APPLICATION FOR TRANSMISSION LICENCE VARIATION

by

Transmission Operations (Australia) Pty Ltd

ACN 159 526 520

16 July 2018

NON-CONFIDENTIAL VERSION

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1 Introduction

Transmission Operations (Australia) Pty Ltd ACN 159 526 520 (**TOA**) was issued a licence to transmit electricity on 4 September 2013 (**Licence**). We seek a variation to our Licence to allow for the connection of the Moorabool Wind Farm (**MOWF**) and the Elaine Wind Farm (**ELWF**).

The scope of the existing Licence is specific to the assets constructed for the Mt Mercer wind farm, including the Elaine Terminal Station (**ELTS**). The Licence also obliges us to offer to provide connection to our electricity transmission system to prescribed persons.

We are currently authorised to transmit electricity via the "transmission asset" and on the terms and conditions set out in our Licence. "Transmission asset" is defined as "the assets connecting the Mt Mercer Wind farm to the declared transmission system". This definition does not expressly include additional connections through the ELTS, despite us being required to offer such further connections.

TOA seeks to extend the scope of the existing licence to authorise the transmission of electricity via specific new assets connecting MOWF and ELWF to ELTS. This variation request seeks to align the scope of our Licence with our connection and augmentation obligations.

TOA provides the following variation request in accordance with the matters set out in the letter from the Essential Services Commission (Victoria) (**ESCV**) dated 4 December 2017.

1.1 Applicant information

TOA's business details are provided below.

1.1.1 Business name

Transmission Operations (Australia) Pty Ltd, ACN 159 526 520 and ABN 21 159 526 520.

1.1.2 Registered office

Transmission Operations (Australia) Pty Ltd
40 Market Street
Melbourne VIC 3000

1.1.3 Contact person

Eric Lindner
Chief Executive Officer
Telephone: [✂]

1.1.4 Date sought for variation

TOA seeks the licence variation to commence as soon as possible, and no later than 31 December 2018.

2 The ESCV's objectives

TOA considers that its requested variation is consistent with and furthers the ESCV's objectives set out in section 8 and 8A of the *Essential Services Commission Act 2001 (Vic)*, as amended.

The reasons for this are already set out in TOA's application to the ESCV for the Licence dated November 2012 and the ESCV's Notice of Decision dated 4 September 2013 granting our current Licence. Key aspects of these are set out below.

2.1 Key objectives underpinning current Licence

The ESCV stated in its Notice of Decision that:

(a) it evaluated the risk to Victorian consumers if TOA were to fail for any reason, including the applicant's financial viability, and is satisfied that the regulatory regime under which the applicant will operate is sufficient to ensure the protection of the long term interests of Victorian consumers

(b) a decision to grant a retail Licence to a new transmission market entrant has the potential to promote competition in the transmission of electricity and therefore to also promote the long terms interests of Victorian consumers regarding the efficiency of the industry, and accordingly the Licence granted to TOA is consistent with the ESCV's objectives.

2.2 Key objectives furthered by Licence variation

We consider that our requested variation does not change the above basis upon which our current Licence was granted, and provides additional considerations in favour of making the variation. In particular:

(a) the transmission of electricity by TOA via these additional assets would further facilitate competition in, efficiency of and financial viability of regulated markets, by:

  (i) increasing and improving market participants' connection options

  (ii) fully utilising the ELTS (creating greater efficiencies for its ongoing maintenance and development)

(b) the requested variation will enable TOA to consistently and efficiently comply with the State and national regulatory regime in respect of TOA's connection and augmentation obligations, and therefore ensure consistency between State and national regulatory frameworks

(c) the additional "shared network assets" (being the assets that could, if defective, have any negative bearing on the quality and reliability of the electricity services) would be relatively minor in nature because they are confined by reference to the ELTS and will require little change. Therefore these additional shared assets do not justify the extensive regulatory burden of, or the extra costs and inefficiencies that would result from, applying for a new licence.

Not varying the Licence is contrary to the above objectives and considerations because it would impede or prevent compliance with our connection and augmentation obligations and therefore create significant inefficiencies and increased costs in implementing new connections or augmentations.

3 Changes to corporate and organisational structure

This section sets out any relevant changes to the corporate and organisational structure for TOA since its initial Licence Application in 2012. It also sets out any relevant changes to the proposed service model for the MOWF and ELWF compared with the Mt Mercer wind farm. Generally, the corporate and organisational structures, and the service model remain the same.

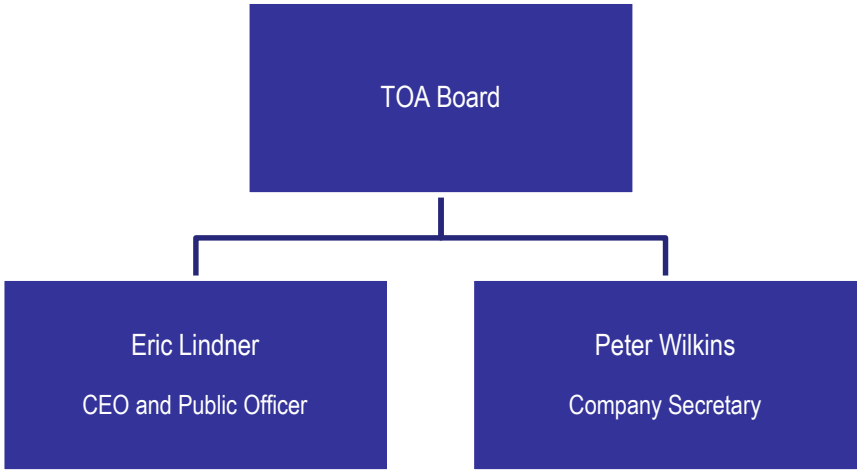
3.1 Changes to corporate structure

There are no changes to the ultimate owners of TOA.

3.2 Changes to organisational structure

The current organisational structure of TOA is shown in the figure below.

Figure 1 TOA organisational structure



Members of TOA's Board are the same as set out in the Licence Application with the following exceptions:

- Shane Breheny been replaced by Timothy Rourke as a Director of TOA
- Andrew Hunter has replaced Peter Tulloch as the Chairman. Peter Tulloch remains on the Board as a Director.

Timothy Rourke has extensive experience in the energy industry. He is also a Director of TOA2, and the Chief Executive Officer of CitiPower, Powercor and United Energy. His previous roles include Asia Pacific Regional Executive for GE Aero Energy based in Singapore, Chief Executive Officer of GE Energy Infrastructure Australia and New Zealand and senior executive roles with AGL, Southern Hydro Pty Ltd and Alliant Energy Australia.

The following changes to key personnel have occurred:

- Peter Wilkins has replaced Simon Lucas as Company Secretary
- Eric Lindner has been appointed as the Public Officer.

Peter Wilkins is Company Secretary and General Manager People and Culture and Legal for CitiPower and Powercor. His previous roles include experience across Human

Resources in the Supply Chain and Logistics, Fast Moving Consumer Goods, Manufacturing and Automotive industries.

3.3 Changes to service model

TOA continues to utilise a service model via contractual arrangements with experts to support its operations on an ongoing basis.

However, as a result of the Australian Energy Regulator's (**AER**) ring-fencing guideline for distributors published in 2016, Powercor Network Services (**PNS**) no longer provides connection and network services to TOA. These are now acquired from Beon Energy Solutions (**Beon**)—which was formerly integrated within PNS and continues to be supported by it.

Beon and PNS are both wholly owned subsidiaries of Victoria Power Networks (**VPN**). Beon has extensive experience in the provision of design, construction, maintenance and management services across the electricity distribution and transmission sectors, as well as the communications sector as discussed further below. Its clients include Australia's largest electricity utilities, infrastructure developers, commercial and industrial clients, and telecommunications network owners.

A more detailed outline of the service model is provided at section 5.1.

4 Scope of variation request

This section sets out the scope of the new assets for the connection of the MOWF and ELWF. In sections 4.1 and 4.2, the following are provided for MOWF and ELWF respectively:

- Overview of the connections
- New primary, secondary and transmission line assets
- A single line diagram.

4.1 New Assets for the connection of MOWF

The 321 MW MOWF will be connected to the AusNet Services grid via ELTS. ELTS is connected into the 220 kV line from the Moorabool Terminal Station (**MLTS**) to Ballarat Terminal Station (**BATS**).

ELTS works involve:

- Extending the 220kV bus from Bay E to Bay F (minor augmentation of shared assets)
- The installation of a new 400MVA 220kV/132kV transformer
- Switching, metering, protection and controls, and communications.

A 132kV overhead line will be constructed to connect ELTS to MOWF's 132kV/33kV Collector Stations at Ballark (**BKS**) and Bungeeltap (**BPS**). The 29.5 km line will comprise 11.1 km double circuit to BKS and then single circuit to BPS.

4.1.1 New Assets

The new assets for the MOWF connection are outlined below.

Primary plant – ELTS major plant

- 5 of - 132kV Motorised Disconnectors
- 2 of - 132kV Circuit Breakers with Integral Current Transformers
- 5 of - 132kV Magnetic Voltage Transformers (2-off Line and 3-off Bus)
- 9 of - 132kV Surge Arresters (3-off per 132kV line and 3-off at Power Transformer)
- 1 of - 220/132/11kV 400MVA Power Transformer
- 2 of - 220kV Motorised Disconnectors
- 1 of - 220kV Circuit Breaker with Integral Current Transformers
- 3 of - 220kV Combined Current Transformer/Voltage Transformer
- 3 of - 220kV Surge Arresters

Secondary plant

Secondary functional scope and associated works for the MOWF connection is provided in Schedule 1 to confidential **Attachment A**.

132kV Overhead Transmission line

The 29.5 km overhead transmission line connecting ELTS to the two wind farms collector stations comprises:

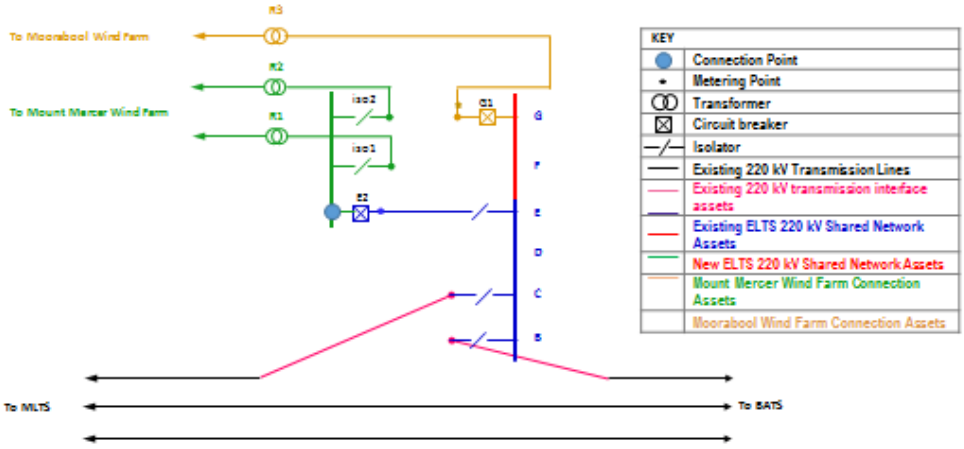
- Insulators
- Conductor and conductor fittings
- Poles and pole fittings
- Stay fittings
- Optical ground wire.

More detailed transmission line information including the functional specification is provided in Schedule 1 to confidential **Attachment A**.

4.1.2 Single line diagram

Figure 2 provides a single line diagram of the ELTS connection of the MOWF. This diagram includes the existing connection of the Mt Mercer wind farm.

Figure 2 ELTS connection of MOWF single line diagram



4.2 New assets for the connection of ELWF

The 84 MW ELWF is to be connected to AusNet Services' network via ELTS. ELTS is connected into the 220 kV line from MLTS to BATS.

ELTS works involve:

- Extension of the 220kV bus from Bay F to Bay G (minor augmentation of shared assets)
- The installation of a new 100MVA 220kV/33kV transformer
- Switching, metering, protection and controls and communications.

Three 33 kV underground feeders will run to the wind farm. The boundary between TOA's assets and ELWF will be at the 33 kV cable connection onto the 33 kV feeder circuit breakers.

4.2.1 New Assets

The new assets for the ELWF connection are outlined below.

Primary Assets – ELTS major plant

- 1 of - 220kV circuit breaker
- 2 of 220kV Motor Operated Disconnect Switches
- 1 of - 100MVA 220/33kV Transformer
- 1 of - 33 kV Capacitor bank
- 6 of - 33kV circuit breakers.

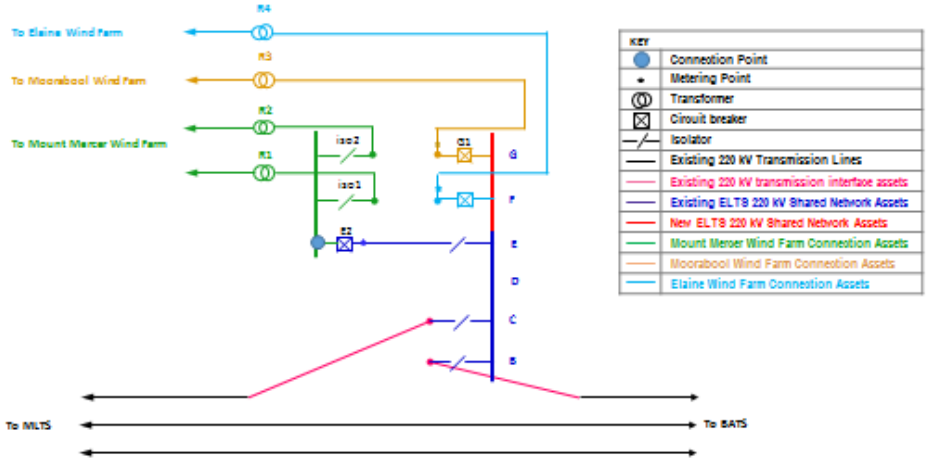
Secondary

Secondary functional scope and associated works for the ELWF connection is provided in Schedule 1 to confidential **Attachment B**.

4.2.2 Single line diagram

Figure 3 provides a single line diagram of the ELTS connection of the ELWF. This diagram includes the existing connection of the Mt Mercer wind farm and the new connection for the Moorabool wind farm.

Figure 3 ELTS connection of MOWF and ELWF single line diagram



5 Technical capacity

To demonstrate that TOA continues to have the required technical capacity, this section sets out the following information:

- Details of TOA's 'service model', including identifying services and functions to be performed by third parties
- Details of relevant planning approvals or land access arrangements
- Confirmation that TOA has met the requirements of, and obtained relevant approvals, under the National Electricity Law
- Confirmation of the risk management and governance policies that TOA will use to meet obligations arising under relevant health, safety, environmental and social legislation.

5.1 Service Model

TOA continues to have access to the expertise, knowledge and skill required to viably operate as a Transmission Network Service Provider in the National Electricity Market (**NEM**). The service model involves purchase contracts with related entities within the VPN Group for the majority of services required by TOA to undertake its day to day business.

This is the same service model used to deliver the Mt Mercer wind farm (commissioned in 2013) and the Ararat wind farm (commissioned in 2016 by TOA's sister company, Transmission Operations (Australia) 2. These projects have delivered high quality assets that operate with high reliability.

5.1.1 Contracted Service Providers

TOA is acquiring its services for the MOWF and ELWF connections from Beon and International Infrastructure Services Company – Australian Branch (**IISC-AU**).

5.1.2 Service Contracts

Design, construction, operation and maintenance services

TOA is contracting Beon to provide the design, construction, operation and maintenance of the assets for the MOWF and ELWF connections. The contracts with Beon for the provision of these services are:

- Confidential **Attachment A** and **Attachment B** —Beon will undertake the design, construction and commissioning of the augmentation to the ELTS, and the connections for MOWF and ELWF.
- Confidential **Attachment C** — Beon will undertake the operation and maintenance of the shared assets of the ELTS, and the connections for MOWF and ELWF.

These contracts require Beon to:

- Maintain adequate technical capacity

- Allow information to be provided to TOA and any regulatory body
- Perform functions in a manner that allows TOA to comply with all relevant legal and regulatory obligations.

Corporate services

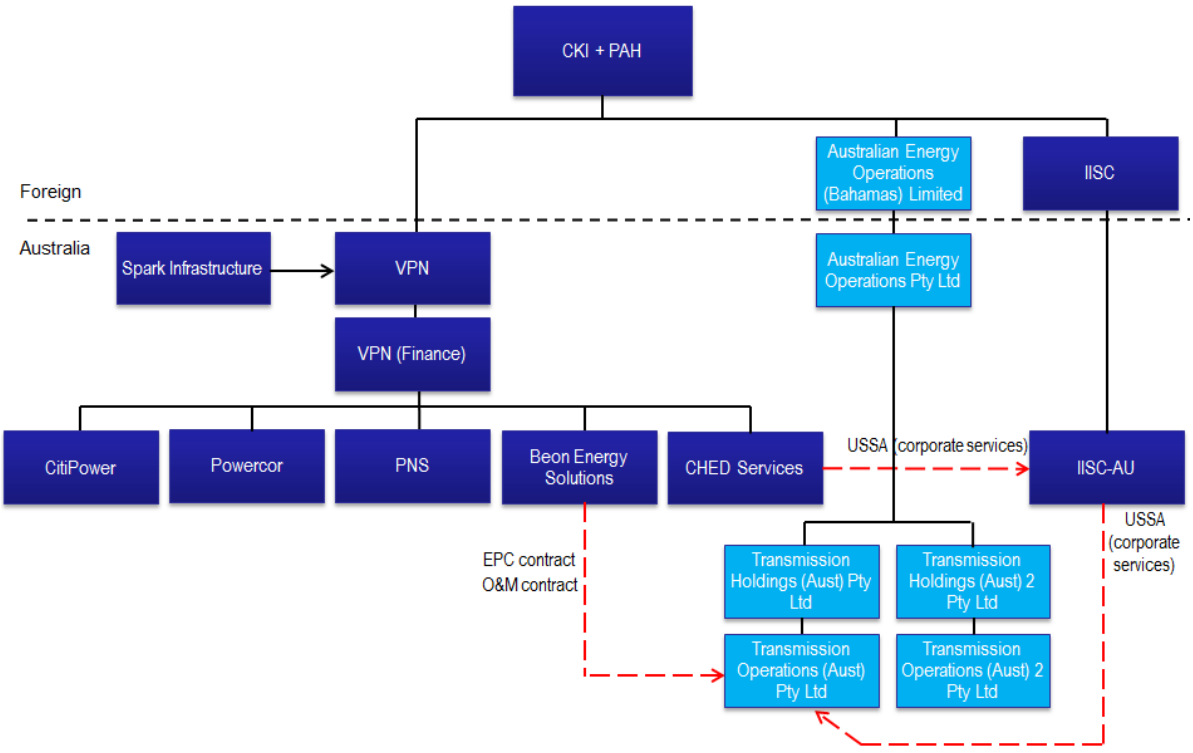
The services contemplated through the original Utility Support Services Agreement are continuing to be provided. IISC-AU provides specialist corporate services including, Finance, Company Secretarial, Internal Audit, Legal, Human Resources, Corporate Affairs, Regulation, Customer Services, Information Technology and Office Administration.

The contract requires IISC-AU to:

- Maintain adequate technical capacity
- Allow information to be provided to TOA and any regulatory body
- Perform functions in a manner that allows TOA to comply with all relevant legal and regulatory obligations.

The figure below shows TOA's relationship with Beon and IISC-AU.

Figure 4 TOA Service Providers



Note: Australian Energy Operations (Bahamas) Limited and Australian Energy Operations Pty Ltd were formally known as Transmission General Holdings (Bahamas) Limited and Transmission General Holdings (Aust) Pty Ltd respectively. These are purely name changes with no consequential impact on the businesses

The expertise of Beon and IISC-AU are outlined below.

5.1.3 Service provider expertise

Beon Expertise

Beon has extensive knowledge and abilities covering a full range of power industry disciplines, including electricity and telecommunications design, survey and drafting, material procurement, overhead and underground line construction, substation and terminal station construction, maintenance, operational assets management and specialist metering services.

Beon provides services to transmission businesses including AusNet and TransGrid. It also provides non-regulated services to electricity distributors including Powercor and CitiPower. Beon is supported by PNS, which provides regulated services to Powercor and CitiPower.

IISC-AU Expertise

IISC-AU provides specialist corporate, including Finance, Company Secretarial, Legal, Human Resources, Corporate Affairs, Regulation, Customer Services, Information Technology and Office Administration.

IISC-AU has access to its owners' extensive experience providing services to utility companies around the world. This is achieved via its direct contractual arrangement with CHED Services to provide services as required of IISC-AU by TOA.

5.2 Planning approvals and land access arrangements

Identification of approvals for the MOWF 132kV powerline are provided in Schedule 3 to **Attachment A.** As the connection of the ELWF occurs within ELTS, an overhead powerline is not required and as such planning regulations do not apply.

5.3 Requirements under the National Electricity Law

TOA has met, or will meet in due course, the requirements of, the National Electricity Law and the National Electricity Rules (**Rules**). This includes obtaining relevant approvals under associated procedures. These requirements include:

- In accordance with clauses 2.9.2 of the Rules, Australian Energy Market Operator (**AEMO**) approved TOA's registration as a Network Service Provider – Transmission (registration effective 10 September 2013)
- Compliance with NEM-related policies such as System Operating Procedures and Local Black System Procedures required by AEMO
- Compliance with AEMO specified Protection and Control Requirements (**PCRs**) and Project Functional Requirements (**PFRs**)
- Utilising a metering co-ordinator as required under Chapter 7 of the Rules.

5.4 Risk management and governance policies

TOA's Board is responsible for overall corporate governance. The Board's responsibilities include ensuring significant risks have been identified, appropriate and adequate controls,

monitoring, accountabilities and reporting are in place, and ensuring risks are being managed in accordance with the Board approved risk tolerance.

The Chief Executive Officer oversees TOA's risk profile and ensures appropriate policies and procedures are adopted for the timely and accurate identification, reporting and management of significant risks to the business.

TOA has established a Governance framework to ensure it meets all obligations arising under relevant health, safety, environmental or social legislation and the management its business risks. TOA utilises an "Enterprise Risk Management" approach to provide a comprehensive and consistent means to manage and report on business risk exposures through identification of strategic and operational risks, determining accountability for those risks, assessment of controls and the control environment and ensuring that there are adequate resources to manage the risks.

TOA's risks are assessed against the following key risk areas:

- **Financial**—Impacts associated with Third Party Property Damage, Company Asset Damage, Supply Reliability and Quality
- **Health and Safety**—Impacts associated with Employee, Public and Service Provider Electric Shock, Fire or Injury
- **Reputation**—Impacts associated with negative Media Coverage, Customer Satisfaction, Stakeholder Satisfaction (e.g. Regulators, Governments), Supply Reliability and Quality
- **Compliance**—Impacts associated with non-Compliance to Legislation, Regulation, Industry Codes, Licences
- **Employee Satisfaction**—Impacts associated with Employees / Service Providers' Engagement, Motivation and Morale
- **Environment**—Impacts on the environment.

6 Financial viability

To demonstrate that TOA continues to have the required financial viability, this section sets out the following information:

- TOA's audited financial statements for the past two financial years
- For the new infrastructure, the full life financial model, confirming all relevant projected costs and revenues, including:
    - revenue received from generators and AEMO
    - construction and establishment costs
    - operation and maintenance costs
    - financing structure and costs
    - explanation and justification for any key assumptions.

6.1 Audited financial statements

TOA's financial reporting is based on a calendar year. TOA's audited financial statements are provided at the following attachments:

- Confidential **Attachment D** for 2016
- Confidential **Attachment E** for 2017

6.2 Financial model

TOA's financial model covering the full lives for MOWF and ELWF is provided at confidential **Attachment F**. These demonstrate that TOA's financially viability will be sustained with the undertaking of these new connections. Further information relating to the revenues, construction costs, operating and maintenance costs, insurance, tax and financing costs that are incorporated in the financial model are provided in the following sub-sections 6.2.1 – 6.2.6

6.2.1 Revenues received from generators and AEMO

TOA's revenues relating to the MOWF and ELWF connections are set out in two key contracts for each connection. There are two elements to the revenue:

- Connection Services Agreements with MOWF and ELWF. The agreements are provided at confidential **Attachment G** and confidential **Attachment H** respectively. [✂]
- Network Services Agreements with AEMO for the connections of MOWF and ELWF provided in confidential **Attachment I**, confidential **Attachment J** and confidential **Attachment K** respectively. [✂]

6.2.2 Design and Construction costs

The design and construction costs for the MOWF and ELWF connections are capped in accordance with the respective Design and Construct contract. The design and

construction costs incorporated in the financial models are those determined by these contracts.

6.2.3 Operating and maintenance costs

TOA will incur operating and maintenance costs, which relate to:

- The operation and maintenance of the MOWF and ELWF connections. These costs are prescribed in the Operations and Maintenance Contract (Moorabool and Elaine). This contract is with Beon and provided in confidential **Attachment C**
- Corporate services provided through the existing Utility Support Services Agreement contract with IISC-AU discussed in section 5.1
- Other costs such as insurance.

6.2.4 Insurance

Marsh PEMA has undertaken insurance due diligence investigations of the MOWF and ELWF connection assets. Their findings are outlined in the following attachments:

- Australian Energy Operations Pty Ltd; Insurance Due Diligence Report, 12 September 2017 – confidential **Attachment L**
- Australian Energy Operations Pty Ltd; Insurance Due Diligence Report - Update 1, 7 March 2018 – confidential **Attachment M**
- Australian Energy Operations Pty Ltd; Insurance Due Diligence Report - Update 2 30 May 2018 – confidential **Attachment N.**

[✂]

6.2.5 Tax

A variable that could change during the 25 year period is TOA's tax obligations due to a 'change of law'. [✂]

6.2.6 Financing structure and costs

TOA is refinancing with Westpac Banking Corporation for five years period. Under the agreement, Westpac will provide additional funding to TOA for construction of the ELTS, being ELWF and MOWF connections. Extracts of the Facility Agreement are provided at confidential **Attachment O.**

[✂]

6.3 Financial viability of TOA's Owners

CK Infrastructure Holdings Ltd (**CKI**) and Power Assets Holdings Ltd (**PAH**), continue to be the ultimate owners of TOA, and continue to have substantial assets and turnover as evidenced through their audited financial statements available in their annual reports.

CKI continues to be the largest publicly listed company on the Stock Exchange of Hong Kong and PAH continues to be listed on the Stock Exchange of Hong Kong and be one of the constituent shares of the Hang Seng Index.