

Protecting Critical Infrastructure and Systems of National Significance

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Protecting Critical Infrastructure and Systems of National Significance (PCISNS).

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Wilson Transformer Company Pty Ltd (WTC)

Wilson Transformer Company (WTC) is an 87 years old Australian owned private company. We are the major supplier and service provider of electrical transformers to critical Australian electrical infrastructure with over a 40% market share. WTC is also the only manufacturer of large power transformers in Australia following the closure of manufacturing plants in Sydney in 2001 and in Brisbane in 2012 owned by two large multi-nationals. WTC therefore has a vital interest in the outcomes of this review.

WTC's strong supply and service roles also place it in a knowledgeable position to understand the risks to critical infrastructure in the electricity generation, transmission and distribution industry, as well as other large infrastructure activities in Australia.

Refer Website: www.wtc.com.au Brochure: [WTC-Company-e-Profile-July-2020.pdf](#)

Overview and Introductory Comments

According to the Consultation Paper, the Governments will introduce an enhanced regulatory framework, building on existing requirements under the Security of Critical Infrastructure Act 2018, including:

- A positive security obligation for critical infrastructure entities, supported by sector specific requirements;
- Enhanced cyber security obligations for those entities most important to the nation; and
- Government assistance to entities in response to significant cyber attacks on Australian systems.

There is a recognition that Australia needs to address vulnerability in supply chain security, control systems and operational technology so that businesses can operate in a global, networked environment and be protected from all hazards, but then when you look at the three initiatives listed above, they clearly do not address many of the issues.

WTC believes the Government needs to agree on what principles and policies are needed to ensure the security of our infrastructure in the best interests of the nation. Some of the big questions to be addressed include:

- Do we require a certain percentage of our infrastructure to be owned by Australian companies or the Government? If so what percentage?
- If entities are foreign owned, what measures are needed to protect our national interest such as majority of Australian directors, Government regulatory oversight, etc?
- In industries where there are no Australian entities providing the critical services such as internet news and other services, what controls are needed to protect our interests? Do we for instance need an independent monitoring of input, etc?

Once these big questions are answered then at an industry specific level, some specific regulations need to be put in place. In the power industry, what percentage of transmission and distribution entities need to be majority Australian owned and controlled? The answer to this question depends on the risk being addressed:

- On prices charged to the consumer, the Government can regulate, but
- On the question as to the ability of a foreign entity to turn out the lights or disrupt the economy, we need to agree on a percentage of the network to be owned or controlled in Australia. The Government did in the case of Ausgrid.

Each industry will be different but on the question of securing supply, the regulations need to be specific. For insulin supply it is arguably unacceptable to have all of our needs supplied by one foreign power and to address this the Government needs to support a local source of supply as well. The Government would then have a monitoring role in ensuring the competitiveness and price to be charged by the local manufacturer. For example, a company could be licensed by the Government to supply insulin at a price determined by an agreement.

In the power transformer manufacturing industry, there needs to be an agreement that it would be unacceptable that there be no local manufacturing source or repair capability. The question then is what percentage of overseas supply is acceptable, or alternatively what volume of local manufacturing is needed to support a local manufacturer and repairer.

Perhaps one way in assisting Australian manufacturing across a range of industries is to apply a local sourced preference scheme similar to what a number of State Governments have applied at various times in the past but there needs to be safeguards to ensure that the critical infrastructure objective does not lead to inefficient practices that will hurt Australia competing internationally. On this basis the incentives should only apply to that level of production that will ensure a competitive local supplier to the critical infrastructure industry.

Over the past 30 years, Australia has lost considerable manufacturing, process industry and refining capability which has left us vulnerable as a nation. Most of this capability may never return, but capable entities which have survived this period of transition along with new businesses need to be nurtured to address the future needs of Australia.

Major Concerns of Wilson Transformer Company (WTC)

1. Overseas Ownership of Electricity Utilities

The significant overseas ownership of Australian electricity transmission and distribution networks in South Eastern Australia could potentially restrict the operations of these entities at a time of National Security concern or for the operation of our power systems. The ownership of these transmission and distribution companies are:

- a) The Victorian Grid and the Eastern Victorian Distributor – 19.9% State Grid China, 31.1% Singapore Power, 49% public.
- b) 3 out of 5 Victorian Distributors – 100% CKI Hong Kong.
- c) Fifth Victorian Distributor – 60% State Grid China, 40% Singapore Power.
- d) The SA Grid – 47% State Grid China, 33% YTL Malaysia, 20% Hastings Utilities.
- e) The SA sole Distributor – 100% CKI Hong Kong.
- f) The ACT Distributor – 50% held by an entity that is 60% owned by State Grid China and 40% by Singapore Power.

[REDACTED]

Substantially more information is available on the internet including annual reports.

So far, WTC has remained a significant supplier to most of these utilities except as detailed below, but this could potentially change with Board direction or influence.

Gas Networks have similar equity arrangements and are extensively overseas controlled by [REDACTED].

2. Import Challenges in the Australian Market

WTC's ability to maintain a viable power transformer manufacturing and support business in Australia is a major challenge. Over the past 6 years, WTC's power transformer business has lost well over \$■m. These losses have substantially been supported by other parts of the business and have been caused by the following:

- a) An increasing share of the Australian power transformer market being supplied from overseas, with well over half the imports coming from China.
- b) WTC's inability to stop the dumping of power transformers by overseas manufacturers in Australia despite the company having lodged two major dumping cases in 2013 and 2019. Key factors in not winning these dumping cases to the degree expected have been:
 - The ability of overseas manufacturers using group companies to disguise the real cost of manufacture. WTC is currently before the Federal Court seeking a judicial review of the latest decisions by the Anti-Dumping Commission and the Anti-Dumping Review Panel.
 - The decision by the Anti-Dumping Commission to **not** link injury to dumping which has recently been rejected by the Anti-Dumping Review Panel.
- c) The perceived preference that some overseas controlled electricity utilities sometimes portray in buying new power transformers from manufacturers outside Australia or from the country of their ownership. This is also occurring with developers of renewable wind and solar generation infrastructure. To the extent that electricity companies with foreign ownership buy foreign transformers, then the percentage of this vital infrastructure network owned overseas or supplied from overseas increases as does the need to safeguard our National Interest. This is demonstrated by the fact that:
 - Chinese power transformers are now in the Grid in every State of Australia. They are also in other strategic assets around the country such as – iron ore mines, large wind and solar farms grid connections, LNG facilities, etc. This development has occurred over the past 10 years.
 - During the expansion of the large iron ore mines in Western Australia, China as the major customer of the mines is alleged to have exerted pressure on the miners to use Chinese industrial products in the development of the mines. These arrangements were put in place such that WTC could not even bid for most of the transformer requirements at that time.
 - The foreign risk concern to the electricity grid has been played out in the USA recently where the US Administration issued an "Executive Order on Securing the United States Bulk-Power System" which impacts on the purchase and use of power transformers and other equipment from foreign adversaries.
<https://www.whitehouse.gov/presidential-actions/executive-order-securing-united-states-bulk-power-system/>
 - The concern expressed in the US even went so far as to suggest that imported transformers may have software imbedded in them that could be triggered to disrupt the US electricity supply system.
 - A further concern for WTC is that foreign made power transformers now face very high dumping duties in the USA and Canada. In the USA dumping duties up to 60% have been imposed. As a consequence overseas power transformer manufacturers will be under more pressure to sell their production at dumped prices in other countries such as Australia.

3. Export Challenges in our Region

While the power transformer manufacturers WTC competes with in Australia have open access to the Australian market, the countries they export from support and protect their domestic manufacturers by requiring products be made in their country, using non-tariff barriers to prevent imports or providing preferences and other support activities for local manufacturers. These methodologies are used in Indonesia, Thailand, Vietnam, Taiwan, Korea, Japan, China and India.

4. National Security Concerns

WTC is not asking for a prohibition on imported power transformers, but there does need to be control over a reasonable proportion of power transformers procured in Australia to ensure that there is a source of supply and repair in Australia and that the National Security concerns are addressed.

Background on WTC

Australian owned Wilson Transformer Company (WTC) designs and manufactures distribution transformers, padmounted substations, and power transformers up to 550MVA power rating and 400kV. WTC also packages its products with externally sourced equipment such as switchgear and inverters.

WTC, via its subsidiary Dynamic Ratings, also designs and manufactures monitoring and control systems for electrical apparatus and substations (transformers, switchgear, rotating machinery, battery systems, etc).

WTC employs over 600 skilled Australians supporting our country with –

- A large power transformer manufacturing, test and service facility with 220T lifting and 300T air skate capability on a 10 acre site in Glen Waverley. The facility was extensively upgraded between 2009 and 2012, has modern capabilities and is the only one of it's type in Australia following the closure of two large multi-national competitor plants in 2001 and 2012.
- A substantial distribution transformer manufacturing plant in Wodonga making distribution transformers from 10kVA to 8,000kVA as well as package substations and skid mounted systems for the large-scale renewable sector. This facility has been upgraded many times since it was opened in 1981.
- Dynamic Ratings monitoring and control systems based in Glen Waverley
- TJH2b Analytical Laboratory based in Glen Waverley
- Transformer service resources in Victoria, Queensland, NSW and WA.

Overseas, Dynamic Rating has a substantial facility in the USA supporting major transmission and distribution utilities, and electricity generating plants including nuclear and renewables.

WTC also has sales offices in the UK and New Zealand, JV distribution transformer manufacturing plants in Malaysia and Saudi Arabia, a JV Fault Current Limiter developer and supplier in Israel, and analytical laboratories in Malaysia and the Philippines.

Sectors Supported by WTC in Australia

WTC is the major transformer supplier with support capabilities to the following sectors in Australia –

- a) Electricity Transmission and Distribution utilities with power and distribution transformers including package substations.
- b) Coal, Gas and Hydro electricity power generating plants including grid connection and other transformers.
- c) Large scale wind and solar renewable electricity generating projects with grid connection transformers.
- d) Large scale renewable projects with wind tower transformers and skid mounted solar generating plants which include inverters, transformers, switchgear and control equipment.
- e) Transformers for large battery systems, SVCs and synchronous condensers for grid stability.
- f) LNG processing plants and gas extraction activities with power and distribution transformers and package substations.
- g) Large aluminium smelters with rectifier and regulating transformers.
- h) Coal and iron ore extraction activities with power and distribution transformers.
- i) Paper and steel manufacturing plants with power and distribution transformers.
- j) Desalination plants and water pumping facilities with power transformers.
- k) Rail systems including trackside transformers and on-board locomotive transformers.
- l) Data centre transformers.
- m) Defence installation supply transformers.
- n) Universities and food production supply transformers.
- o) General industry and infrastructure including hospitals, cities, bridges and tunnels.

Over the years WTC has supplied, replaced and repaired critical transformers in power generation plants, aluminium smelters, mines, and the transmission and distribution networks where WTC was not the original equipment supplier.

Besides supplying transformers to the forgoing sectors, WTC, Dynamic Ratings and TJH2b also provide through life service, repair and support for products and systems, including on-line monitoring and control systems and off-line analytics.

Our internal and cloud-based engineering, commercial, and communication IT systems are being progressively upgraded in an endeavour to address the risks of a cyber or other event. These activities are being undertaken with our own IT experts and with some external support.

Enhanced Critical Infrastructure Framework and Entities to be Covered

WTC supports an approach which achieves a baseline of cyber, physical, personnel and supply chain protections based on a framework built around principle-based obligations sitting in legislation.

In addition to the cyber threat, a key and developing issue for Australia is the reduction of physical facilities and the reduction of industry knowledge experts that are involved in the supply to and support of Regulated Critical Infrastructure Entities. Increasingly this capability in Australia has been closed down or offshored, risking the ability of Australian based resources to rapidly respond to unplanned events. This trend has developed as the ownership of Electricity Utilities has transferred overseas, and large construction and engineering consulting firms become part of global organisations. These changes have been a contributing factor to the closure of manufacturing and service facilities, and the use of overseas engineers rather than Australian capability.

WTC is of the view that the Company as an entity sits within the definition of a Critical Infrastructure Entity supporting Regulated Critical Infrastructure Entities. WTC also supports many entities that would fall into the definition of Critical Infrastructure Entities as well as the Whole Economy.

Response to Questions 1 to 6 of the Consultation Paper

1. It is suggested that the definition of critical infrastructure on page 11 of the discussion paper be modified slightly by including the following words in red –

‘those physical facilities, **manufacturing & service support facilities**, supply chains, information technologies and communication networks, which if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic wellbeing of the nation, or affect Australia’s ability to conduct national defence and ensure national security.’

If the proposed modification above is not acceptable, then a “manufacturing and service support facilities” which support Critical Infrastructure somehow needs to be included, perhaps as a 12th item in the list of areas where there will be proportionate security obligations.

WTC further supports proportionate security obligations to the areas specified on page 11 of the discussion paper.

2. The definition of Critical Infrastructure should be enhanced to address the issues of a more challenging world.
3. No comment at this stage.
4. Common threats we endeavour to prepare for and experienced as a business –
 - Dumped products from overseas suppliers and from MNCs with overseas manufacturing operations and sales/customer interfacing offices in Australian.
 - International alliances on supply cutting out Australian suppliers and preventing Australian suppliers from even participating in bids or projects for Australia.
 - Purchase decisions increasingly being made overseas to the detriment of Australian suppliers and service providers.

- Purchasing decisions by our customers are increasingly being based on price with less consideration for the total cost of ownership and long-term commitments of the supplier to Australia. Local suppliers are held to account for long term strategic assets and therefore act in the best interests of Australia, while overseas suppliers often provide a product that is designed to get through the warranty period.
 - Variability in demand for products and services.
 - Cyber or other event, including from a supplier, a customer or a competitor.
5. No comment at this stage. This is a very complex issue.
6. Owners and operators of systems of national significance should be –
- The Federal or State Governments, or
 - Majority Australian owned entities $\geq 51\%$ equity and preferably much higher, or
 - If $< 50\%$ Australian equity, the operators should be $\geq 51\%$ Australian and there should be a stringent regulatory regime. This should include obligations to support Australian based product suppliers, service providers and subject matter experts to maintain and enhance Australian capability for national security.

The problem with majority overseas equity and operational control is that decisions will most likely be made for the benefit of the overseas owner rather than in Australia's best interests. Some overseas electricity utility shareholders of Australian electricity utilities are State owned enterprises and have their own manufacturing subsidiaries and subject matter experts.

Government-Critical Infrastructure Collaboration to Support Uplift

WTC supports the concept of working together. Internally, within our business, we use the slogan – Better Together.

Enhancing and broadening the Government's existing critical infrastructure education, communication and engagement activities through a reinvigorated Trusted Information Sharing Network and updated Critical Infrastructure Resilience Strategy is logical.

WTC has some questions/comments regarding the activities:

- Would entities include the expanded list and potentially a business such as WTC?
- Who are the international partners? Are they governments, equity owners, consultants or suppliers?
- Which entities would be the participants being offered individual vulnerability assessments?
- Which entities would participate in the partnership?

Response to Questions 7 to 9 of the Consultation Paper

7. A revised TISN and Critical Infrastructure Resilience Strategy would support the reforms proposed in the Consultation Paper, but the reforms need to be broader.
8. Under a new definition of Critical Infrastructure Entities, there are potentially hundreds of entities that would qualify. This could then only be done on a sector specific basis so that the

shared information as required would be treated confidentially. WTC would like to know the details of the revised TISN model.

9. Cyber security is without doubt the issue that can be cross sector shared. Webinars, education and information sharing in this field would be valuable. In the narrower sector activities, perhaps more direct engagement between government, a Potential Critical Infrastructure Entity such as WTC, and a Regulated Critical Infrastructure Entity could be valuable.

Initiative 1: Positive Security Obligations (PSO's)

Principles-based outcomes

WTC supports the strategy and actions proposed.

Security Obligations

WTC supports a new framework in legislation the high-level security obligations that critical infrastructure entities should meet, covering as outlined at a minimum:

- Physical Security
- Cyber Security
- Personnel Security
- Supply Chain Security – This matter needs to be considered on a sector basis in much more detail than addressed in the Consultation Paper.

Response to Questions 10 to 14 of the Consultation Paper

10. Yes, although they may well duplicate what exists in the Regulated requirements for electricity. Further, specific sectors requirements in the supply chain may need to be much more detailed than the broad principles-based proposals.
11. Yes.
12. It is my understanding that organisations I am familiar with are already operating in-line with many of the principles and where they are not, the time and cost to meet principles would be minimal.
13. Based on WTC's response in 12, the costs to meet the new obligations would be minimal.
14. Some business systems and Regulatory requirements impose security obligations in-line with the principles. The costs to meet the obligations would not be too high. Maintaining supply chain security including domestic manufacturing and service capability, and domestic human expertise may impose some additional cost, but this should be off-set by local support and reduced total supply chain costs.

Regulators

There are already many Acts and Regulations which make up the regulatory framework for electricity in Australia, which in the main come under the States but with some Commonwealth oversight. For example, in Victoria the Electricity Industry Act 2000 regulates electricity and the Essential Services Commission issues licences for the generation, transmission, distribution,

supply and selling of electricity. Further the Australian Energy Regulator (AER) is the economic regulator of electricity, the Australian Energy Market Commission (AEMC) is the rule maker and the Australian Energy Market Operator (AEMO) is the wholesale market operator.

The forgoing Acts and Regulations however do not address many of the issues associated with protecting critical infrastructure systems and entities, both regulated and unregulated. WTC therefore supports Regulatory Reforms to address these issues, as proposed, but which should sit beside and not replace existing regulations which currently have a different focus.

Response to Questions 15 to 21 of the Consultation Paper

15. There may be some duplication, but as much as possible it should be avoided, unless the role of the existing regulator was modified to include critical infrastructure obligation. This may be challenging as the role of the Regulator would then extend to critical infrastructure entities outside the regulated environment.
16. No comment at this stage.
17. The existing regulator would be in a good position to take on the role for the regulated electricity sector, but it would be challenging to take on a wider role.
18. Support would need to come from a Federal body with oversight. The existing regulator would also need to engage with some of the critical entities outside the regulated electricity sector, which would be highly beneficial.
19. Initially by engaging with entities and understanding the issues.
20. The AusCheck scheme may be beneficial, but any responsible entity does detailed checks on new employees which may be as detailed or more detailed than AusCheck.
21. The Positive Security Obligations proposal appears reasonable, but they may need to be broadened to secure the supply chain, including the support for domestic manufacture, supply and service. The issue of penalties for non-compliance would need to be understood, and should be a last resort measure.

Initiative 2: Enhanced Cyber Security Obligations

Initiative 3: Cyber Assistance for Entities

As WTC does not operate a System of National Significance and is not a Regulated Critical Infrastructure Entity, we will not have Positive Security Obligations with the Government and therefore will not be responding to the Consultation Paper from page 25 onwards including expressing views on questions 22 to 36.

WTC however is very concerned about cyber security and cyber incidents and we want to play our role as an Australian Critical Infrastructure Entity in preventing, disrupting and as appropriate responding to a cyber threat or incident within our capability.