Fortescue
The New Force in Iron Ore

Generation Licence Exemption Application

Electricity Generation Licence - Exemption Application
Electricity Industry Act 2004

Pilbara Energy Connection

30 June 2020

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1. INTRODUCTION

Fortescue's vision is to be the safest, lowest cost, most profitable mining company.

Since it was founded in 2003, Fortescue Metals Group Ltd (**Fortescue**) has discovered and developed major iron ore deposits and constructed some of the most significant mines in the world.

Now consistently shipping around 170 million tonnes of iron ore per annum, Fortescue has grown to be one of the largest, global iron ore producers and is focussed on its vision of being the safest, lowest cost, most profitable mining company.

Fortescue owns and operates integrated infrastructure and supply chain spanning two mine hubs, with a third under development in the Pilbara, the fastest, heavy haul railway in the world, the five berth Herb Elliott Port in Port Hedland and the Judith Street Harbour towage infrastructure.

Innovation in exploration, ore processing and plant design is a key component of Fortescue's strategy to efficiently and effectively deliver products from mine to market.

Fortescue's longstanding relationships with customers in China have grown from the first commercial shipment of iron ore in 2008, to now being a core supplier of seaborne iron ore to China, and expanding into markets including Japan, South Korea and India.

Fortescue is committed to investing in the long-term sustainability of its business. Fortescue is developing the Eliwana Mine and Rail Project and the Iron Bridge Magnetite Project.

The Iron Bridge Project will deliver a premium product with iron content of 67%, further enhancing the range of products available to Fortescue's customers through its flexible integrated operations and marketing strategy.

Together, the Iron Bridge and Eliwana projects will increase the average iron ore content of Fortescue's ores and provide the ability to deliver the majority of products at greater than 60% Fe.

The following electricity generation licence exemption application for the Solomon Power Station electricity generating works, and the Pilbara Generation Project (refer Section 2.2) will allow Fortescue to supply electricity to the Iron Bridge Magnetite Project.

2. PILBARA GENERATION PROJECT

2.1 Overview of Fortescue's Existing Electricity Generation

Fortescue presently owns and operates the Solomon, Cloudbreak and Christmas Creek power stations each supporting their respective mining operations on islanded electrical networks.

With the significant increased electrical demand required by the Iron Bridge Magnetite Project, Fortescue is undertaking to construct, commission and own, additional electricity generation assets to meet this demand. This Project is known as the **Pilbara Generation Project** or **PGP** and is further described in Section 2.2 below.

The Pilbara Energy Connection, a fully integrated 220kv electrical transmission network[1], will electrically connect the Pilbara Generation Project and the Solomon Power Station, to the Iron Bridge Magnetite Project.

2.2 Overview of Pilbara Generation Project

The Pilbara Generation Project will consist of a 165MW natural gas fuelled power generation facility, two photovoltaic electricity generation facilities totalling 150MW, and two 25MW / 10MWh battery energy storage facilities, all connected to the Pilbara Energy Connection (refer Figure 1).

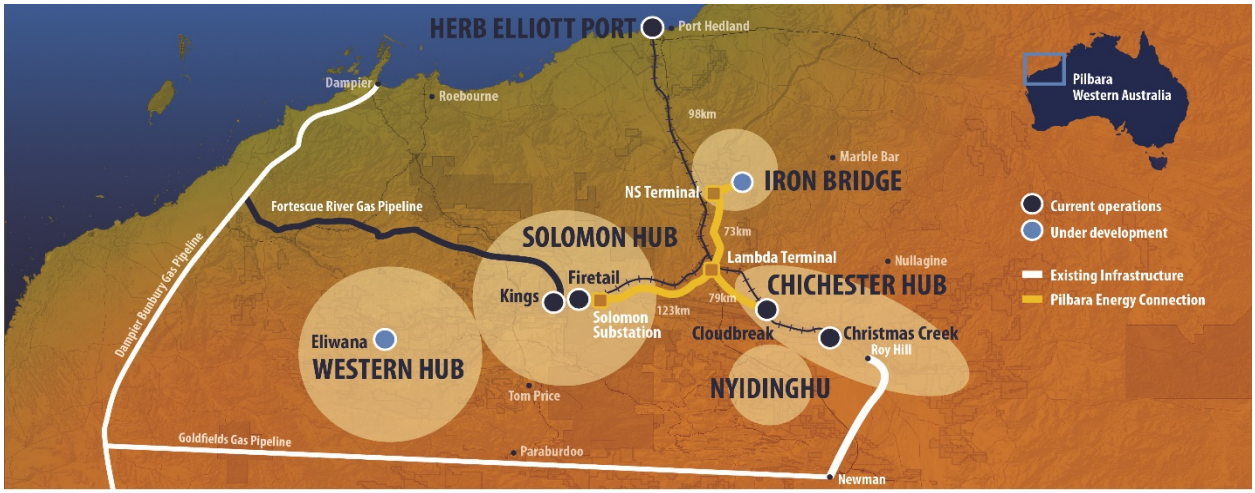

Figure 1

The Pilbara Generation Project works will all be owned, controlled, and operated by Pilbara Energy (Generation) Pty Ltd (ACN 631 303 305) (**PEG**), being a 100% owned subsidiary of Fortescue Metals Group Ltd and will be connected, via the Pilbara Energy Connection, to the Iron Bridge Magnetite Project, located 145km by road south of Port Hedland.

[1] Covered by a transmission licence exemption.

2.3 Location

The Solomon Power Station, owned, controlled and operated by FMG Solomon Pty Ltd, is located within the Fortescue Solomon Hub Mine-site, approximately 102km by road north of Tom Price, on a Mining Lease granted pursuant to the *Mining Act 1978* (WA) (**Mining Act**).

The Pilbara Generation Project power generation facilities are to be constructed on a number of miscellaneous licences and Mining Lease(s) that, as at the date of this submission, have either been granted or are pending grant pursuant to the Mining Act.

3. REQUEST FOR EXEMPTION

Section 8 of the *Electricity Industry Act 2004* (WA) provides that the Governor may exempt any person from requirement for licence to construct or operate electricity generating works.

Fortescue submits this application for generation licence exemptions for any generating facilities connected to the Pilbara Energy Connection that are owned by Fortescue Metal Group Ltd, or any of its related bodies corporate.

This application addresses the public interest criteria defined in section 8(5) of the *Electricity Industry Act 2004* (WA) to be considered when determining if the exemption would be contrary to public interest.

4. PUBLIC INTEREST ASSESSMENT

4.1 Environmental Considerations

4.1.1 Solomon Power Station - Environmental Approvals Framework

The Solomon Power Station electricity generation works were referred to, and approved, by both Commonwealth and State primary environmental legislation as follows:

(a) EPBC Act

The Solomon Iron Ore Project, including Solomon Power Station was referred to the Commonwealth Department of Environment and Energy under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) on 21 July 2014 (EPBC Reference 2014/7275). The Department of Environment and Energy assessed the referral under a bilateral agreement and approved the project on 12 June 2018.

(b) EP Act – Part IV

The Solomon Iron Ore Project, including Solomon Power Station was referred to the Environmental Protection Authority (**EPA**) under Section 38 of the *Environmental*

Protection Act 1986 (WA) (**EP Act**). The EPA determined that the Solomon Iron Ore Project required formal assessment at the level of Public Environmental Review. The EPA approved the Solomon Iron Ore Project on 20 April 2011 under Ministerial Statement 862 (MS862). The Solomon Iron Ore Expansion was referred to the EPA on 22 July 2014 The EPA determined that the Solomon Iron Ore Project required formal assessment at the level of Public Environmental Review. The EPA approved the Solomon Iron Ore Expansion on 3 October 2017 under Ministerial Statement 1062 (MS1062). MS1062 is a revision of MS862.

(c) EP Act – Part V

The operation of the Solomon Power Station is licensed under Part V Category 52 of the EP Act. Licence L8858/2014/1 (as amended) was originally approved by Department of Water and Environment Regulation on 26 March 2015 with an amendment notice issued on 13 May 2019 for the operation of 134.4 MWe (using natural gas) and 94.2 MWe (using diesel fuel).

(d) Mining Act

The Solomon Power Station is located on M47/1431 granted pursuant to the *Mining Act 1978* (WA). Activities therein must be approved under a Mining Proposal. A Mining Proposal with a Closure Plan for Solomon Project Early Ore Mining and Infrastructure Development (Reg31835) was granted by the Department of Mines and Petroleum (now DMIRS) on 12 October 2011.

Extension of the Solomon Power Station to include substation and laydown was included in the Mining Proposals with Closure Plans: Tailings Storage Facility No. 1 Embankment Construction and Unrelated Minor Works Mining Proposal and Mine Closure Plan (Reg33382), Dry Processing Mining Operations Mining Proposal and Closure Plan (Reg34022) granted by the Department of Mines and Petroleum on 12 July 2012.

4.1.2 Pilbara Generation Project - Environmental Approvals Framework

The Pilbara Generation Project infrastructure has been referred under both Commonwealth and State primary environmental legislation as follows:

(a) EPBC Act

The Pilbara Generation Project was referred to the Commonwealth Department of Environment and Energy on 30 November 2018 (EPBC Reference 2018/8349). The Department of Environment and Energy subsequently confirmed on 2 April 2019 that the Pilbara Energy Connection is not a Controlled Action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and no further approvals are required under this Act if Matters of National Environmental Significance (**MNES**) can be avoided.

(b) EP Act – Part IV

The Pilbara Generation Project was referred to the Environmental Protection Authority under section 38 of the EP Act on 26 November 2018. This referral was limited to the transmission lines with terminal and substation infrastructure. The EPA subsequently determined that the Pilbara Energy Connection does not require formal assessment. A separate referral for the Pilbara Generation Project power station will be submitted for assessment in late May 2020.

A range of secondary environmental approvals are required for activities to be conducted in respect of the Pilbara Generation Project as follows.

(c) EP Act – Part V

Land clearing will be facilitated via a series of native vegetation clearing permits (**NVCP**), to be obtained under Part V of the EP Act. The first of three planned NVCPs for the transmission network (CPS 8716/1) was submitted to the Department of Mines, Industry Regulation and Safety on 17 October 2019, and granted on the 12 December 2019. The second NVCP was submitted on the 3 March 2020 and granted on the 7 May 2020 (CPS8834/1). The third and final NVCP application for the transmission network will be made following grant of tenure.

Clearing for the North Star Junction and Lambda Junction solar farms will be facilitated using NVCP purpose permits. The tenure boundary will be used as the project envelope, with a limit of 610 ha and 630 ha to be cleared within this envelope for North Star and Lambda respectively. The approval will contain exclusion areas for creekline habitats and critical habitats.

Licensing of the construction of the new 165 MW (with designed output of 150MW) power generation facility, is required under Part V of the EP Act, in the form of a works approval. This application is scheduled for submission in early May 2020. Operation Licensing of the facility is required under Part V of the EP Act, in the form of an operating licence.

Solar farms and transmission lines do not constitute prescribed premises categories, as listed in Schedule 2 of the EP Act. As such, there are no further works approvals or licences that need to be sought under Part V of the EP Act.

(d) Mining Act

As the Pilbara Generation Project is located on tenure prescribed under the *Mining Act 1978* (WA), activities therein must be approved under a Mining Proposal. A Strategic Mining Proposal, including mine closure plan for the transmission network was submitted to the Department of Mines, Industry Regulation and Safety on 30 October 2019 and was granted on the 18 March 2020. The Strategic Mining Proposal will allow for staged approval of activities following grant of tenure.

Separate mining proposals, including mine closure plans, will be submitted for the Pilbara Generation Project power station in late May 2020 and for the North Star Junction and Lambda Junction Solar Farms in September 2020.

4.1.3 Environmental Justification and Consideration of Alternatives

Construction of the Pilbara Generation Project will result in negligible emissions. However, the Pilbara Generation Project is the key catalyst for integration of large scale renewable generation to supply the Iron Bridge Magnetite Project.

The alternative source of electricity for the Iron Bridge Magnetite Project would involve installation of a new natural gas transmission line, connecting the Iron Bridge Magnetite Project to the existing Pilbara Energy Pipeline and the construction of a standalone natural gas-fired power station. Due to the single source power supply, this power station would need to be sized significantly in excess of the forecast peak power demand to allow for maintenance and power supply spinning reserve requirements.

This option would require additional clearing of native vegetation at the Iron Bridge site, and would limit the opportunity for the incorporation of large-scale renewable generation into the energy mix, as the power station would be used as an isolated supply for the Iron Bridge Magnetite Project. Connecting the Iron Bridge Magnetite Project facility to the Pilbara Generation Project, via the Pilbara Energy Connection, provides the platform for integration of large-scale renewable generation, and large-scale battery energy storage systems, that would otherwise not be available.

4.2 Social Welfare and Equity Considerations

The Pilbara Generation Project will facilitate the delivery of energy on far more reliable, cost-efficient and far less carbon intense basis, than the identified alternative scenario of islanded powered generation.

4.3 Economic, Regional Development, Employment and Investment Factors

Utilisation of available electricity generation at Solomon Power Station electricity generating works increases sunk capital utilisation, and existing footprint, whilst providing opportunities for improved operational efficiencies.

The Pilbara Generation Project, connected via the Pilbara Energy Connection electricity transmission network, will provide crucial power supplies to the proposed magnetite operations at Iron Bridge. The Iron Bridge Magnetite Project requires up to 187 megawatts of Peak Load power to be delivered from a mix of existing and new generation sources which will be connected to the Fortescue owned and operated Pilbara Energy Connection Network.

In April 2019, the development of the US$2.6 billion Iron Bridge Magnetite Project was approved. With first magnetite exports scheduled for mid-2022, the Iron Bridge Magnetite Project will deliver (22 million tonne per annum) of high grade, 67% Fe, magnetite concentrate product, once full operational capacity is achieved. Reliable, cleaner and cheaper energy is required to facilitate the development and sustainable operation of the Iron Bridge Project which is expected to create up to 3,000 jobs during construction phase, and 900 full time positions during ongoing operations.

The Pilbara Generation Project will provide a unique electricity generation solution, spanning the expanse of the central Pilbara region, with capacity to support future growth of Fortescue operations.

4.4 Interest of Customers

The Iron Bridge joint venture, being the owner and operator of the Iron Bridge Magnetite Project, will be the only direct customer of electricity transmitted by the Pilbara Generation Project that is not a 100% wholly owned subsidiary of Fortescue Metals Group Ltd. The construction of these electricity generating works is of utmost benefit to the Iron Bridge Joint Venture as it facilitates the supply of reliable, low cost electricity.

4.5 Interests of Other Licensees or Applicants

Other mining operations in the central Pilbara area (eg BHP Billiton and Rio Tinto) generally generate electricity and self-supply for on-site consumption or consumption within joint ventures. These companies hold exemptions under the Electricity Industry Act or via various State Agreements.

Fortescue does not view this application as being counter to the interests of any other licensee or applicant for a generation licence.

4.6 Competition in Electricity Industry Market

Fortescue does not view this application as being counter to competition in the electricity industry markets.

4.7 Policy Objectives of government

Fortescue notes the government's proposed new policy objectives in relation to the supply of electricity in the Pilbara region being;

'*To promote efficient investment in, and efficient operation and use of, services for the long-term interests of consumers of electricity in the Pilbara region relating to –*

(a) Price, quality, safety, reliability and security of supply; and

(b) *The reliability, safety and security of the interconnected Pilbara system.*'

Fortescue fully supports the promotion of efficient investment; efficient operation and use; safety and reliability excellence and providing a platform that allows a growing role for renewable energy to reduce the environmental impacts of electricity supply to its operations.

The limited alternatives for electricity generation to supply the Iron Bridge Magnetite Project, was an onsite power station with gas pipeline infrastructure. Fortescue does not view this application as being contrary to the public interest with respect of the policy objectives of government.

4.8 Other Matters

Fortescue is already proficient in developing and operating large electricity generating works and has by way of example electricity generating facilities at Solomon mine site, Cloudbreak mine site, and Christmas Creek mine site. Fortescue also has other power transmission networks operating at 66kV, 33kV, 22kV and 11kV, all of significant length, spread across various operational mine sites and under Fortescue's direct control, management and statutory responsibility.

Fortescue has a proven record in delivering projects to a world class standard whilst fully complying with its corporate and social responsibilities.