-handed “regulation to establish a NWIS central system operator with rights and obligations that ensure reliable electricity supply and with statutory immunity when it acts to protect the security of the system.
(b) Reform the UTP subsidy arrangements to remove the existing perverse incentives to competition.
(c) Either through the Code or through the legislation established to deliver item (a) above, cover all networks in the Pilbara.

The above reforms can deliver a platform on which to optimise existing infrastructure and generation capacity and ensure efficient operation of the NWIS for the benefit of all parties. This outcome cannot be delivered by a decision to cover the Horizon Power network only, under the Code. For this reason, Horizon Power believes the Minister should reject Alinta’s Application on the basis that it does not meet section 3.5(a) or section 3.5(c) of the Code and should continue the program of reform for the electricity industry in the Pilbara.

3. NWIS NETWORKS

3.1 Horizon Power Network

The Horizon Power Network in the Pilbara supplies the townships of Karratha, Roebourne, Point Samson, and Port Hedland (including Wedgefield and South Hedland). The Horizon Power Network supplies part[2] of the port operations of BHP Billiton (**BHP**) and Fortescue Metals Group (**FMG**) in Port Hedland. Both BHP and FMG procure power through long-term Power Purchase Agreements (**PPAs**) established through competitive procurement processes.

The Horizon Power Network is connected to networks owned by others as set out in Figure 2 below.

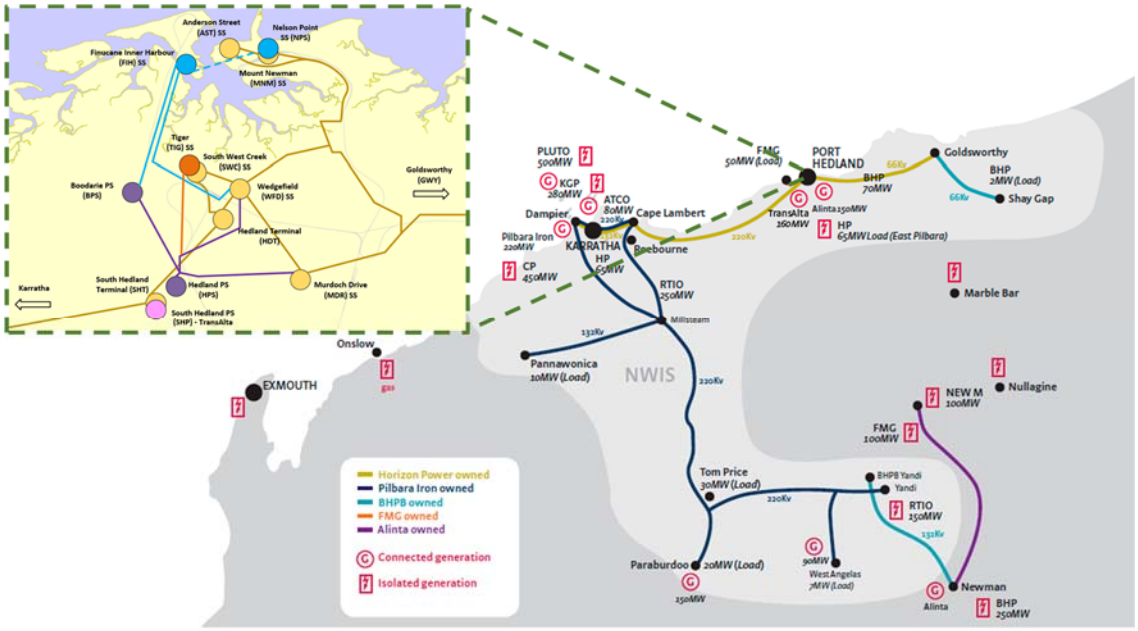

Figure 2: Network Ownership in the Pilbara

Rio Tinto and the port loads of FMG and BHP are interconnected to the Horizon Power transmission network. BHP is already supplied by Alinta through a bilateral access agreement with Horizon Power established in 1996. This agreement is discussed in more detail in section 5.1.

Excluding the transmission-connected load, the peak load supplied by the Horizon Power distribution network is less than 117 MW and has a minimum load of 19 MW with an average of 58MW.

[2] The BHP and FMG port loads are met by supplies from the Horizon Power Network and the Alinta Network.

The peak demand of less than 117 MW supplied by the Horizon Power Network (not including BHP and FMG) is in the context of other electrical loads in the Pilbara region that in total exceed 1500 MW (see Figure 3 below). That is, Horizon Power's share of the Pilbara transmission and distribution market represents less than 8% by volume of the peak load, meaning this is an extremely small electricity market. Horizon Power notes that it is not aware that any other energy market of a similar or smaller size has been opened to competition in isolation of the broader potential market.

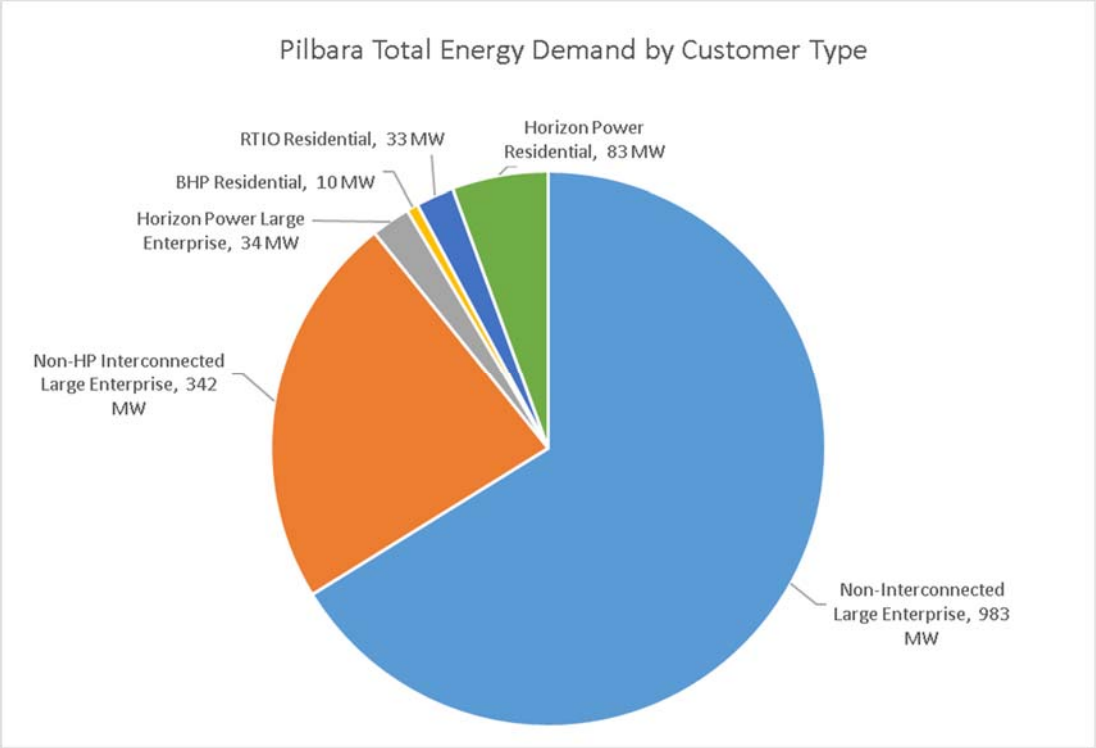

Figure 3: Total Pilbara current energy demand, by customer type

The majority of customers by number and volume are on subsidised tariffs gazetted by the government under the UTP. The customer numbers and type of tariffs are set out in Figure 4 below.

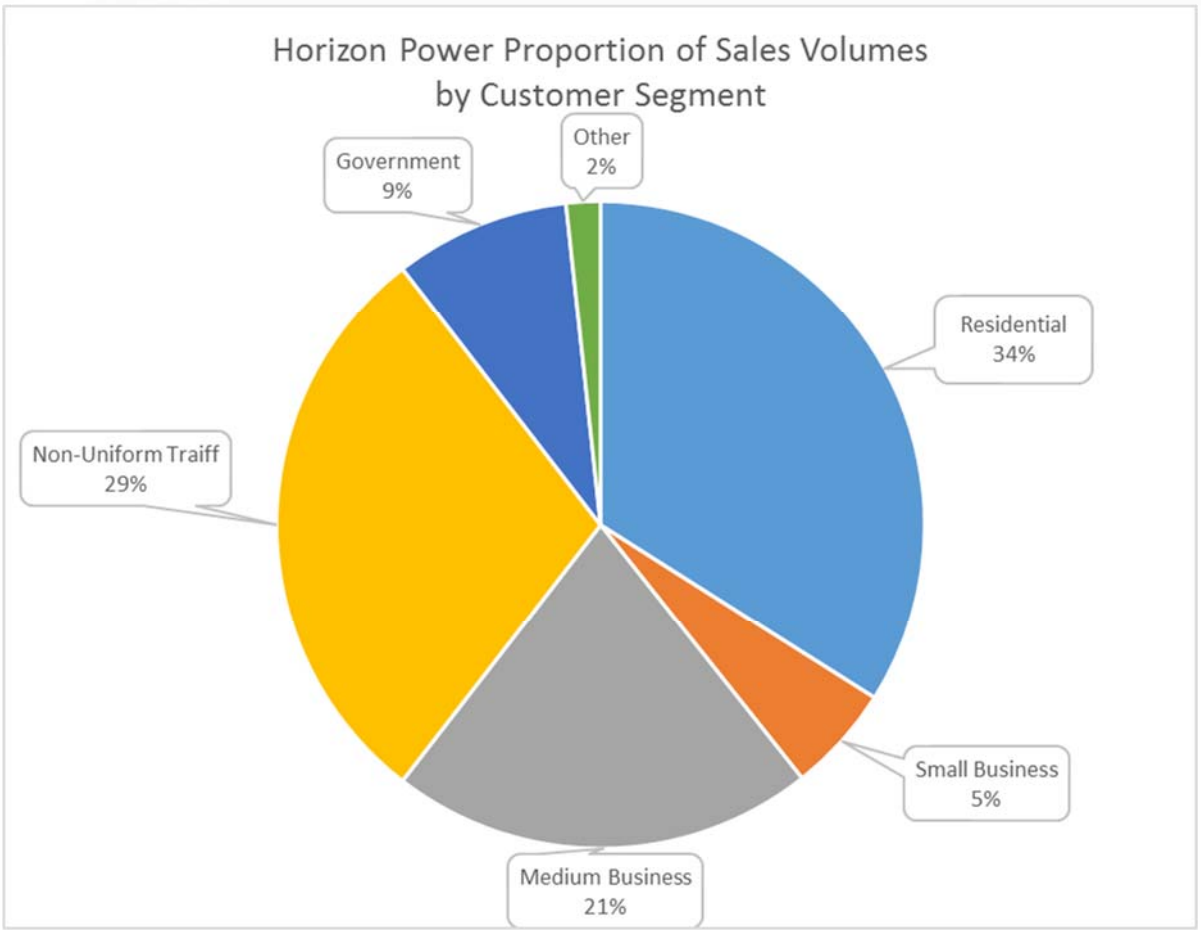

Figure 4: Horizon Power current sales volumes by customer type

3.2 Other networks in the Pilbara

In addition to the Horizon Power Network, the electricity "grid" in the Pilbara region comprises:

- Alinta's generation and network assets, which interface with the Horizon Power Network at Wedgefield Substation and Murdoch Drive Substation at 66kV;
- Network assets owned by BHP and FMG;
- generation assets owned by ATCO and TransAlta.; and
- the Rio Tinto -generation assets and the network, which supplies electricity from Dampier to Pannawonica, then to Paraburdoo and across to Yandi (Rio Network).

These networks are electrically connected and are known collectively as the North West Interconnected System (NWIS).

The Alinta Port Hedland Network

The Alinta Port Hedland Network was established in 1995 to connect the Alinta Hedland Power Station (Alinta HPS) generation assets to the electricity assets of Horizon Power's predecessor, Western Power Corporation (now the Horizon Power Network) to facilitate a supply of power to BHP loads by wheeling through the HP Network. The contractual arrangements underpinning this transaction are still on foot, albeit with Alinta and Horizon Power as successor parties.

However, these contractual arrangements pre-dated the introduction of the access regime established by the Electricity Transmission Regulations 1996 and the Electricity Distribution Regulations 1996.

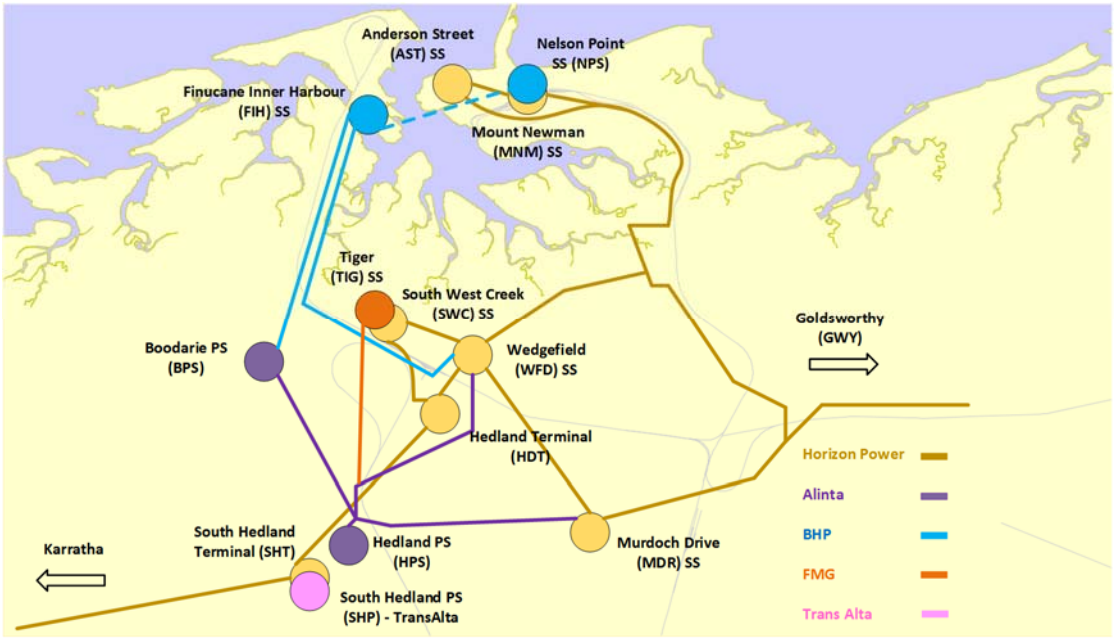

Figure 5: The East Pilbara Network including the Alinta owned networks

In about 1998, an onsite power station at Boodarie (Boodarie Power Station, BPS) was established to supply the BHPB Hot Briquette Iron Plant (HBI Plant). After the HBI Plant was decommissioned, BHP Billiton constructed a network asset to connect the Alinta BPS switchyard and re-enforce the supply to its Finucane Island operations.
Alinta connects its Boodarie PS through two 66kV power lines to Horizon Power's network to supply and provide backup for BHPB and FMG.

The Alinta Port Hedland Network is:

a) an integral component of the NWIS, supplying power to BHPB Iron Ore Pty Ltd's (BHPBIO) operations at Finucane Island through the connection point that was historically the location of the HBI Plant, with an approximate annual consumption of 350 GWh[3];
b) an integral component of the power supply to FMG's operations in Port Hedland through the FMG T line and Tiger substation, with an approximate annual consumption of 230 GWh[3];

These loads are by far the largest component of the electricity consumed in the East Pilbara region, at approximately 75% by volume.

[3] These sales volumes are a rough estimate as Horizon Power has no direct data on these sales volumes.

FMG's electrical load requirements in the Port Hedland area have grown significantly over the past few years. In March 2014, FMG completed a US $9.2 billion expansion of mine, port and rail operations to 155 million tonnes. In July 2014, FMG signed a 25-year agreement to participate in a public-private partnership with the government of Western Australia, Horizon Power and TransAlta, under which a 150MW combined-cycle gas power station was built in South Hedland and commissioned in late July 2017 to supply energy to FMG's port and rail operations.[4]

The Rio Tinto Network

The Rio Tinto Iron Ore (Rio Tinto) Network extends from Dampier to Pannawonica and Tom Price, then to Paraburdoo and across to Yandi, supplying customers in the towns of Wickham, Dampier, Pannawonica, Paraburdoo, and Tom Price, along with all of Rio Tinto's mining and port operations in the Pilbara. It is understood Rio Tinto supplies customers in the above towns at prices consistent with the UTP. The Rio Tinto Network interconnects with the Horizon Power Network at a voltage of 33 kV, with a maximum transfer limit of 30 MW at Cape Lambert and Dampier. Between these two points, the two networks operate in parallel, supporting continuous supply in the event of a single network failure. The Rio Tinto network is the largest component of the NWIS by far.

Newman Interconnected Network

The electricity network in Newman includes interconnected networks owned by BHP and Alinta, discussed further below. This network crosses over the NWIS but is not electrically connected to it.

BHP Newman Network

The BHP Newman Network includes the distribution system that supplies the town of Newman, an electricity network that supplies the local mining operations, interconnecting circuits connecting to the Alinta Newman Network, and a 132kV electricity line supplying BHP mining operations north of Newman.

Alinta Inland Network

The Alinta Newman Network includes a 220kV transmission line supplying Roy Hill north of Newman and interconnected circuits connecting to the BHP Newman Network.

[4] Fortescue Metals Group Limited 2014 Annual Report at [12].

4. CURRENT ISSUES FACING THE NWIS

The NWIS has developed in an ad hoc manner over several decades, as resource and energy companies have made individual investments in generation capacity and network infrastructure and have established operational practices to meet the requirements of their particular projects. This approach to system planning and development has resulted in a network characterised by fundamental design and operational deficiencies and inefficiencies.

Opportunities exist to improve the availability, security and cost of electricity services in the NWIS through better integration of generation and network investment and system operations, which would support future Pilbara developments by:

- reducing barriers to entry to new industry;
- reducing ongoing electricity costs; and
- removing the need for government investment.

But these opportunities cannot be realised solely through coverage of the Horizon Power Network. To maximise these opportunities, broader reform of governance arrangements for the NWIS must be undertaken such that a bilateral competitive market for electricity services can develop in the medium term and electricity infrastructure can be developed in a more integrated and cost-effective manner, when the next major demand and supply expansions occur in the Pilbara in the longer term.

4.1 Issues affecting economic efficiency

Excess installed generation capacity

The piecemeal and disconnected nature of the NWIS has a negative impact on economic efficiency in the NWIS. There is much under-utilised generation capacity in the Pilbara because so many self-generation facilities, which were built outside interconnected networks, all require independent reserve capacity. If these assets could be accessed to make more efficient use of existing capacity, less new generation investment would be required to support economic growth in the region.

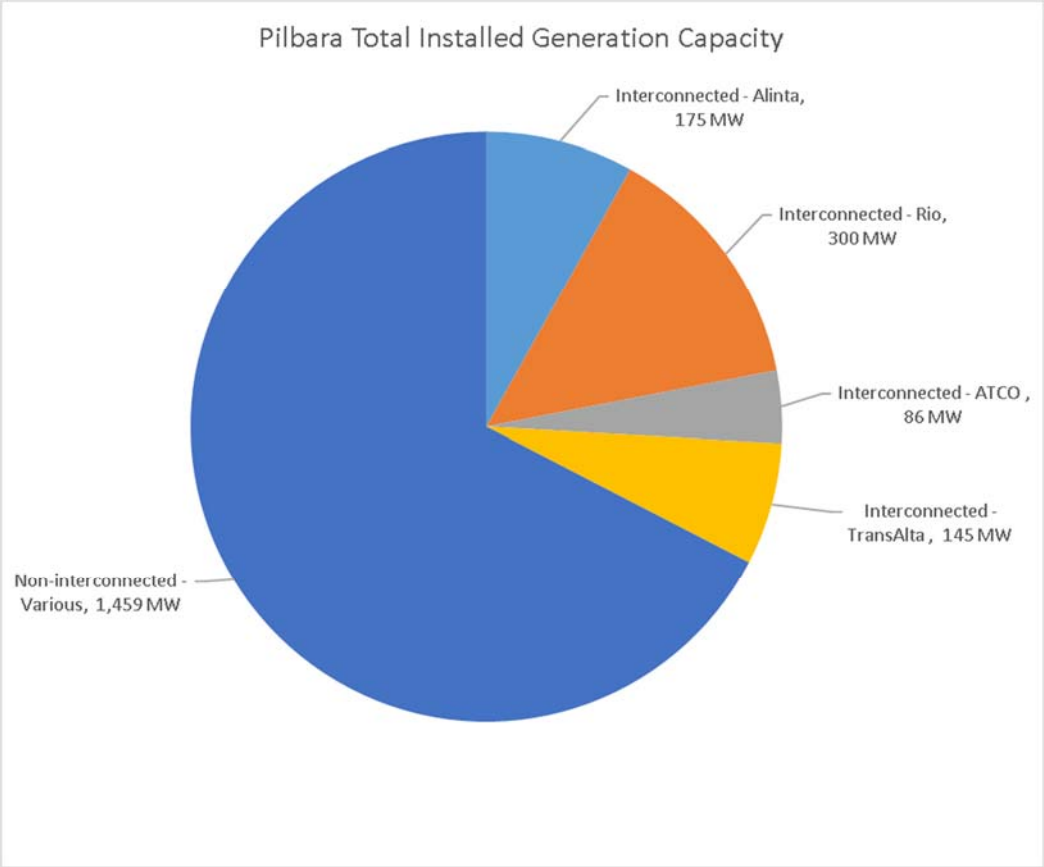

Figure 6: Total Pilbara Installed Generation Capacity by ownership and connection status

Inefficiencies in the dispatch of generation

Inefficiencies also occur in the use of the installed generation capacity to meet real-time loads. Ancillary services are those that ensure stable and reliable power supply on a real-time basis. These services are captured in the Code as "Supplementary Matters" and are intended to be addressed through supporting regulation.[5] In sophisticated markets, they include a range of services that provide economic drivers to meet the requirement that, on an instantaneous basis, generation and load are matched.

The inability to access individual networks, the absence of economic dispatch across the NWIS, and the inability to coordinate the provision of ancillary services have led to inefficient capital investment in the Pilbara, both in generation and networks.

Horizon Power submits that the most significant cost savings potentially available in the Pilbara electricity market are those that would be derived from optimising the dispatch of generation

[5] The Code refers to supplementary matters being addressed regulation under the EIA, or other law, or other mechanisms.

and sharing of common reserve capacity.[6] Coverage of the Horizon Network alone will not achieve generation optimisation or sharing of reserve capacity.

Efficient Solutions for the Pilbara inland areas

The Horizon Power network covers only the costal portion of the Pilbara region. The Rio Tinto, BHP Newman and Alinta Newman networks currently serve the inland areas of the Pilbara. The scale of any competitive market in the Pilbara depends on the volume of loads and generators for which it is economically prudent to connect to the network in support of a competitive power supply. At this time, any load or generator that wishes to develop in the inland Pilbara must establish a standalone supply or build parallel networks (to the existing inland networks) in order to connect to the Horizon Power network.

By way of example, Horizon Power notes that the Balla Balla development requires 40MVA at its port site and 160MVA at its mine site. The Horizon Power Network-connected solution for the mine site requires a 200km transmission line that crosses the Rio Tinto transmission line and goes past the generating plant at FMG's Solomon mine. A more economically efficient solution could be achieved if the NWIS were subject to a form of light-handed access regulation that enabled interconnection of the Rio Tinto 220kV with the Balla Balla mine.

As another example, any long term renewable generation development in the Pilbara[7] would be most cost effectively developed inland in the Region B or C wind speed areas away from the high-strength region D of the coastal areas. Any such development would be supported by access to the networks that serve the inland regions and the ability to sell to multiple customers.

4.2 Adverse TEC (subsidy impacts)

The Western Australian Government's current policy is to charge uniform electricity retail tariffs to eligible consumers served by the state-owned electricity corporations. Section 129D of *Electricity Industry Act* requires the Treasurer to determine, by notice in the Government Gazette, the tariff equalisation contribution that is payable by Western Power to Horizon Power. The TEC is equal to the disparity between:

a) the efficient cost of supply of electricity to persons in areas outside of the SWIS; and
b) the revenues available to Horizon Power from supplying electricity to persons in areas outside of the SWIS at the regulated retail tariffs.

Current practices within Government also recognise Synergy's efficient cost of supplying electricity by segmenting the subsidy payment, as calculated in accordance with the Act, into two components:

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[6] This position is supported by reports by Allen Consulting Group (December 2008), Worley Parsons (December 2008), and SKM (June 2012) on the electricity industry in the Pilbara. Horizon Power can provide copies of these reports on a confidential basis if requested.

[7] It is expected that renewable generation in the Pilbara would not be developed to provide generating capacity but to avoid fuel and variable operating costs and to capture renewable energy certificates as is currently the case in other jurisdictions

- Tariff Adjustment Payment (TAP): the subsidy paid to both Synergy and Horizon Power that represents the difference between Synergy's cost reflective tariffs and the uniform tariffs paid by customers; and
- Tariff Equalisation Contribution (TEC): the subsidy paid only to Horizon Power for the difference between Horizon Power's and Synergy's cost-reflective tariff.

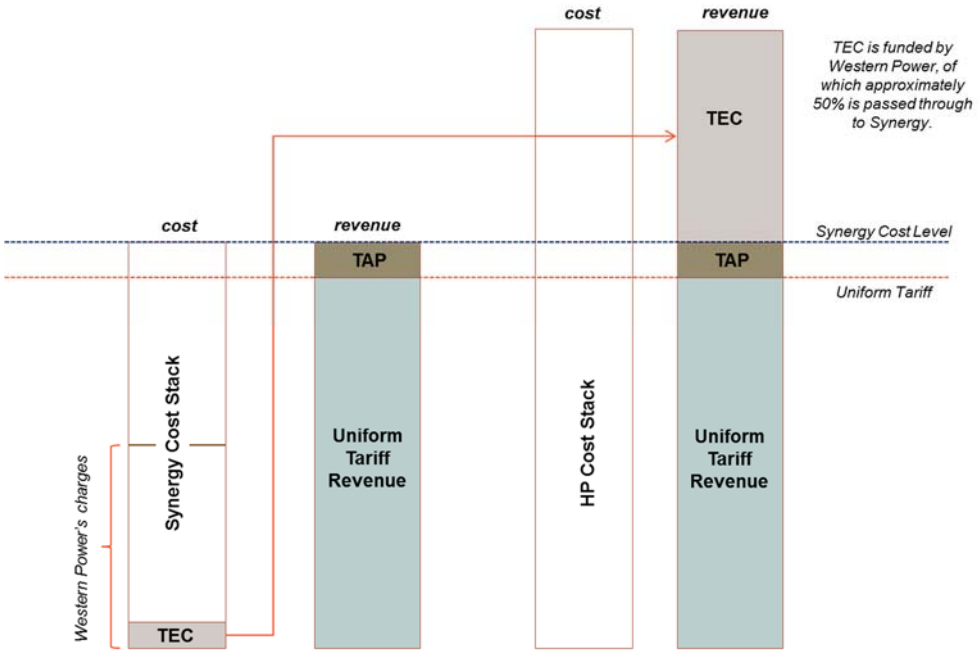

Figure 7: Contribution to revenue from TAP and TEC for the SWIS (Synergy) and Horizon Power

In 2013, Horizon Power implemented a strategic review to increase efficiency, lower its subsidy, and maintain and extend its core business to deliver safe, reliable and affordable services (**Strategic Review**). Through its Strategic Review, Horizon Power delivered over 160 individual initiatives to achieve sustained subsidy reduction. These initiatives were delivered on schedule and across every facet of the business, including revenue streams, capital utilisation, the cost of generation, and expenditure on overheads.

Horizon Power achieved its overall target of reducing its subsidy by $100m per annum in January 2017, 16 months ahead of schedule. For the 2017/18 financial year, Horizon Power forecasts a total of $105m in subsidy reduction, following the completion of ongoing Strategic Review initiatives. However, coverage of the Horizon Power Network would reverse the significant subsidy reductions achieved to date.

As can be observed from Figure 8 below, if Horizon Power loses revenues because of competition, it will need a higher TEC subsidy, which will drive a higher Western Power Network charge to Synergy and increase TAP for both Synergy and Horizon Power. This in turn will drive an increase to the net state debt. The higher SWIS network charge will also be passed through to SWIS customers, resulting in an estimated 1.56% and 3.5% increase, respectively, in network charges for non-UTP SWIS customers. This process effectively results in a transfer of value from SWIS customers to NWIS customers.

These cost increases are a function of Horizon Power's high proportion of fixed costs. These costs include

1. Long-term power purchase agreements dominated by fixed capacity related charges
2. Medium- to long-term gas purchase agreements with significant take-or-pay levels. These include purchase arrangements from Synergy and other gas market participants.

Horizon Power has entered these medium- to long-term arrangements on the expectation that it would be required to maintain a secure supply to the UTP customers at the lowest cost and risk outcome available. All of the long-term, fixed-cost commitments were entered before the likelihood that UTP customers would be subject to competition[8].

Figure 8 below demonstrates that movement of the subsidy arrangements (TEC and TAP) for a 30% loss in sales volumes and a 65% loss in sales volumes. As sales revenues are lost TEC and TAP increase to address costs.

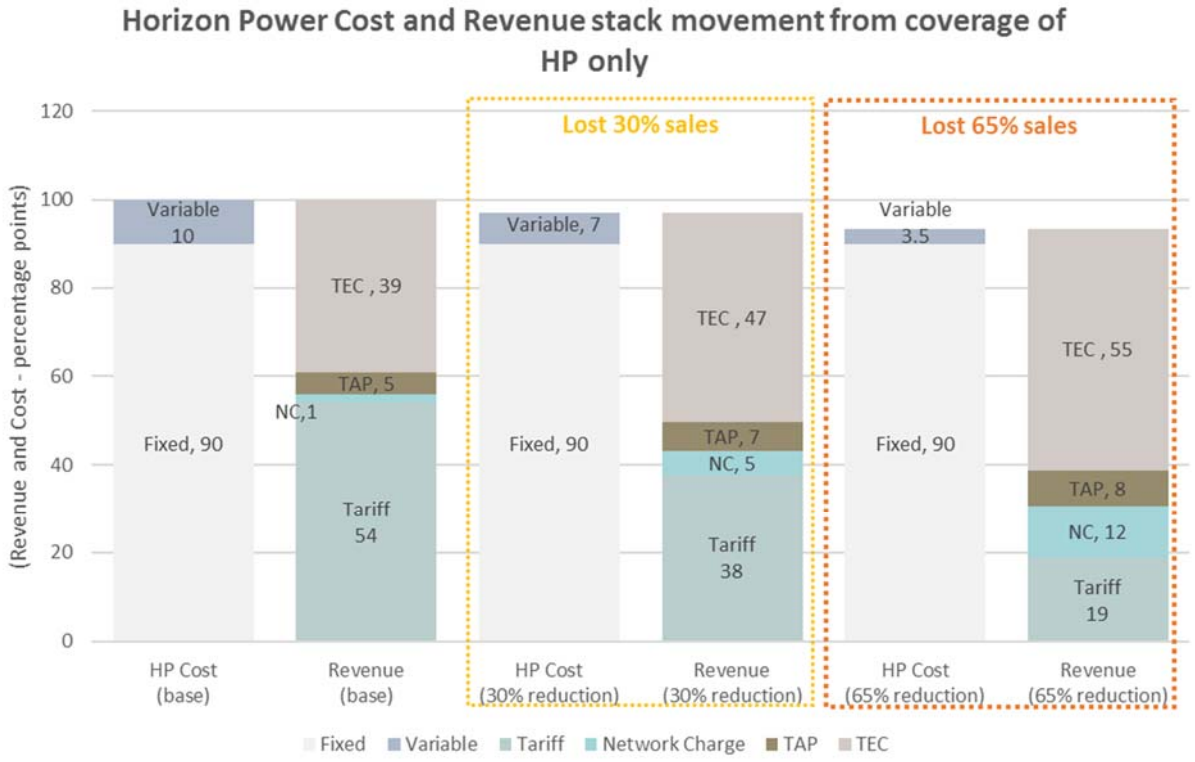

Figure 8: Impact of competition on TEC, at sales losses of 30% and 65%, respectively. (Modelling assumptions are detailed in Annexure C.)

4.3 Operational and technical issues

There is no formal governance regime in place for the administration and operation of the NWIS.

[8] The last external (non-government), long-term, fixed cost arrangement Horizon Power entered in the Pilbara was the Pilbara Power Partnership (TransAlta and FMG) suite of arrangements.

For example, no single body is accountable for the security and reliability of electricity supply across the NWIS. As a result, power system stability is considered marginal under existing arrangements and ancillary services, such as frequency control services and network control services, are replicated in each individual network rather than being optimised across the whole electricity system.[9]

Contrary to best-practice electricity systems, there is no single set of technical rules applying equally to all participants in the NWIS. After consulting all interested parties, In about 2006 Horizon Power developed technical rules to apply to the NWIS. However, these rules governing the network are not enforceable under the *Electricity Industry Act* or other legislation. The rules are implemented through bilateral contracts with all generators and major loads, and many of these contracts contain derogations based on historical arrangements. Rio Tinto and Alinta apply separately developed technical rules for the planning and connection of loads and generators to their networks.

A summary of the existing technical and operational issues in the NWIS that must be addressed is set out below. Table 2 below compares how these are addressed with how they may be dealt with under the Code or other regulatory reform.

[9] PUO, *Pilbara Electricity Infrastructure Project – Stage One Report* (July 2015)

Table 1: NWIS operational and technical issues, and proposed solutions

Issue	Now addressed by	Position if only Horizon Power is covered	Horizon Power's preferred regulatory response
Obligation for network owners to provide open access on specified terms and conditions, including as to price.	Bilateral electricity transfer access contracts (ETACs) negotiated by Horizon Power, including a customer-reviewed pricing model.	The Code requires the Economic Regulation Authority to approve a model ETAC on which Horizon Power must base its offers of access. Since statutory immunities usually applicable to system operators do not apply to Horizon Power, the ERA will be required to determine terms and conditions where this risk is allocated to either of Horizon Power or a prospective user, including considering tools such as insurance.	The Code alone will not adequately address the risks associated with Horizon Power's not receiving the benefit of system operator statutory immunities. Horizon Power considers that statutory reform to effect the statutory immunities will be necessary to ensure the ERA can determine economically efficient terms and conditions.
Dispatch of generation	Presently the dispatch of generation is effected through a balancing obligation contained in the non-Horizon Power parties' access contracts. In essence, this means that energy consumed by a non-Horizon Power party customer must be equal to the energy exported to the Horizon Power Network by that party.	No change. Particularly dispatch remains inconsistent with the principles of "economic dispatch," whereby the cheapest energy is dispatched first to minimise wholesale electricity costs across a market.	Horizon Power considers that there is a strong case for the principles of economic dispatch to be established in the Pilbara along the lines of the Pilbara Net proposal detailed in section 4.5 of this submission.

Issue	Now addressed by	Position if only Horizon Power is covered	Horizon Power's preferred regulatory response
Ancillary services, including frequency control	Horizon Power either provides ancillary services to its own network or contracts with third parties on a bilateral basis for the procurement of ancillary services.	Any disconnection of other privately owned and unregulated networks will result in the duplication of frequency control ancillary services. Horizon Power will be required to procure the ancillary services from the generators that remain connected to its network without the benefit of system operator statutory immunities.	Horizon Power considers that ancillary services should be purchased by an independent central system operator for all parties through a competitive process.
Accounting for out-of-balance energy	Horizon Power acts as settlement body under separate bilateral contracts between Horizon Power and network users. These contracts have different pricing outcomes.	The absence of statutory immunities means the ERA will be required under the Code to determine arrangements for out-of-balance energy that allocate risk associated with the performance of these arrangements. Horizon Power considers this risk management should be addressed through insurance-based risk regime.	A central system operator is established and made responsible for sourcing balancing energy and granted protections equivalent to the statutory immunities given to the system operator in the SWIS.

Issue	Now addressed by	Position if only Horizon Power is covered	Horizon Power's preferred regulatory response
Control of system in emergency or fault conditions	Horizon Power does not have the power to control connected generators in a manner that would be consistent with generally accepted practices in wholesale electricity markets like that in the SWIS (via automatic governor control, for example). As a consequence, Horizon Power must phone control centres for interconnected networks, effectively requiring real-time cooperation between five control centres.	In the absence of statutory immunities or protections that are materially identical, Horizon Power will be required to fulfil these functions without regulatory protections.	A central system operator is established across all NWIS networks and is made responsible for control of system in emergency or fault conditions.
System planning to establish efficient investment in network assets	There is no central body responsible for system planning across the NWIS, and as a result, generation and network investment has been characterised by a "piecemeal" approach, which has not promoted economically efficient outcomes.	No change	Horizon Power considers that a central system operator could be granted responsibility for system planning.

Issue	Now addressed by	Position if only Horizon Power is covered	Horizon Power's preferred regulatory response
Analysis of the impact of new significant generation and loads on integrity and security of system	Horizon Power and Rio Tinto undertake assessments and share network models confidentially through a third party. Horizon Power has only very blunt instruments at its disposal (compared to every other network, including the SWIS and NEM) to protect the integrity of the system. Basically, it has the option to disconnect generation or load or both. Note that the current state of the system has already caused one complete cascading failure, and every year there are supply interruptions, typically from load-shedding, resulting from the lack of technical coordination.	As per current arrangements (noting unregulated networks may choose to, or be required to, disconnect)	A central system operator (defined and protected in regulation) holds and maintains system model and coordinates all system-wide technical studies.

Issue	Now addressed by	Position if only Horizon Power is covered	Horizon Power's preferred regulatory response
Requirement to maintain adequate system capacity across the entirety of the NWIS.	Generation planning on each party's network. No system-wide planning or sharing of reserve capacity.	In the SWIS, maintenance of system capacity is a system-wide matter addressed in the WEM Rules. If Horizon Power is covered under the Code, it will be a "supplementary matter" that will need to be dealt with in Horizon Power's Access Arrangement. Horizon Power will propose the inclusion of a bilateral system adequacy obligation in the ERA-approved ETAC.	In Horizon Power's view, maintenance of adequate system capacity can be effected by: - A centralised function as is the case in the SWIS; or - ETAC obligations requiring users to have adequate generation capacity to meet contracted maximum demand (CMD), plus a reserve margin.
Standardised solution for customer to transport electricity over multiple networks	None	None	Horizon Power would propose a central system operator with protections equivalent to the statutory immunities to purchase use of system capacity from multiple owners and sell combined service to NWIS users.
Supplier of last resort obligations (customer's right to supply protection)	None	None	Obligations similar to the SWIS

4.4 Deficient and fragmented regulatory regime

Ordinarily, parties who carry out system operator functions have the benefit of a statutory immunity that excludes, or caps, liability as a matter of law for civil damages claims from third parties. Annexure A sets out a detailed comparison of relevant statutory immunity provisions that apply to system operators in other jurisdictions.

For example, the protections set out in section 126 of the *Electricity Industry Act 2004* (WA) **(Electricity Industry Act)** exempt the Australian Energy Market Operator **(AEMO)** and any officer or employee of AEMO from civil monetary liabilities for an act or omission done or made in good faith in the performance, or purported performance of a function as system or market operator under the Electricity Industry (Wholesale Electricity Market) Regulations 2004 or the Wholesale Electricity Market Rules.

The primary aim of these statutory immunity clauses is to ensure that system operators with responsibility for the security and safety of the power system can carry out system operations without being subject to legal action, other than where bad faith or gross negligence can be shown. In particular, system operators are usually granted wide discretion under legislation as to how they act in securing the safety of the power system in emergency circumstances, and they are permitted to act without notice and without concern for potential legal action in negligence. For example, the system operator would be protected against liability if it took steps in good faith to disconnect power supplies involving a large number of customers even if it resulted in serious economic harm to end-users.

The protections in section 126 of the *Electricity Industry Act* do not apply to Horizon Power even though it carries out the *de facto* role of system operator for the NWIS. This means that Horizon Power has uncapped liability to third parties in relation to its management of the power system, except to the extent it is able to limit its liability bilaterally through contracts. Horizon Power's exposure is significant because of the risk of substantial economic loss arising from blackouts or fluctuations in power quality in the Pilbara.

4.5 An alternative way forward

Many of the issues facing the NWIS can be resolved through the introduction of an independent network co-ordination group for the Pilbara ("Pilbara Net").

Comprising system control, non-government investors, government, a board, and system control, with oversight by a regulator, Pilbara Net supports the Government's objective of implementing a light-handed regulatory regime for the Pilbara. Instrumental to the Pilbara Net's structure and governance is the role of the independent system operator, as shown below:

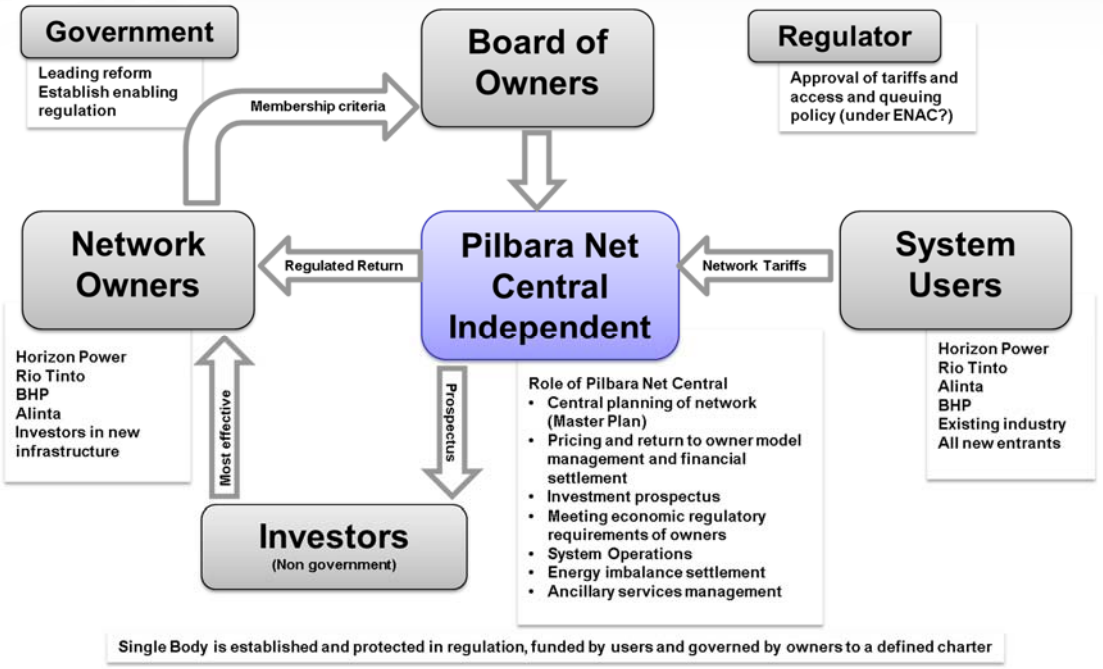

Figure 9: proposed makeup, structure, and functions of Pilbara Net

Under the proposal, network users would be charged tariffs for network services, and deliver regulated rates of returns to network owners, thereby encouraging third party investment in network assets. To ensure separation of duties, the Economic Regulatory Authority (**ERA**) would determine the network tariff pricing. Consistent with current regulatory pricing models, as utilization of the network increases, network charges for individual customers would reduce. The Pilbara Net proposal would lower barriers to entry for small to medium sized resource developments by removing the requirement for investment in expensive standalone network and generation assets. This would then lead to the diversification of the business section in the Pilbara, which currently mostly consists of very large resource companies and small local businesses.

Pilbara Net would be governed by a Board comprising representatives from all the network owners. The Government would set the regulatory framework for the operation of Pilbara Net. The regulatory framework would cover rights for the system operator, and obligations on network operators and users, including for example, the obligation to comply with Technical Rules.

The Pilbara Net:

- supports job creation and economic growth in the Pilbara without:
  - the need for material Government funding
  - the sale of the Horizon Power network assets in the Pilbara.
- delivers cost-effective competition to all current and future users in the Pilbara region
- allows network owners to maintain control of their assets
- creates opportunity to improve TEC returns
- resolves current problems in the NWIS, including lack of network open access, limited competition, and deficiencies in regulation

A key feature of the Pilbara Net proposal is the establishment of a central body for the planning and operation of the electricity systems in the Pilbara that supports:

- multiple users of the electricity network with pricing and investment governed by regulation
- multiple users of generation assets with pricing and development driven by competition
- multiple owners of network assets, with the ability for non-government investment in regulated assets. Horizon Power estimates it must invest approximately $310m in transmission assets over the next 10 years (beginning in 2018/19)

Horizon Power supports the Pilbara Net solution, because it will have the option to:

- efficiently compete for additional large customers who will make full, effective use of long-term generation contracts and thereby increase revenue
- reduce generation costs through formalising spinning reserve and installed reserve-sharing.

Both of the above provide opportunities to increase profit and reduce TEC.

In order to best achieve the Code's objective of economically efficient investment in and use of infrastructure by enabling multiple users to access available generation capacity through the sharing of outputs from generation facilities and ancillary services, which would be optimised across the whole of the NIWS (instead of being replicated in individual systems), coverage of the Horizon Power Network should be undertaken only in conjunction with coverage of all of the NWIS and with the introduction of regulatory reform along the lines of the Pilbara Net proposal.

5. BACKGROUND TO ALINTA'S APPLICATION FOR COVERAGE

5.1 The need for a replacement ASA

Since 1996, Horizon Power's predecessor, Western Power Corporation, has been party to an Access and Standby Agreement (**ASA**) with Pilbara Energy Pty Ltd (**PEPL**) to enable PEPL to access Horizon Power's Network to supply electricity from PEPL's power station at Port Hedland to BHPBIO 's sites at Nelson Point, Finucane Island and Goldsworthy. Alinta is PEPL's successor to PEPL under the ASA.

For at least 10 years, Horizon Power has sought to renegotiate the ASA with Alinta for the following reasons:

- the ASA predates the introduction of the access regime established by the *Electricity Transmission Regulations 1996* and the *Electricity Distribution Regulations 1996*, and the ASA itself contemplates that it would be renegotiated once those instruments apply.

- the NWIS is an increasingly complex power system, and the ASA does not provide Horizon Power with sufficient rights to adequately address all operational and technical issues that a power system operator like Horizon Power should have. In this regard, the most serious concern is that the terms of the ASA prevent Horizon Power from imposing a uniform set of technical rules with application across the NWIS.

In view of this, there is a risk that the current owners and operators of the NWIS will be unable to prevent or avoid the occurrence of a contingency event on the Horizon Power network. In such an event, network reliability and security may be seriously compromised, and there is a risk that costs and liabilities may be unfairly incurred by Horizon Power and/or other parties.

5.2 Previous coverage applications

On 24 October 2014, Alinta applied for coverage of the Horizon Power Network on the basis that it was seeking to enter the market to supply electricity to customers connected to the Horizon Power Network.

On 17 November 2014 Horizon Power applied for coverage of the Alinta Network on the basis that it sought access to customers on the Alinta Network.

5.3 Transmission and distribution ETAC

On 5 January 2015, at the request of the Minister for Energy, Horizon Power and Alinta withdrew their coverage applications under clause 3.9 of the Code.

On 24 December 2015, at the request of the Minister for Energy, Horizon Power and Alinta entered into a non-binding memorandum of understanding (**MOU**) to facilitate the negotiation of an ETAC between the parties that would apply to Alinta's access to the Horizon Power Network and to Horizon Power's access to the Alinta Network.

The draft ETAC that Horizon Power provided to Alinta as a starting point for negotiation was based on the "model standard access contract," because that term is defined in the Access

Code, and included amendments that addressed the unique characteristics of the Horizon Power Network. Consistently with the draft ETAC, Horizon Power proposed to:

- offer a standard connection service, exit service and entry service; and
- adopt a pricing model which Horizon Power considered consistent with the pricing methods and objectives contained in the Code.

In the absence of a statutory framework providing immunity to Horizon Power when it is carrying out system management functions, Horizon Power requested that the ETAC include exclusions of liability for potential third-party claims against it in carrying out its functions as system operator.

To manage these risks within a workable commercial framework, Horizon Power proposed an insurance regime similar to what typically applies in construction projects under which the principal's risk is insured by the contractor. Horizon Power was advised by its insurance brokers that such insurance would be available.

Alinta contended that the insurance would be prohibitively expensive. If this is the case, then it underlines the materiality of the risks being insured against and the need for them to be appropriately allocated under the ETAC.

Horizon power is essentially of the view that, Alinta sought a risk profile where it was able to gain the opportunity to have additional profit from new customers but Horizon Power took on the system risk and cost of Alinta supplying these customers.

Horizon Power did not consider that it was reasonable that it or any other system operator should be required to underwrite the risks associated with Alinta's or any other retailer's entry into new retailer markets in the NWIS, because ultimately this results in these costs and liabilities being borne , in the case of Horizon Power as system operator, by the state and the public of Western Australia.

Because the Horizon Power and Alinta negotiation teams disagreed about which party should bear the costs and risks associated with these liabilities, the unresolved matters were proposed, in accordance with the MOU, to be escalated for resolution by an independent expert.

Even if Alinta's application for coverage is successful, the issue of which party bears the risk associated with the system operator's liability to third parties will need to be resolved, most likely through regulatory determination, if not agreed.

5.4 Termination of negotiations by Alinta

On 26 July 2017 Alinta wrote to Horizon Power informing it that Alinta did not wish to proceed with expert determination in relation to these matters, because:

- the binding terms of expert determination had not been agreed; and
- Horizon Power was not obliged to enter into an ETAC irrespective of the outcome of the expert determination.

Irrespective of the expert's determination, Horizon Power is not able to fetter the decision of the Minister and Horizon Power's board whether to enter into the ETAC.

Alinta informed Horizon Power that it considered that there was no prospect of a successful outcome in the absence of a formal regulatory framework and that the negotiations under the MOU were at an end.

Horizon Power is still prepared to continue negotiations with Alinta in relation to the ETAC and would also be prepared to progress to expert determination, should Alinta wish to do so.

However, unless there is regulatory regime established to support Pilbara system operations, negotiation of access contracts under the Code is likely to face the same issues of how best to allocate regulatory risk in a way that is fair to all parties.

An ETAC, in the absence of supporting regulation, is a cumbersome and inferior method of resolving, among other things, the serious risks associated with the role of system operator in the NWIS. Consistent with best practice in other jurisdictions, including the SWIS, these risks are more efficiently and effectively addressed by regulation that establishes a formal system operator with statutory powers and immunities that provide sufficient protection to enable the operator to carry out its functions without the risk of third-party liability for system failures.

6. DISCUSSION OF THE TESTS IN SECTION 3.5 OF THE CODE

6.1 Application of tests in section 3.5 of the Code

Pursuant to section 3.5, the Minister must decide that a network be covered if he is satisfied of certain criteria, namely:

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?

Horizon Power accepts that Alinta's application for coverage is likely to satisfy the test in section 3.5(b).

However, Horizon Power is of the view that coverage of the Horizon Power Network does not satisfy the tests in section 3.5(a) or (c), that is, coverage would not promote a material increase in competition in at least one market and/or would be contrary to the public interest. Horizon Power is of the view that, with the introduction of a light-handed access regime offering statutory protection for the system operator function, and with TEC reform, coverage of the entire NWIS may meet the requirements to be in the public interest. The balance of this section sets out Horizon Power's reasons for this view.

6.2 Considerations in sections 3.4 and 3.6 of the Code

In considering Alinta's application for coverage of the Horizon Power Network, the Minister is required under the Code to consider whether any coverage decision should extend beyond the Horizon Power Network and the extent to which the Horizon Power Network is interconnected. In particular:

- s 3.4 provides that the Minister's coverage decision may cover the network to a greater or lesser extent than requested in the coverage application if, having regard to the part of the network that is necessary to provide covered services that applicants may seek, the Minister considers that doing so is consistent with the Code objective;
- s 3.6 provides that, when exercising his coverage functions, the Minister must have regard to the geographical location of the network and the extent to which the network is interconnected with other networks.

6.3 Discussion of Section 3.5(a) of the Code

In support of its application, Alinta suggests that access to covered services provided by means of the Horizon Power Network would promote a material increase in competition in the market for the retail supply of electricity to customers supplied using the Horizon Power Network.

However, as noted in section 1.2 above, Horizon Power contends that the effect of coverage of the Horizon Power Network will not be an increase in competition but more likely a substitution of one monopoly provider (Horizon Power) for another (Alinta).

Under the existing TEC model, Horizon Power would risk making greater losses if it reduced price for customers on uniform tariffs. TEC is calculated based on the difference between the gazetted tariff and the efficient cost to supply, so if customers are offered a price below the gazetted tariff, Horizon Power loses the full value of TEC for those customers. Therefore, dropping prices for customers on gazetted tariffs results in an unacceptable risk to Horizon Power's financial viability, and the only commercially prudent decision for Horizon Power is to keep supplying customers at uniform tariffs.

That is, presently Horizon Power has no incentive under the TEC calculation to compete with Alinta (or any other competitors, in the event that competition is introduced into the NWIS) for load by offering a cheaper rate to customers who consider transferring their custom to a competing retailer.

As noted above, because Horizon Power's subsidy is calculated on the basis of regulated tariffs, the practical effect of this is that, if its network is covered Horizon Power would be subject to a perverse incentive to refrain from offering cheaper tariffs and would thus likely lose an extensive number of customers. This outcome is likely to reduce Horizon Power's sales revenues and significantly increase the TEC

.

In this scenario, in which Horizon Power is unable to compete on price for these customer segments, Horizon Power believes Alinta's estimate of a 10% reduction in costs to all Horizon Power customers is unrealistic for UTP customers. This is discussed further below.

Further, in support of its application, Alinta suggests it is aware of at least two new entrants who wish to access the Horizon Power Network and supply retail customers. Even if coverage of the Horizon Power Network is granted, given the limited size of the market, Horizon Power considers it unrealistic to expect new retailers to be able to overcome the barriers to entry created by the electricity licensing regime and the Small-Use Customer Code in the NWIS, as well as the requirement to install incremental generating capacity. In this regard, it is important to understand that pricing in accordance with the UTP is below Horizon Power's actual costs of supplying its small-use customers. A new entrant generator seeking to supply customers on the Horizon Power Network would need to install new capacity and absorb the regulatory costs associated with obtaining a retail electricity licence. In these circumstances, unless the government moves away from the UTP, only an existing, vertically integrated gen-tailer, such as Alinta, with access to spare generation capacity, will be able to compete with Horizon Power's UTP pricing in delivering an equivalent level of service.

6.4 Discussion of Section 3.5(c) of the Code

The "public interest" criterion in section 3.5(c) of the Code was adapted from section 44G(2)(f) of the *Trade Practices Act 1974* (Cth) (now the *Competition and Consumer Act 2010* (Cth)).10 This criterion was recently considered in The Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal (2012) 246 CLR 379 at [42], [108] to [114] (French CJ, Gummow, Hayne, Crennan, Keifel and Bell JJ) (Joint Judgment). The Joint Judgment, relevantly, set out the following propositions:

a) When used in a statute, the expression "public interest" imports a discretionary value judgment to be made by reference to undefined factual matters. The power is "neither arbitrary nor completely unlimited" but is "unconfined except insofar as the subject matter and the scope and purpose of the statutory enactment may enable the Court to pronounce given reasons to be definitely extraneous to any objects the legislature could have had in view". It follows that the range of matters to which the Minister may have regard when considering "public access" is very wide and includes the economic or societal costs and benefits that are likely to arise from access to covered services provided by means of the network.

b) Conferring the power to decide on the Minister is consistent with legislative recognition of the great breadth of matters that can be encompassed by an inquiry into what is or is not in the public interest and with legislative recognition that the inquiries are best suited to resolution by the holder of a political office.

c) All costs that may be imposed on society by reason of access (social costs) are potentially relevant to the public interest considerations. The significance to be attached to such social costs would be affected by the existence of any countervailing social benefits.

It is clear from the above that the Minister is at liberty to consider a virtually limitless array of "social costs" and "social benefits" in considering whether access to the Horizon Power Network is contrary to the public interest. The task of the Minister is to consider all social costs and benefits involved in coverage of a facility and, having done so, to decide whether coverage is not contrary to the public interest.

The Minister is not required to carry out the task of considering public interest in a judicial manner or in an overly precise manner but instead should undertake a broad balancing of relevant costs and benefits. Ultimately, the public interest is concerned with the net benefits of access: that is, whether the benefits outweigh the costs.

Horizon Power submits that coverage of only the Horizon Power Network in the Pilbara will have the following adverse public interest effects:

- Coverage of the Horizon Power network will cause substantial loss of Horizon Power revenue with no compensating opportunities for growth. This loss will be directly funded by customers in the SWIS and by taxpayers (These losses are quantified later in this section.)

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[10] State of Western Australia Application to the National Competition Council for a Recommendation on the Effectiveness of the Western Australian Third Party Access Regime for Electricity Networks dated June 2005 at page 31.

- Coverage of only the Horizon Power part of the NWIS will further complicate Horizon Power's role as *de facto* system operator for the NWIS, as third- party access to only Horizon Power's part of the NWIS will make the system more complex for Horizon Power to manage, exacerbating existing technical and regulatory interface issues associated with the interconnected electricity systems in the NWIS, reducing network security, and increasing Horizon Power's risk exposure to third- party claims.
- Coverage of only the Horizon Power Network will create an uneven playing field, which may enable unregulated parties such as Alinta to game commercial outcomes by, for example, requiring reference services, terms and conditions and technical outcomes under the Code, the cost of which will be borne by Horizon Power and its customers, but which may have a restrictive effect on Horizon Power's ability to compete in the retail market.

For the above reasons, in the event that the Minister decides to grant coverage of the Horizon Power Network, Horizon Power considers that it will have no option but to apply for coverage of the Alinta Network and possibly other networks.

Key public interest impacts are considered in detail below.

Adverse financial impact for SWIS users and state debt

In considering the public interest, Horizon Power submits that the Minister should consider the extent to which the increased regulatory and compliance costs, and the costs associated with the loss of Horizon Power revenue through loss of retail customers to competition, may adversely impact SWIS users in the calculation of the TEC and the state government's consolidated account in respect of the tariff adjustment payment.

There are significant administrative, regulatory and compliance costs associated with coverage of the Horizon Power Network under the Code. In its application, Alinta submits that, while there are likely to be some regulatory costs for Horizon Power and the state of Western Australia associated with the introduction of competition, these costs should be weighed against the significant and long-term benefits from the introduction of competition in the NWIS. In this regard, Alinta notes that, because of Horizon Power's monopoly position in the NWIS, Horizon Power (and therefore the state) is required to underwrite the significant cost of any new power station supplying customers of its network.

The following discussion uses the modelling assumptions detailed in Annexure C, beginning on page 60 of this submission.

Price Benefits for Pilbara Customers[11]

Alinta's economic study undertaken by REMPLAN into the economic benefits of Alinta's competitive entry to Horizon Power's portion of the NWIS concludes that the following benefits will follow coverage:

- an approximate 10% decrease in prices in the large commercial and small commercial and residential market segments of the NWIS (which market segments represent approximately 12.7% of electricity demand in the NWIS);
- $240m of direct energy cost savings in the Pilbara in the first 10 years; and
- the creation of 22 new (indirect) jobs in the Pilbara.

Horizon Power does not agree with the REMPLAN analysis of the likely benefits to follow from coverage of the Horizon Power Network. In particular, Horizon Power is of the view that the estimated 10% decrease in prices in the large and small commercial and residential markets is likely to be overstated. Horizon Power considers that it is likely that only non-uniform tariff customers may benefit from a price decrease of approximately 10%. Horizon Power estimates that the value of the expected price decrease to these customers is approximately $5m.

For other tariff classes, Horizon Power assumes that only customers who transfer to Alinta may experience lower prices. Given Horizon Power cannot prudently compete for these customers, it is likely that this price decrease will probably be less than 5%, which will amount to approximately $2–4.2m.

Increases in TEC

Loss of Horizon Power customers to Alinta as a consequence of coverage will reduce economies of scale, with the effect that Horizon Power's average costs (of supplying fewer customers) will increase, with a resultant increase in the TEC.

- Horizon Power estimates the financial impact of coverage of its network, assuming all existing tariff classes are open to competition, will result in a material increase in the TEC levy, increasing to approximately $28–62m TEC by the end of the second year after coverage (mid-point). This will result in a 1.6–3.5% increase in the cost of Western Power network charges for non-uniform tariff SWIS customers.
- In addition, as a result of the financial effect of coverage on the TAP, net state debt will increase by approximately $32–68m by the end of year 4 (end point).

Figure 10 below illustrates the increase in total subsidy and the resulting increases in costs to SWIS customers and taxpayers (through increases in net state debt) for: the 30% loss scenario (as detailed in the Alinta Submission) and; the 65% loss scenario that Horizon Power submits is likely given Horizon Power's inability to prudently compete for UTP customers. The figure illustrates these cost increases over the 4 year period used in the Horizon Power modelling.

[11] Refer to Annexures C and D for detailed modelling assumptions that support the discussion in this section

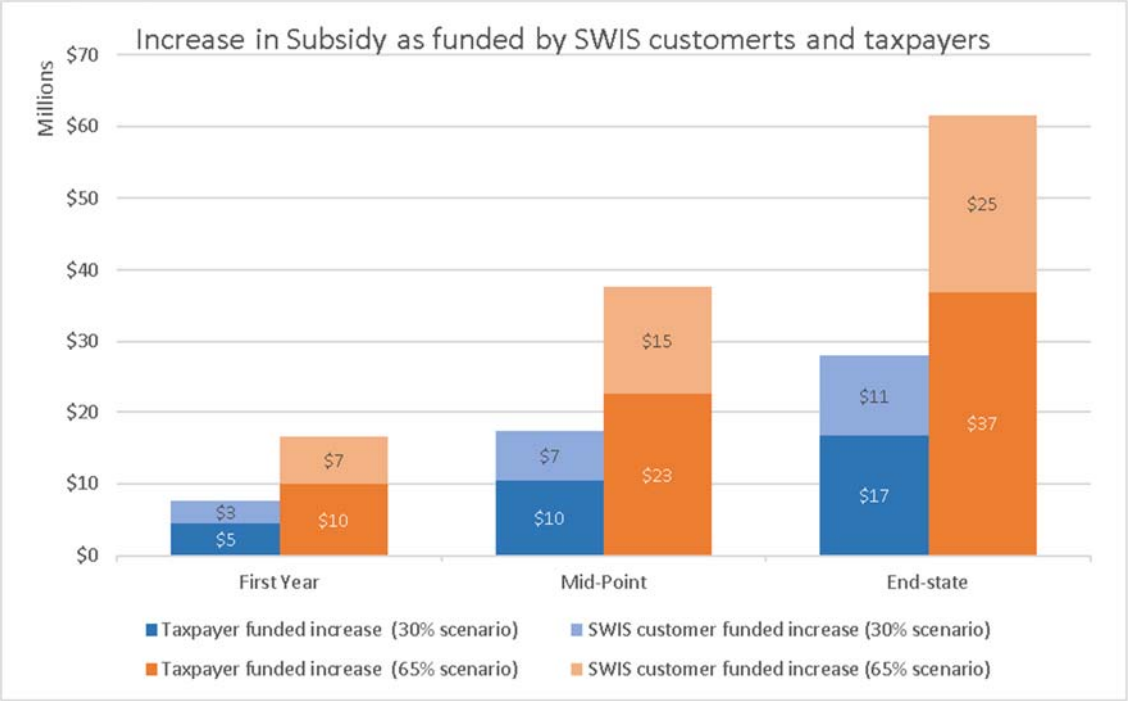

Figure 10: Taxpayer (net state debt) and SWIS customer contribution to increases in subsidy resulting from coverage of Horizon Power network only

Incremental costs to Horizon Power of coverage

To quantify the order of magnitude of the additional costs discussed above for multiple parties supplying the small Horizon Power customer base through a covered distribution system, the following estimates are provided:[12]

a) Coverage under the Code results in additional costs to Horizon Power in the order of $1m per annum;
b) The capital and operating costs of new metering and billing systems is in the order of $2m per annum[13]. This metering system will need to provide near real time information across all of Horizon Power's customers for generation dispatch to meet load balancing obligations.
c) The cost of generators installing communication equipment to meet the half hour energy balancing obligations. These have not been specifically estimated at this time.

[12] These costs are provided for illustrative purposes and are considered conservative given the costs incurred by Western Power of delivering similar outcomes in the SWIS.

[13] Horizon Power has not completed a detailed cost estimate to upgrade metering, communication and data storage system to be able to provide circa real time metering information from all of its 10,000 meters in the Pilbara. It had previously competed an estimate for circa 100 customers and has doubled the annual cost of this estimate a basis for the cost of the service required.

Cost to Horizon Power and Rio resulting from disconnection after HP coverage

The Horizon Power Network operates in parallel with the Rio Network in the West Pilbara, with each network providing a level of redundant supply to the other at Dampier and Cape Lambert. If the Horizon Power Network were covered in isolation and the Rio Network remained connected, the Rio Network would be used to provide Horizon Power's covered services. It is anticipated that this situation would result in commercial complexities that would likely lead to disconnection of Rio Tinto's and Horizon Power's networks. This outcome would result in the following:.

Duplication of Frequency Control

Rio Tinto are providing frequency control services for Horizon Power and Alinta by providing 20MW of upward and downward deviation frequency control. Horizon Power pay Rio Tinto a share of the costs associated with providing these services. If the Horizon Power and Rio Tinto networks were disconnected, these services would need to be duplicated on each system. The costs of providing the frequency control services for each separate network would be very close to the costs of providing these services for both networks, because the level of upward and downward deviation required is similar.[14] Horizon Power's estimate of these costs is $3-4m per annum.[15] Therefore, the impact of the Rio and Horizon Power Networks disconnecting will be a $3–4m increase in frequency control costs. These costs are largely from increased gas consumption and higher maintenance costs resulting from an increase in machine run-hours. For the purposes of this submission, it is assumed Horizon Power will incur half of this incremental cost of between $1.5m and $2m.

Need to construct networks to provide redundant supplies to Dampier

Additional investment will be needed to maintain a Technical Rules-compliant supply for customers connected to Horizon Power's Dampier substation. This will involve either a second 132kV supply into Dampier or the creation of a 33kV supply from Karratha to interconnect with the 33kV supplies from Dampier. Either option is likely to exceed $10m in capital expenditure.[16]

[14] Rio Tinto currently provide 20MW of deviation for its own requirements. Horizon Power's analysis suggests that BHP loads require approximately 20MW and Horizon Power retail loads require 8MW. Therefore the 20MW provided by Rio Tinto covers all of the requirements of all customers on the NWIS.

[15] Cost estimates vary based on load levels, gas prices and the load generation capacity balance for any generator.

[16] This is an order of magnitude estimate.

Summary of Financial Impacts of Covering Horizon Power Only

Figure 11 summarises the financial impacts of covering Horizon Power discussed in this section.

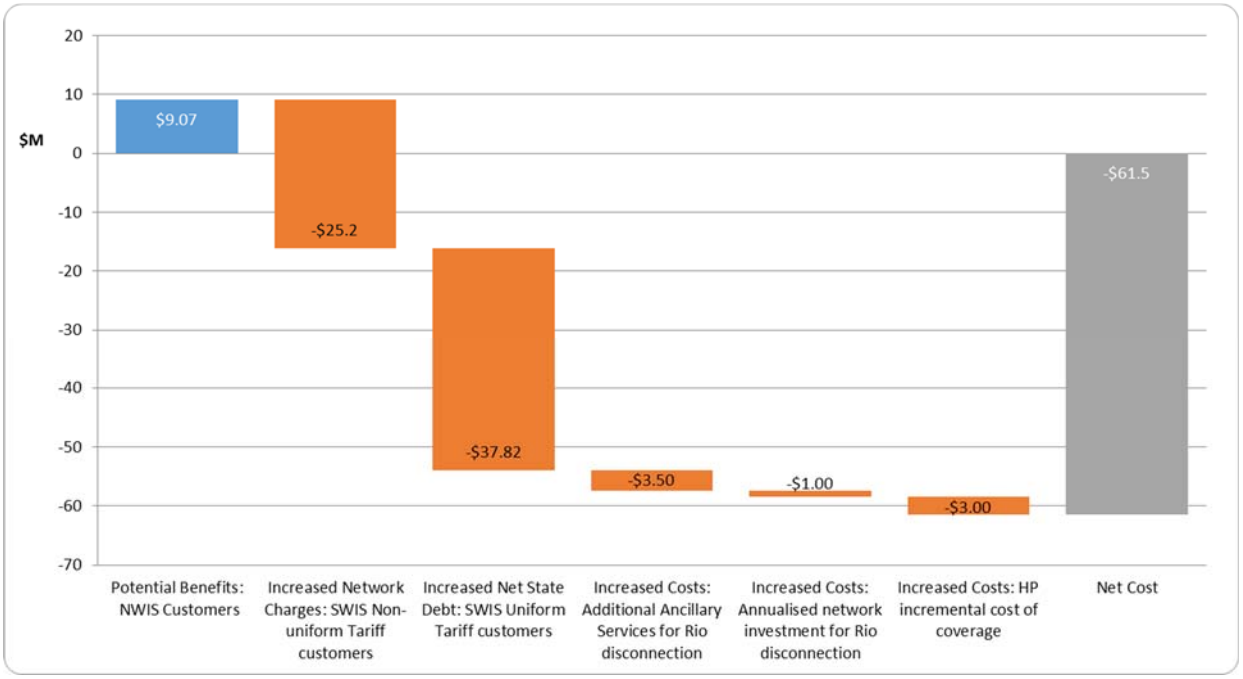

Figure 11: Public benefit and cost stack movement from coverage of HP only

Better ways to deliver reduced costs to customers in the Pilbara

The coverage of Horizon Power only is a very ineffective way to deliver the benefits to customers in the Pilbara. For illustration, if government accepted the creation of 22 jobs detailed in the REMPLAN study, and wanted to capture these benefits, it could reduce the UTP rates by 10 % in the Pilbara. The resulting increase in TEC would be $10m per annum by the end state. This is 70-85% lower than the $35.5-$69.5m increase in TEC, other costs and lower tariff reductions resulting from the coverage of Horizon Power only. Further, reducing the UTP rates would also likely benefit customers in towns not supplied by Horizon Power (by RTIO and BHP following the UTP rates) in a way that covering Horizon Power only would not.

Social impacts

These estimated potential savings, of up to $9m accruing to a minority of customers, are dwarfed by the increase in costs resulting to SWIS non-UTP customers and taxpayers from non-avoidable fixed costs, increased regulatory burdens and inefficiencies, which Horizon Power estimates will total $70m.

Horizon Power is not aware of any other circa-100MW peak load, standalone distribution system that is supported by a competitive retail electricity market with full retail contestability. Horizon Power is also not aware of a market with full retail contestability not supported by a real-time wholesale energy market. Horizon Power submits that the Horizon Power electricity market in the Pilbara is too small to support the overheads associated with a real-time

wholesale energy market [17]. The preceding cost estimates **do not** include the costs of establishing a wholesale energy market.

Pursuant to section 71(4)(b) of the *Electricity Industry Act*, Horizon Power is by default the supplier of last resort for areas outside the SWIS. Horizon Power has historically operated as an essential service provider, where the cost of providing the essential infrastructure and services has exceeded the uniform tariff revenue received for those services. The adverse financial impact of coverage of the Horizon Power Network will make it more difficult for Horizon Power to perform this role, consistently with its obligation under *the Electricity Corporations Act 2005* to act in accordance with commercial principles.

Coverage of Horizon Power will exacerbate technical issues without protecting the system operator

It is essential that the NWIS system operator have sufficient rights to manage its network in the Pilbara in accordance with the rights and obligations that are routinely granted to other network and system operators in Western Australia, Australia and internationally.

Because Horizon Power is unable to impose any uniform technical standards with respect to power system management, but is instead required to operate under bilateral contracts with varying rights and obligations, the risk of technical or operational error is higher than in a regulated environment. Granting third parties such as Alinta access to the Horizon Power Network further increases the risk of technical operator error because the system becomes more complex to manage.

Further, unless the UTP and the existing subsidy arrangements are reformed before coverage is granted, Horizon Power will be put in an untenable legal position. If it continues to price in accordance with UTP, it may have the unintended effect of substantially lessening competition in the NWIS electricity retail market, potentially in breach of the Federal Government's new formulation of section 46 of the *Competition and Consumer Act 2010.*[18]

Complete coverage required to achieve the Code objective

Horizon Power submits that coverage of only the Horizon Power Network will not achieve the Code's objective of maximising economic efficiency. This objective is best achieved by complete coverage of the NWIS.

Coverage of the whole of the NWIS, together with the introduction of legislation to address current issues with system operations to bring it in line with current practice for other national and international integrated grids, such as by establishing a central system operator and energy settlement, will enable market mechanisms to be applied across all interconnected networks in

[17] Real-time wholesale energy market refers to a mechanism that sets the settlement price for out-of-balance energy (or total energy) in each trading interval through a bidding process. The alternative is to set the settlement price for out-of-balance energy on some other basis.

[18] The *Competition and Consumer Act (Misuse of Market Power) Act 2017* is currently before Parliament.

the NWIS. Economic benefits will include lower generation costs by optimising dispatch and common reserve capacity.

Horizon Power, Rio and Alinta / BHP[19] have different arrangements for providing spinning reserve on their respective networks. Coverage of the Horizon Power Network only puts at risk the tenuous arrangement currently in place for Horizon Power and Rio to share the costs of frequency control services. In essence, non-interconnected networks replicate the ancillary services provision in each network at a cost that is similar to that of providing the services for a single interconnected network. This piecemeal approach increases, and will continue to increase, the costs of providing ancillary services and poses challenges for each network operator in its efforts to maintain power system security and reliability.

[19] Alinta and BHP operate the interconnected system in Newman and are linked through the ASA in Port Hedland and are therefore presented as single entity w.r.t sourcing ancillary services.

Annexure A – Comparison with other jurisdictions

Jurisdiction	System Management / System Operator	Liability limitations
Australia – National Electricity Market	AEMO	Summary: • AEMO does not incur a civil monetary liability unless it acts in bad faith or is negligent in the performance of its functions under the National Electricity Law or the National Electricity Rules (ss 119(1) and (2) of the NEL). • The National Electricity Regulations (regulations 14(1) and 14(3)) set out the maximum civil monetary provisions for acts or omissions done or made in bad faith or through negligence. Legislative provisions (note: references are to the South Australian Act containing the National Electricity Law (at Schedule 1) which is applied as a law in each participating jurisdiction of the NEM by application statutes): *National Electricity (South Australia) Act 1996* **Section 119 (Immunity of AEMO and network service providers)**: (1) AEMO or an officer or employee of AEMO does not incur any civil monetary liability for an act or omission in the performance or exercise, or purported performance or exercise, of a function or power of AEMO under this Law or the Rules unless the act or omission is done or made in bad faith or through negligence. (2) A network service provider or an officer or employee of a network service provider does not incur any civil monetary liability for an act or omission in the performance or exercise, or purported performance or exercise, of a system operations function or power unless the act or omission is done or made in bad faith or through negligence. (3) The civil monetary liability for an act or omission of a kind referred to in subsection (1) or (2) done or made through negligence may not exceed the prescribed maximum amount.

		(4) The Regulations may, for the purposes of subsection (3), without limitation— (a) prescribe a maximum amount that is limited in its application to persons, events, circumstances, losses or periods specified in the Regulations; (b) prescribe maximum amounts that vary in their application according to the persons to whom or the events, circumstances, losses or periods to which they are expressed to apply; (c) prescribe the manner in which a maximum amount is to be divided amongst claimants. (5) AEMO or a network service provider may enter into an agreement with a person varying or excluding the operation of a provision of this section and, to the extent of that agreement, that provision does not apply. (6) This section does not apply to any liability of an officer or employee of a body corporate to the body corporate. (7) In this section — ***system operations function or power*** means a function or power prescribed as a system operations function or power. *National Electricity (South Australia) Regulations* **Regulation 14 (Maximum civil liabilities of AEMO or network service providers)**: (1) For the purposes of section 77A(4)(c) of the old National Electricity Law and section 119(3) of the new National Electricity Law, maximum amounts are prescribed as follows: (a) the maximum amount of AEMO's civil monetary liability to each person who suffers loss as a result of a relevant event is, in respect of that event, $2m; (b) however, if the amount of AEMO's civil monetary liability to the person in respect of that event (as affected, if at all, by paragraph (a)) exceeds the prescribed amount in respect of the relevant event, the maximum amount of AEMO's civil monetary liability to that person in respect of that event is that prescribed amount; (c) the maximum amount of each network service provider's civil monetary liability to each person who suffers loss as a result of a relevant event is, in respect of that event, $2m;

		(d) however, if the amount of the network service provider's civil monetary liability to the person in respect of that event (as affected, if at all, by paragraph (c)) exceeds the prescribed amount in respect of the relevant event, the maximum amount of the network service provider's civil monetary liability to that person in respect of that event is that prescribed amount; (e) paragraphs (a), (b), (c) and (d) do not apply in relation to civil monetary liability for death or bodily injury; (f) the maximum amount of the civil monetary liability of each officer or employee of AEMO or a network service provider to each person who suffers loss as a result of a relevant event is, in respect of that event, $1. (2) AEMO and each network service provider must ensure that the following provisions are complied with in relation to claims against AEMO or the network service provider alleging civil monetary liabilities in respect of relevant events: (a) the claims must be dealt with in an orderly manner, without bad faith and with reasonable dispatch; (b) a register must be maintained containing the following in relation to each claim lodged with it: (i) a unique identifier assigned to the claim and linked to each entry in the register relating to the claim; (ii) the date on which the claim was lodged; (iii) the amount of the claim (if stated by the claimant); (iv) the date or dates on which the relevant event to which the claim relates is alleged to have occurred; (v) the date of payment of the claim; (vi) the amount paid on the claim; (c) separate running totals must be kept in the register of— (i) the amounts of the claims (as stated by the claimants) in relation to relevant events alleged to have occurred during the same prescribed 12-month period; and (ii) the amounts paid on the claims in relation to relevant events alleged to have occurred during the same prescribed 12-month period; (d) the running totals kept in the register must be made available for inspection by the public, during ordinary business hours and at no fee, in each participating jurisdiction in which AEMO or the network service provider carries on business; (e) a person appointed by NECA, or, after the commencement date of the new National Electricity Law, by the AER, must be allowed, at any time during ordinary business hours, to conduct inspections of the register and other records of AEMO or the network service provider, and to question officers and employees of AEMO or the network service provider, for the sole purpose of checking the accuracy of the register.

		(3) In this regulation— ***prescribed amount*** in respect of a relevant event means— (a) in relation to AEMO—the amount obtained by deducting from $100m the aggregate of the amounts already paid by AEMO in discharge of AEMO's civil monetary liabilities to persons suffering losses as a result of relevant events occurring during the same prescribed 12-month period as that in which the relevant event occurred; (b) in relation to a network service provider—the amount obtained by deducting from $100m the aggregate of the amounts already paid by the network service provider in discharge of the network service provider's civil monetary liabilities to persons suffering losses as a result of relevant events occurring during the same prescribed 12-month period as that in which the relevant event occurred; ***prescribed 12-month period*** means each period of 12 months commencing on 13 November in any year and ending on 12 November in the following year; relevant event means— (a) in relation to AEMO—a negligent act or omission, or a series of connected negligent acts or omissions, in the performance or exercise, or purported performance or exercise, of a function or power of AEMO under the old National Electricity Law or the Code or the new National Electricity Law or the Rules; (b) in relation to a network service provider—a negligent act or omission, or a series of connected negligent acts or omissions, in the performance or exercise, or purported performance or exercise, of a system operations function or power; (c) in relation to an officer or employee of AEMO—a negligent act or omission, or a series of connected negligent acts or omissions, in the performance or exercise, or purported performance or exercise, of a function or power of AEMO under the old National Electricity Law or the Code or the new National Electricity Law or the Rules; (d) in relation to an officer or employee of a network service provider—a negligent act or omission, or a series of connected negligent acts or omissions, in the performance or exercise, or purported performance or exercise, of a system operations function or power.
New Zealand	Transpower System operator means the person who ensures the real-time co-	<u>Summary:</u> • If the system operator breaches the *Electricity Industry Participation Code 2010* (NZ), its liability is limited to $200,000 in respect of any one event or series of closely related events arising from the same cause or circumstance, or $2 million in respect of all events occurring in any financial year (regulations 52 and 53 of the *Electricity Industry Enforcement Regulations 2010* (NZ)).

	ordination of the electricity system, and is the person referred to in section 8 (section 5 of the *Electricity Industry Act 2010* (NZ)). By section 8 of the Act, Transpower is named as the system operator. Part 7 of the *Electricity Industry Participation Code 2010* (NZ) relates to the system operator, and includes provisions relating to the system operator's principal performance obligations and to security of supply and emergency management.	Legislation: *Electricity Industry Enforcement Regulations 2010* (NZ) **Regulation 52 (Liability of system operator)**: (1) This regulation applies if the Rulings Panel is considering the liability of the system operator, or the imposition of any penalty or costs against the system operator, resulting from a breach of the Code. (2) The Rulings Panel must take into account— (a) any arrangements the Authority has made with the system operator, including the policy statement and the procurement plan; and (b) the extent to which the acts or omissions of other persons have affected the system operator's ability to comply with the Code; and (c) the fact that the real-time operation of the power system may involve a number of complex judgements and interrelated incidents. **Regulation 53 (Limit of liability of system operator)**: The system operator is not liable for a sum in excess of— (a) $200,000 in respect of any one event or series of closely related events arising from the same cause or circumstance; or (b) $2 million in respect of all events occurring in any financial year.
Great Britain	National Grid (system operator for	Summary:

energy for life	the National Electricity Transmission System) Section 4(4) of the *Electricity Act 1989* – "transmit", in relation to electricity, means transmit by means of a transmission system, that is to say, a system which consists (wholly or mainly) of high voltage lines and electrical plant and is used for conveying electricity from a generating station to a substation, from one generating station to another or from one substation to another	• The national system operator is only liable in damages where the operator has acted in bad faith (including where the act or omission is fraudulent, in breach of a duty owed under section 27(4) of the *Electricity Act 1989*, a criminal offence, breach of contract, etc.) (regulations 15(1) and (2) of the *Electricity Market Reform (General) Regulations 2014*). • The Regulations do not prescribe a maximum amount of damages. <u>Legislation:</u> *Energy Act 2013* Section 63 of the *Energy Act 2013* deals with exemptions from liability in damages and provides that regulations made be providing that the national system operator is not liable in damages for anything done or omitted in the exercise or purported exercise of a relevant function specified in the regulations. The national system operator is not exempt from liability for an act or omission which is shown to be in bad faith, is unlawful by virtue of section 6(1) of the *Human Rights Act 1998* (public authorities not to act incompatibly with convention rights), or breach of a duty owed by virtue of section 27(4) of the *Electricity Act 1989* (compliance with final or provision order under that Act)). *Electricity Market Reform (General) Regulations 2014* **Regulation 15 (Restricted liability in damages)** (1) Paragraph (2) applies to— (a) the national system operator; (b) any director of the national system operator; and (c) any employee, officer or agent of the national system operator. (2) Subject to paragraph (3), a person to whom this paragraph applies is not liable in damages for anything done or omitted to be done in the exercise or purported exercise of the national system operator's functions under— (a) these Regulations; (b) the Allocation Regulations; or (c) any allocation framework made by the Secretary of State pursuant to section 13(2) of the Act.

		(3) The exclusion of liability in paragraph (2) does not— (a) apply where the act or omission occurs in bad faith, including where the act or omission— (i) constitutes a tort which involved a wilful act or omission calculated to cause harm or loss to another person; or (ii) is fraudulent; (b) prevent an award of damages in respect of an act or omission which is— (i) unlawful by virtue of section 6(1) of the Human Rights Act 1998(7); (ii) a breach of a duty owed by virtue of section 27(4) of the Electricity Act 1989; (iii) a criminal offence; (iv) an infringement of a person's intellectual property rights; (v) a breach of confidentiality, whether statutory or at common law; or (vi) a breach of contract.
Singapore	Energy Market Company – operates and administers the wholesale market (calculating prices, scheduling generation, clearing and settling market transactions and procuring ancillary services; administers rule change process) Power System Operator – a division of Energy Market Authority	<u>Summary:</u> • Unless a claim, loss, cost, liability, obligation, action, judgement, suit, expense, disbursement or damages arises by wilful misconduct by or any negligent act or omission of the EMC in the execution or purported execution of any function, power or obligation under these market rules, any market manual or the system operation manual, EMC is not liable (clause 13.1.1 of the Market Rules). The EMC is to indemnify and hold harmless a market participant in respect of any liability which may be imposed on EMC under clause 13.1.1 (clause 13.1.2 of the Market Rules). • EMC is not liable for consequential loss, special damages, loss of profit, loss of opportunity, or any damages where the amount claimed (exclusive of costs) is in the aggregate less than $5,000 (in respect of a given event or circumstance and a given person) (clause 13.1.4 of the Market Rules). • Similar provisions with respect to the liability of the PSO (see clauses 13.2.1, 13.2.2 and 13.2.4 of the Market Rules). • The liability provisions in, amongst others, clauses 13.1.1, 13.1.2, 13.1.4, 13.2.1, 13.2.2 and 13.2.4, apply to any agreements between the EMC / PSO and market participants, and in the event of any inconsistency between the Market Rules provisions and those in the contract, the Market Rules provisions prevail to the extent of the inconsistency. <u>Legislation:</u>

energy for life	responsible for ensuring reliable supply of electricity to consumers and secure operation of power system; controls the dispatch of generation facilities, co-ordinates outages and power system emergency planning and directs operation of high voltage transmission system	*Electricity Act* (Chapter 89A) – Part VI (Wholesale Electricity Market) **Section 45 (Liability of Market Company)**: (1) No suit or other legal proceedings shall lie against any director, officer, employee or agent of the Market Company or any person acting under the direction of the Market Company for anything which is in good faith done or not done, in the execution or purported execution of the functions of the Market Company. (2) Subsection (1) does not relieve the Market Company of any liability to which it would otherwise be subject in respect of a cause of action arising from any act or omission referred to in that subsection. *Market Rules* (as at 1 April 2016) **Clause 13.1 (Liability of EMC)**: 13.1.1 Except as otherwise provided in these market rules, the EMC shall not be liable for any claim, loss, cost, liability, obligation, action, judgement, suit, expense, disbursement or damages of a market participant or its directors, officers or employees whatsoever, howsoever arising and whether as claims in contract, claims in tort (including but not limited to negligence) or otherwise, arising out of any act or omission of the EMC in the execution or the purported execution of any function, power or duty under these market rules, any market manual or the system operation manual except to the extent that such claim, loss, cost, liability, obligation, action, judgement, suit, expense, disbursement or damages arises out of any wilful misconduct by or any negligent act or omission of the EMC in the execution or purported execution of any function, power or obligation under these market rules, any market manual or the system operation manual. 13.1.2 Subject to section 13.1.4, the EMC shall indemnify and hold harmless a market participant and the market participant's directors, officers and employees from any and all claims, losses, liabilities, obligations, actions, judgements, suits, costs, expenses, disbursements and damages incurred, suffered, sustained or required to be paid, directly or indirectly, by, or sought to be imposed upon, the market participant, its directors, officers or employees from or in respect of any matter with respect to which liability may be imposed on the EMC pursuant to section 13.1.1. 13.1.3 For the purposes of section 13.1.1, an act or omission of the EMC effected in compliance with these market rules, any market manual or the system operation manual shall be deemed not to constitute wilful misconduct or a negligent act or omission. 13.1.4 Except as otherwise provided in these market rules, in no event shall the EMC be liable to indemnify and hold harmless a market participant or the market participant's directors, officers or employees from or in respect of:

		13.1.4.1 any indirect or consequential loss or incidental or special damages including, but not limited to, punitive damages; 13.1.4.2 any loss of profit, loss of contract, loss of opportunity or loss of goodwill; or, 13.1.4.3 any damages where the amount claimed, exclusive of amounts claimed for costs, in respect of a given event or circumstance and a given person, is in the aggregate less than $5,000; and no market participant shall assert or attempt to assert against the EMC any claim in respect of any of the losses or damages referred to in section 13.1.4.1 to 13.1.4.3. 13.1.5 Each market participant shall have a duty to mitigate damages, losses, liabilities, expenses or costs relating to any claims for indemnification that may be made by the market participant pursuant to section 13.1.2. **Clause 13.2 (Liability of PSO)**: 13.2.1 Except as otherwise provided in these market rules, the PSO shall not be liable for any claim, loss, cost, liability, obligation, action, judgement, suit, expense, disbursement or damages of a market participant or its directors, officers or employees whatsoever, howsoever arising and whether as claims in contract, claims in tort (including but not limited to negligence) or otherwise, arising out of any act or omission of the PSO in the execution or the purported execution of any function, power or duty under these market rules, any market manual or the system operation manual except to the extent that such claim, loss, cost, liability, obligation, action, judgement, suit, expense, disbursement or damages arises out of any wilful misconduct by or any negligent act or omission of the PSO in the execution or purported execution of any function, power or obligation under these market rules, any market manual or the system operation manual. 13.2.2 Subject to section 13.2.4, the PSO shall indemnify and hold harmless a market participant and the market participant's directors, officers and employees from any and all claims, losses, liabilities, obligations, actions, judgements, suits, costs, expenses, disbursements and damages incurred, suffered, sustained or required to be paid, directly or indirectly, by, or sought to be imposed upon, the market participant, its directors, officers or employees from or in respect of any matter with respect to which liability may be imposed on the PSO pursuant to section 13.2.1. 13.2.3 For the purposes of section 13.2.1, an act or omission of the PSO effected in compliance with these market rules, any market manual or the system operation manual shall be deemed not to constitute wilful misconduct or a negligent act or omission.

		13.2.4 Except as otherwise provided in these market rules, in no event shall the PSO be liable to indemnify and hold harmless a market participant or the market participant's directors, officers or employees from or in respect of: 13.2.4.1 any indirect or consequential loss or incidental or special damages including, but not limited to, punitive damages; 13.2.4.2 any loss of profit, loss of contract, loss of opportunity or loss of goodwill; or, 13.2.4.3 any damages where the amount claimed, exclusive of amounts claimed for costs, in respect of a given event or circumstance and a given person, is in the aggregate less than $5,000; and no market participant shall assert or attempt to assert against the PSO any claim in respect of any of the losses or damages referred to in sections 13.2.4.1 to 13.2.4.3. 13.2.5 Each market participant shall have a duty to mitigate damages, losses, liabilities, expenses or costs relating to any claims for indemnification that may be made by the market participant pursuant to section 13.2.2. **Clause 13.5 (Contractual Liability)**: 13.5.1 The liability and indemnification provisions of sections 13.1 to 13.3 and, where applicable, of any other section of these market rules other than this section 13.5, and the force majeure provisions of section 13.4 shall apply to any agreement referred to in these market rules to which the EMC and a market participant or the PSO and a market participant are parties and to all acts or omissions of the EMC or the PSO, as the case may be, or the market participant in the execution or purported execution of any function, power or duty under such agreement. In the event of an inconsistency between such liability, indemnification and force majeure provisions and the liability, indemnification and force majeure provisions of such agreement, the liability and indemnification provisions of sections 13.1 to 13.3 and, where applicable, of any other section of these market rules other than this section 13.5, and the force majeure provisions of section 13.4 shall prevail to the extent of the inconsistency.

Annexure B – Response to Department of Treasury Issues Paper

1. Introduction

On 15 September 2017, the Department of Treasury, Public Utilities Office published the 'Coverage of the Horizon Power electricity network in the North West Interconnected System: Issues Paper' (**Issues Paper**). The purpose of the Issues Paper was to provide guidance on matters relevant in assessing the coverage application against the tests in section 3.5 and section 3.6 of the *Electricity Networks Access Code 2004 (WA)*(**Code**) and to pose a series of questions for stakeholder consultation in respect of the application.

The matters raised in the Issues Paper are set out below, along with Horizon Power's corresponding response raised in this submission paper.

2. Matters Raised in the Issues Paper

2.1 The network that is subject to the coverage application

Question 1: Does Alinta's coverage application define the network for which coverage is sought with sufficient clarity?

Alinta's application relevantly stated:[20]

> 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 referred to 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.

Horizon Power's response:

Alinta's application is for coverage of the transmission and distribution systems of Horizon Power's network.

In section 3 Horizon Power's submission notes that coverage of Horizon Power's network operates, or can operate, in parallel with other network owners. If these networks remained connected to a covered Horizon Power Network, these other networks would be contributing to Horizon Power's provision of its regulated transport services. This will create significant

[20] Alinta Energy, *Network Coverage Application for Horizon Power NWIS Network,* 4 August 2017, pg. 5.

commercial uncertainty for all parties and the unregulated networks may disconnect to avoid the resulting risk exposure.

2.2 The coverage criteria

The following questions relate to the nature of the network or networks that are the subject of the coverage application and request feedback as to whether covered services differ between transmission and distribution networks.

Question 2: Are there effectively different networks within the Horizon Power network for which access is being sought?

Horizon Power's response:

Alinta's application is for coverage of the transmission and distribution systems of Horizon Power's network. Horizon Power submits that there are no material differences in the nature of the services sought between the transmission and distribution networks. However, most of the cost benefits arise from coverage of the transmission network (refer to discussion on customer base in section **Error! Reference source not found.** of this submission).

Question 3: Should covered services be split into a transmission network use of system service and a distribution network use of system service?

Horizon Power's response:

See response to question 2 above.

2.3 Criterion (a): Promotion of a material increase in competition

The Issues Paper states that the rationale behind the criterion in section 3.5(a) is that the imposition of costs associated with an access arrangement is only warranted where there are, or will be, greater competition in at least one market (apart from the market for the particular network service) that leads to consumer benefits. The following questions to be addressed by stakeholders relate to the effect that coverage will have on competition and the extent to which effective competition is already provided by other means.

The Issues Paper notes that Alinta's application did not consider the extent that alternative sources of energy supplies will affect the level of competition, nor did it consider the implications for competition in the electricity generation market if the Horizon Power Network becomes covered under the Code.

Question 4: Will access to the Horizon Power NWIS network promote competition in another market or markets? What is the nature of those markets?

Horizon Power's response:

Horizon Power contends at sections 2 and 6.3 of its submission that the subsidised nature of the NWIS market presents obstacles to achieving a competitive market even if the Horizon Power network is covered. Further in section 3 of its submission Horizon Power details the extent of the total available customers that are made available for competition if Horizon Power only is covered.

Pursuant to the government's uniform tariff policy (UTP), small-use customers in Western Australia have access to regulated retail tariffs, which means all of these customers are charged

the same price for electricity, irrespective whether the costs of supply are higher due to their regional location. Because the UTP means Horizon Power cannot recover its actual costs of supply from its customers, Horizon Power currently receives subsidies equal to the difference between its actual costs and revenues that are ultimately borne by SWIS customers and WA taxpayers. Horizon Power receives this subsidy for costs attributable to supplying UTP customers only, it does not receive subsidy for non UTP customers. The UTP and existing subsidies paid to Horizon Power will make it uncommercial for new entrant retailers, apart from Alinta, to compete for Horizon Power customers.

Further, Horizon Power has a statutory obligation to its primary shareholder, the State Government to act in accordance with prudent commercial principles, consistent with maximising long term value[21]. Under the existing subsidy arrangements, it would not be commercially prudent for Horizon Power to compete with Alinta for UTP customers. Under the existing regime, Horizon Power stands to lose total subsidy support for any customers it supplies at a price below the UTP. It does not lose this support if it maintains the customer pricing offer at UTP. The effect of this loss of subsidy is that Horizon Power is subject to a perverse incentive not to compete with Alinta on price for UTP customers.

Question 5: Is there already significant competition in those markets?

Horizon Power's response:

See response to question 4 above.

Question 6: Are there different related markets for transmission as compared to distribution services and what is the nature of these markets?

Horizon Power's response:

Section 3.1 provides an overview of Horizon Power's transmission and distribution market. The market segments can be broken down into residential, small business, medium business, large business customers and government customers. Excluding transmission-connected loads, Horizon Power accounts for less than 8% by volume for transmission and distribution peak load in the Pilbara.

Question 7: Do other sources of energy such as natural gas or self-supply options, provide effective competition in supply of electricity in the NWIS?

Horizon Power's response:

In Section 4, Horizon Power states that generation capacity in the NWIS is underutilised because of its isolation from interconnected transmission networks. In sections 4.1 and 4.2, Horizon Power submits that access to this generation capacity and more efficient dispatch of existing generation would result in more efficient capital investment and generation optimisation.

Horizon Power submits that coverage of the whole of the NWIS would more effectively achieve the objects of the Code. Horizon Power proposes the sharing of outputs from generation

[21] Section 61 of the *Electricity Corporations Act 2005*

facilities and ancillary services across the whole of the NWIS instead of duplicating individual systems and networks.

Question 8: If you are a generator or electricity retailer, would you be interested in seeking access to the services of the Horizon Power NWIS network now or in the foreseeable future?

Horizon Power's response:

Not applicable, but see Horizon Power's submission in section 6.3 for reasons that Horizon Power considers that, apart from Alinta, new entrant retail competition is unlikely to result from coverage of the Horizon Power network.

Question 9: Would the service quality and/or prices in another market be improved as a result of the access to the Horizon Power electricity network within the NWIS? How would this occur?

Horizon Power's response:

See response to question 4 above.

Further, Horizon Power in section 6.4 submits that isolated coverage of Horizon Power's network will likely result in disconnection of the Rio and Horizon Power network in the West Pilbara. The result will be a duplication of frequency control services which is estimated to cost $3 – 4m per annum. It is assumed that Horizon Power will incur half of this cost, so $1.5 – 2m.

In addition, Horizon Power considers that it will be more difficult for it to perform its role as essential service provider (see section 6.3). This may adversely impact its efforts to maintain power system security and reliability.

2.4 Criterion (b): Uneconomic to duplicate

The criterion in section 3.5(b) of the Code requires consideration of whether it would be uneconomic for anyone to develop another network to provide the covered services necessary to compete in a related market. The Issues Paper notes that this criterion closely mirrors criterion (b) in sections 44G(2)(b) and 44H(4)(b) of the *Competition and Consumer Act 2010* (Cth). The Public Utilities Office considers that the issue to be determined is whether it would be privately profitable for anyone to develop another transmission and distribution network to provide the covered services.

The following questions to be addressed by stakeholders relate to the costs of duplicating the network.

Question 10: What evidence is there that it would, or would not be privately profitable for any party to develop another network to provide the same network services as provided by Horizon Power through the electricity network within the NWIS, on a standalone basis?

Horizon Power's response:

Horizon Power accepts, in section 6.1, that Alinta's application is likely to satisfy the test in section 3.5(b) of the Code, that it would be uneconomic for anyone to develop another network

to provide the covered services provided by means of the network for Horizon Power residential customers.

Horizon Power submits that parallel networks, developed to date to support competition for BHP, FMG and Roy Hill in Port Hedland, represent over 75% of the load in East Pilbara.

Question 11: Is it appropriate to consider the duplication of the transmission and distribution networks separately for the purpose of the private profitability test?

Horizon Power's response:

See response to question 10 above.

Question 12: Are the assumptions Alinta Energy has used to support that duplication of the network is profitable, reasonable?

Horizon Power's response:

See response to question 10 above.

Question 13: Would it be privately profitable to duplicate transmission assets used to service large customers in Karratha and Port Hedland regions?

Horizon Power's response:

See response to question 10 above.

Question 14: Are there any factors likely to emerge in the foreseeable future that will affect the cost and profitability of duplicating the network?

Horizon Power's response:

See response to question 10 above.

2.5 Criterion (c): Public interest test

The criterion in section 3.5(c) of the Code requires consideration to be given as to whether access or increased access to the covered services provided by means of the network would not be contrary to the public interest. The following questions to be addressed by stakeholders relate to the factors the Minister should take into account when assessing the public interest and the weight that should be given to those factors.

Question 15: What factors are relevant to the public interest assessment of determining coverage of the Horizon Power NWIS Network?

Horizon Power's response:

Horizon Power discusses the public interest criterion in section 3.5(c) of the Code at section 6.4 'Discussion on criterion in Section 3.5(c) of the Code'. Horizon Power considers that economic and societal costs are relevant considerations. It is the task of the Minister to consider the net benefits of access and whether those benefits outweigh the costs.

In summary, Horizon Power submits that coverage will result in:

- substantial loss of Horizon Power revenue, with no compensating opportunities for growth.

- Horizon Power estimates the financial impact of coverage of its network, assuming all existing tariff classes are open to competition, will result in a material increase in the TEC levy, increasing to approximately $28 – 62m TEC by the mid-point of coverage.
- This will result in a 1.6 – 3.5% increase in the cost of Western Power network charges for non-uniform tariff SWIS customers.
- In addition, as a result of the financial impact of coverage on the TAP, net state debt will increase by approximately $32 – 68m by the end-state.

- Horizon Power's costs will increase in excess of $3m as a result of obligations that come from coverage.
- If coverage of Horizon Power only results in Rio Tinto disconnecting its network from Horizon Power the following cost increases will result:
  - Horizon Power and Rio Tinto's frequency control costs will increase by $3 – 4m
  - Horizon Power will need to make an investment of in excess of $10m to maintain a technical rules compliant supply to the Dampier Port area and the Karratha Airport.
- Coverage of only the Horizon Power part of the NWIS will further complicate Horizon Power's role as *de facto* system operator for the NWIS, as third-party access to only Horizon Power's part of the NWIS will make the system more complex for Horizon Power to manage, exacerbating existing technical and regulatory issues associated with the interconnected electricity systems in the NWIS, reducing network security and increasing Horizon Power's risk exposure to third-party claims.
- Coverage of only the Horizon Power Network will create an uneven playing field, enabling parties such as Alinta to game commercial outcomes by, for example, requiring reference services, terms and conditions, and technical outcomes that are open under Code regulation of the Horizon Power Network, the cost of which will be borne by customers of that network, but which are inefficient when the system is viewed as an integrated whole, and which may result in barriers to entry for either new entrant retailers and generators on the Horizon Power network, on the broader NWIS, or both.

Question 16: What weight should be given to equity considerations and government policies relating to the Uniform Tariff Policy that impact on electricity consumers located within the SWIS?

Horizon Power's response:

Horizon Power considers that the government's existing energy policy, including the UTP, has a critical impact on achieving a competitive market in the NWIS and should therefore be given substantive weight in considering whether approving Alinta's application would not be contrary to the public interest.

In section 2, Horizon Power points out that, irrespective of coverage of the Horizon Power network, the existing subsidised nature of the NWIS presents an obstacle to achieving a competitive market. Detailed reasons for this position, including the estimated financial impact on WA taxpayers and SWIS customers, are set out in section 6.4 of the submission. In particular, assuming all existing tariff classes are open to competition, Horizon Power estimates

that the loss of customers will result in an increase to the TEC of $28 – 62m over a four-year period.

In addition, as a result of the financial impact of coverage on the TAP, net state debt will increase by approximately $32–68m by end-state.

Question 17: Are the assumptions made by Alinta in assessing the likely effects of competitive entry reasonable?

Horizon Power's response:

In section 6.4, Horizon Power disagrees with the conclusions of Alinta's economic study undertaken by REMPLAN into the economic benefits of competitive entry. Horizon Power is of the view that the estimated 10% decrease in prices for large and small commercial and residential markets is overstated.

At section 2 and in section 6.3, Horizon Power suggests that if coverage is accepted without reforming Horizon Power's funding arrangements through the TEC, Horizon Power would be subject to a perverse incentive not to compete with Alinta on price. This is because Horizon Power's subsidy is calculated on the basis of revenue from regulated (government-gazetted) tariffs (TEC) rather than revenue from regulated and unregulated contestable tariffs.

Question 18: What are the likely effects of competitive entry in the Horizon Power NWIS retail market for residential, commercial and industrial customers?

Horizon Power's response:

See response to questions 4 and 17 above.

Geographical location of the network and the extent of interconnectedness

The following questions to be addressed by stakeholders relates to the obligation under section 3.6 of the Code that requires the Minister when exercising functions under Chapter 3 of the Code have regard to the geographical location of the network and the extent (if any) to which the network is interconnected with other networks.

Question 19: Are there any factors with the geographical location of the Horizon Power NWIS network relevant to the Minister's decision as to whether the network should be covered under the Code?

Horizon Power's response:

See response to question 4 above.

Question 20: Are any factors associated with the extent of interconnection of the Horizon Power NWIS networks relevant to the Minister's decision as to whether that network should be covered by the Code?

Horizon Power's response:

In its application, Alinta states that it does not seek access to the assets of BHP Iron Ore Pty Ltd, Rio Tinto and The Pilbara Infrastructure Pty Limited.[22] Section 3.2 of this submission outlines the interconnected networks that may be affected by Horizon Power's coverage. In addition, section 6.4 states that coverage of Horizon Power's Network would likely result prompt in Rio Tinto and Horizon Power to disconnecting their two networks in the West Pilbara. This is because Rio Tinto would be required to provide Horizon Power's covered services through its parallel network, which would impose the costs of duplication of frequency control and of the infrastructure needed to supply customers connected to Horizon Power's Dampier Substation, along with various social impacts.

Horizon Power in its submission at sections 4.2 and 4.3 argues that the *ad hoc* approach to system planning has brought about fundamental design and operation deficiencies and inefficiencies in the NWIS.

To address these problems, Horizon Power suggests the following approach to electricity industry reform in the Pilbara:

1. Introduce regulation establishing a NWIS central system operator with the authority to ensure reliable electricity supply and with statutory immunity when it acts to protect the security of the system. This regulation should be “light-handed” in nature.
2. Reform the UTP subsidy arrangements to remove the existing perverse incentives to competition.
3. Either through the Code or through the legislation established to deliver item (a) above, cover all networks in the Pilbara.

[22] Alinta Energy, *Network Coverage Application for Horizon Power NWIS Network,* 4 August 2017, pg. 5.

Annexure C – Financial modelling assumptions

The TEC gives Horizon Power no incentive to compete for UTP customers.

Horizon Power will compete for non-UTP customers but not UTP customers. All non-UTP customers will receive a 10% discount from current prices, and UTP customers who transfer to Alinta will receive a 5% discount.

Alinta has five machines with a site condition-rated capacity of 35MW each, totalling 175MW of installed capacity. They must supply BHP about 60MW and require 35MW for reserve capacity; therefore, Alinta can supply 80MW of new loads. This represents about 65% of the Horizon Power load that could be transferred to another retailer.

The loss scenario is modelled 30% and 65%, using a linear ramp over the first three years.

A consistent load factor allows changes in peak MW and MWh sales to be made consistently.

There is a 40% increase in TEC as higher costs by SWIS non-UTP customers, and 60% is funded by government through an accumulating increase in state debt.

Horizon Power loads are based on temperature-adjusted weather forecasts.

Horizon Power has modelled revenue for the network use of system charges for all customers who transfer to another retailer. This revenue is based on Horizon Power's most recent network Use-of-System pricing model.

State Budget Forecast for FY18-FY21 was approved with the assumption that most tariffs will increase 7% per annum.

A Western Power annual revenue of $1.8 billion has been used

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Annexure D – Confidential - Comparison of Modelling Assumptions with REMPLAN and Alinta Analysis