onesteel
whyalla steelworks

9 December 2005

Sebastian Roberts
General Manager
Transition Branch
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Attention: Paul Dunn

Dear Mr Roberts

Re: Network service provider registration exemption

OneSteel Manufacturing Pty Limited (ABN 42 004 651 325) owns and operates an electrical network at its Whyalla steelworks and associated facilities located on Eyre Peninsula in South Australia (the network). Site layouts and the electrical connections are contained in Attachment A. The network connects to the Local Network Service Provider, ETSA Utilities and reticulates power within the Whyalla site and to Iron Knob and Iron Baron, which are both sites previously operated by OneSteel for the production of raw materials for OneSteel's operations.

The Whyalla site also contains co-generation and backup generators that are connected to the National Electricity Grid via the network and, occasionally, export energy to the grid. The operation of the generator facilities is explained in Attachment B. The site draws the balance of its energy requirements from the grid with AGL as the retailer.

OneSteel also supplies energy to other parties within or adjacent to the Whyalla site or near to the lines connecting the Whyalla site to Iron Knob and Iron Baron. The supply to adjacent customers has arisen due to the history of the site, see Attachment C, and remains because it is not cost effective to transfer those customers to the ETSA Utilities network. Supply to those customers is incidental to the business of OneSteel and they are charged the equivalent AGL tariff or less for energy they consume[1]. All customers are metered and charged for their usage at or below the relevant published AGL tariff.

OneSteel has previously relied on the General Exemption from the requirements to register as a network service provider, established by NECA under the National Electricity Code, in relation to the network. We accept your advice that our network is not cleanly within those exemptions and that a specific exemption is required.

[Confidential]

[1] Supply to the township of Iron Knob has been transferred to Cowell Electric. Cowell Electric takes their supply from OneSteel at the substation adjacent to the currently inactive Iron Knob mine.

OneSteel Manufacturing Pty Limited ABN 42 004 651 325
Whyalla Steelworks: Port Augusta Road, Whyalla, SA 5600 PO Box 21, Whyalla, SA 5600, Australia
Phone: 61 8 8640 4444 Fax: 61 8 8640 4797

The network qualifies for exemption from the requirements of chapter 5 and the provision of general access since:

- the network is contained within the OneSteel site or on specific easements in favour of OneSteel and is used primarily for reticulation of the OneSteel generated energy and energy sourced from the Grid to OneSteel facilities;
- supply is provided to other parties either:
  - as a result of historical connections where it is not cost-effective for the customer to be transferred to the ETSA Utilities Network; or
  - where a customer cannot reasonably connect to the ETSA Utilities network and can be accommodated on the OneSteel network without interfering with OneSteel's operations;
- the network is incidental to OneSteel's main purpose on the sites, the production of iron and steel products;
- the network standards are maintained by its agreement with the local network service provider, ETSA Utilities, and its contract with AGL; and
- all other consumers on the site are metered and charged rates at or below AGL South Australia standing offer tariffs.

OneSteel therefore requests that the Australian Energy Regulator grants exemption, under clause 2.5.1(d) of the National Electricity Rules, from the operation of chapter 5 of the National Electricity in relation to the network described in Attachment A.

Partial exemption of the OneSteel network is consistent with the Market Objective[3] since it:

- allows reliable and secure supply of electricity to specific customers at a lower cost than if they were required to connect to the ETSA Utilities network; and
- avoids inefficient construction and use of the network.

Kind Regards

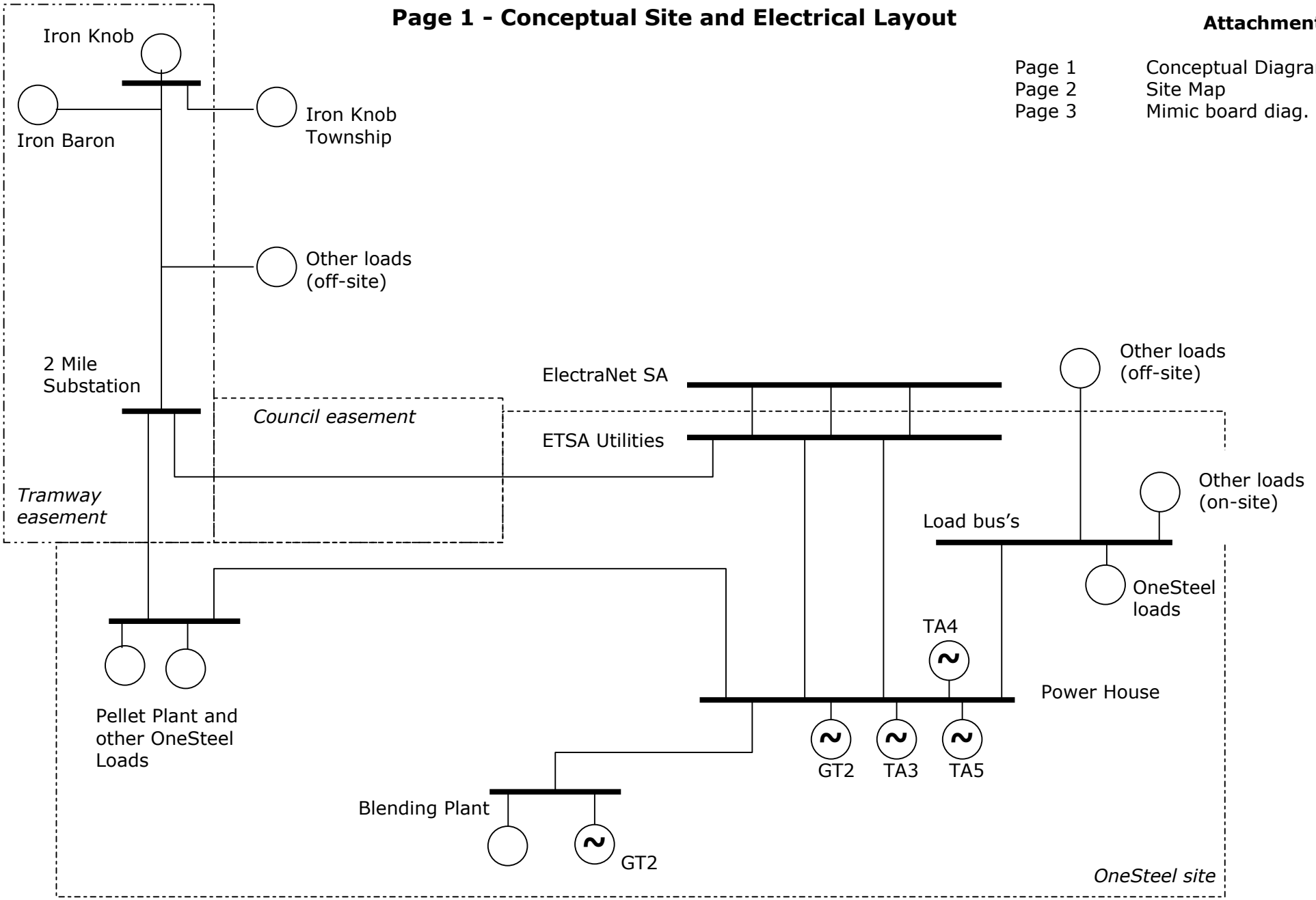
Mark Parry
Executive General Manager
Whyalla Steelworks

[2] Note that OneSteel is currently and will continue to allow connections to our network where that connection cannot reasonably be made to the ETSA Utilities network. Connections of this form are not a business of OneSteel but we consider it a necessary obligation as long as it does not interfere with OneSteel's operations. All costs to connect are borne by the customer and any augmentations are put to tender and, recently, have been made by ETSA Utilities or Cowell Electricity.

[3] The national electricity market objective is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system.

Attachment A

Page 1 - Conceptual Site and Electrical Layout



Attachment A

Page 1 Conceptual diagram
Page 2 Site Map
Page 3 Mimic board diagram

Page 2 - Site Map

Iron Knob & Iron Baron

2 Mile Substation

ETSA

Boilers and Powerhouse

TRUE NORTH
GRID NORTH
TO IRON KNOB
TO WHYALLA
TO PT. AUGUSTA
TRAK LOK
CAFETERIA
SECURITY
GAS METERING COMPOUND
AMENITIES BLOCK & CARPARK
STORE COMPOUND
WATER RECYCLE TANK
STEEL STORAGE
ENVIRONMENT & AMDEL
STORE
MATERIAL HANDLING
WHYALLA TOURIST CENTRE
Lincoln Highway
ADMIN
EDP
CSC
LOUMINCO
CONNELL HATCH
Steelworks Rd.
CASTER
LIME KILN
B.O.S.
STEELMAKING OFFICES
STEELMAKING MAINTENANCE
HEALTH CARE
BRAMBLES
NALCO
STRUCTURAL MILL
FINISHING END
HOT SAW
DESPATCH
RAIL PLANT
ROLLING MILL MAINTENANCE
ROLL MILL OFFICE
Eastern Rd.
BORROW PIT
GENERAL LANDFILL
OIL/WATER SEPARATION
BIOREMED
BIO SOLIDS
SLUDGE DRYING
WHYALLA
DEFENCE FORCES
TANDERRA CRAFT VILLAGE
Shipyard Rd.
MECHANICAL SERVICES
ELEC. SHOP
FIRE STATION
Blast Furnace Rd.
Return Rd.
METSERV STEEL STORAGE AREA
METSERV OFFICE & WORKSHOP
Slag Haul Rd
METAL RECOVERY PLANT - METSERV
TO PACIFIC SALT & COGNIS AUST
Saltworks Rd.
SERVICE SHOPS
EDI
MILL SERV SHOP
STORE 33
FERRO ALLOY BAYS
SLAG POT DUMPING AREA
TO LANDFILL
Interworks Rd.
One Mile Rd.
PROCESS DUST LANDFILL
ASBESTOS LANDFILL
RECLAIMED LANDFILL
GAS HOLDER
Products Rd.
CO/1
CO/2
HARD FILL LANDFILL
REFRACTORIES WAREHOUSE
SALT WATER PUMP
B/F OFFICE
COKE OVENS OFFICE
REED BEDS
Club Road
TUG BERTH
HARBOUR
BLAST FURNACE WHARF
COKE OVENS
BFWTP CELLS
1
2
3
4
BRAMBLES
BF/1
BF/2
BF/3
BF/4
WEIGHBRIDGE
TREADWELL SERVICING
BRAMBLES SLAG POT AREA
STEEL STORAGE
BRAMBLES CRUSHER
TRAIN CONTROL
ASR
PP/1
PP/2
PP/3
PP/4
PP/5
PP/6
TAILINGS DAM
PELLET PLANT
PELLET PLANT MTCE
PELLET BINS
No.2 ORE
2000E
3000E
1000E
1000S
2000S
1000N
2000N
3000N

LEGEND
PUBLIC ROAD
MAJOR WORKS ROAD
MINOR DIRT ROAD
CAR PARKS
VEGETATION
0 250 500

WHYALLA
Lincoln Highway
Spencer Gulf
ADELAIDE
Kangaroo I.

HATCH

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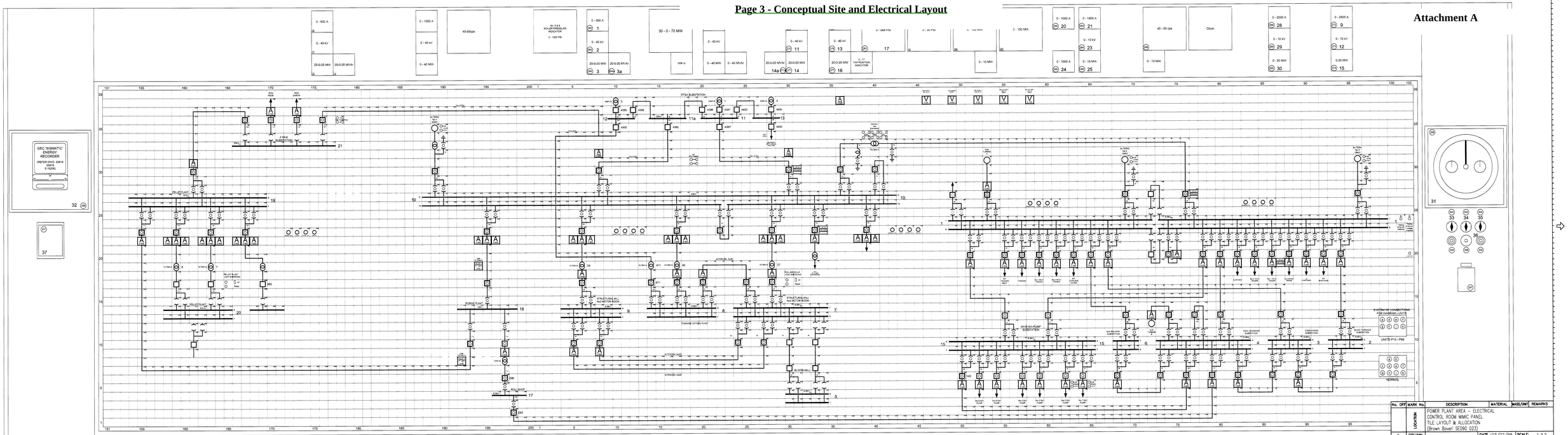
Page 3 - Conceptual Site and Electrical Layout

Attachment A



No. OFF	ITEM	MARK No.	DESCRIPTION	MATERIAL

No. OFF	MARK No.	DESCRIPTION	MATERIAL	MASS/UNIT	REMARKS
LOCATION		POWER PLANT AREA – ELECTRICAL CONTROL ROOM MMC PANEL TILE LAYOUT & ALLOCATION (Brown Boveri SE090 023)			
1	COLUMN				

	NAME	SIGNATURE
DRAWN	S.HIGGINS	
CHECKED	A.CORNISH	
REVIEWED	A.Thomas	
C ENG		

BHP Integrated Steel Division Whyalla Operations

DR DR. REL.

REVISIONS

CAD REF

55815 D

Attachment B to OneSteel Exemption Application

OneSteel Generation

Introduction

OneSteel operates five generators on its Whyalla site for local supply and to offset the cost of electricity. These generators are:

- One 30MW steam generator (No.4 Alternator)
- One 15MW steam generator (No.3 Alternator)
- One 12.5MW steam generator (No.5 Alternator)
- Two 4.2MW gas turbines (gas fired) (Nos.1 & 2 Gas Turbines)

The steam generators use steam produced by boilers fired by waste gas from the Whyalla operations, while the gas turbines use natural gas. The steam produced by the waste gas boilers is also used to power other plant on the site. The gas turbines, in addition to providing electricity, are connected to waste heat recovery boilers to also provide steam. A diagram of the process is shown in Annexure 1.

Process waste gas from the blast furnace and from coking operations is passed to the boiler house where it is converted to steam. The steam is then routed to the powerhouse, which contains the three steam-driven generators and some steam-powered plant (process compressors, etc)[1]. The gas facilities have a limited capability to balance production variations by storing around 10 minutes worth of gas[2].

OneSteel also operates a network for reticulation of electricity between its facilities on the Whyalla site and to sites that relate to its Whyalla operations. The OneSteel network is connected to the ETSA utilities network through four 33kV feeders. Two of these feeders are connected directly to the Powerhouse bus that connects the generators, except one of the gas turbines, to the OneSteel network. High voltage network diagrams are attached as Annexure 2.

Requirement for essential electricity and plant

During normal operations one generator (either No.3 or No.5 Alternator) is operated isolated from the grid to minimise disturbance to essential plant during grid events. This isolated generator gets first call on the steam and produces about 4MW to supply specific essential load. The steam-powered plant also has priority for the steam due to its essential nature.

The gas network that fires the boilers can be augmented by injecting natural gas if there is insufficient gas to provide the essential steam for the isolated generator and the essential steam plant[2]. The boilers can also be fired using fuel oil as a last resort.

If necessary, the gas turbines[3] can be used to produce essential steam and electricity as a backup to the boilers and steam driven generators.

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[1] A single steam manifold captures all of the steam, including any produced by the gas turbines, and allocates it between the various plant and generators according the priorities determined by the power system operator.
[2] The natural gas is injected into the common gas system for the boilers.
[3] The gas turbines are fed from a separate gas supply from the boilers.

Use of steam that is surplus to essential requirements

During normal operations the amount of steam produced by the boiler plant is greater than the minimum required for operations. The surplus steam is used to generate additional electricity, which offsets demand on the site.

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Demand side response

During high prices in the NEM it is possible for the site to use natural gas to augment the steam available for generation to reduce the site net demand or to participate in a demand side arrangement with a retailer. Increasing generation above the level available from using the process gas is only viable during high price periods due to fuel costs.

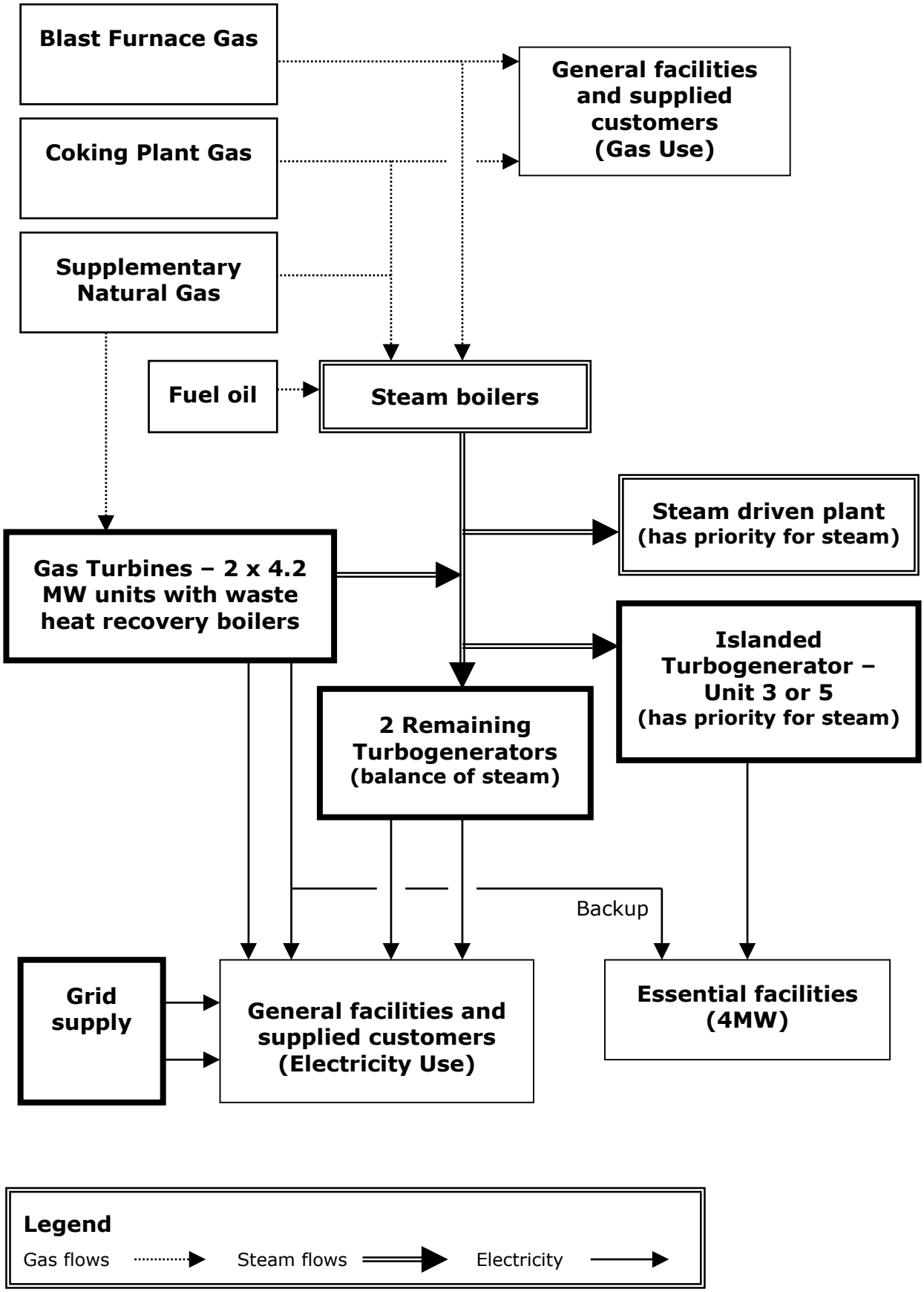
Summary

The OneSteel generators operate to use the waste gas to produce electricity for on-site use. The load on the site greatly exceeds the electricity that can be generated economically on site and therefore in almost all cases no energy is sent off-site.

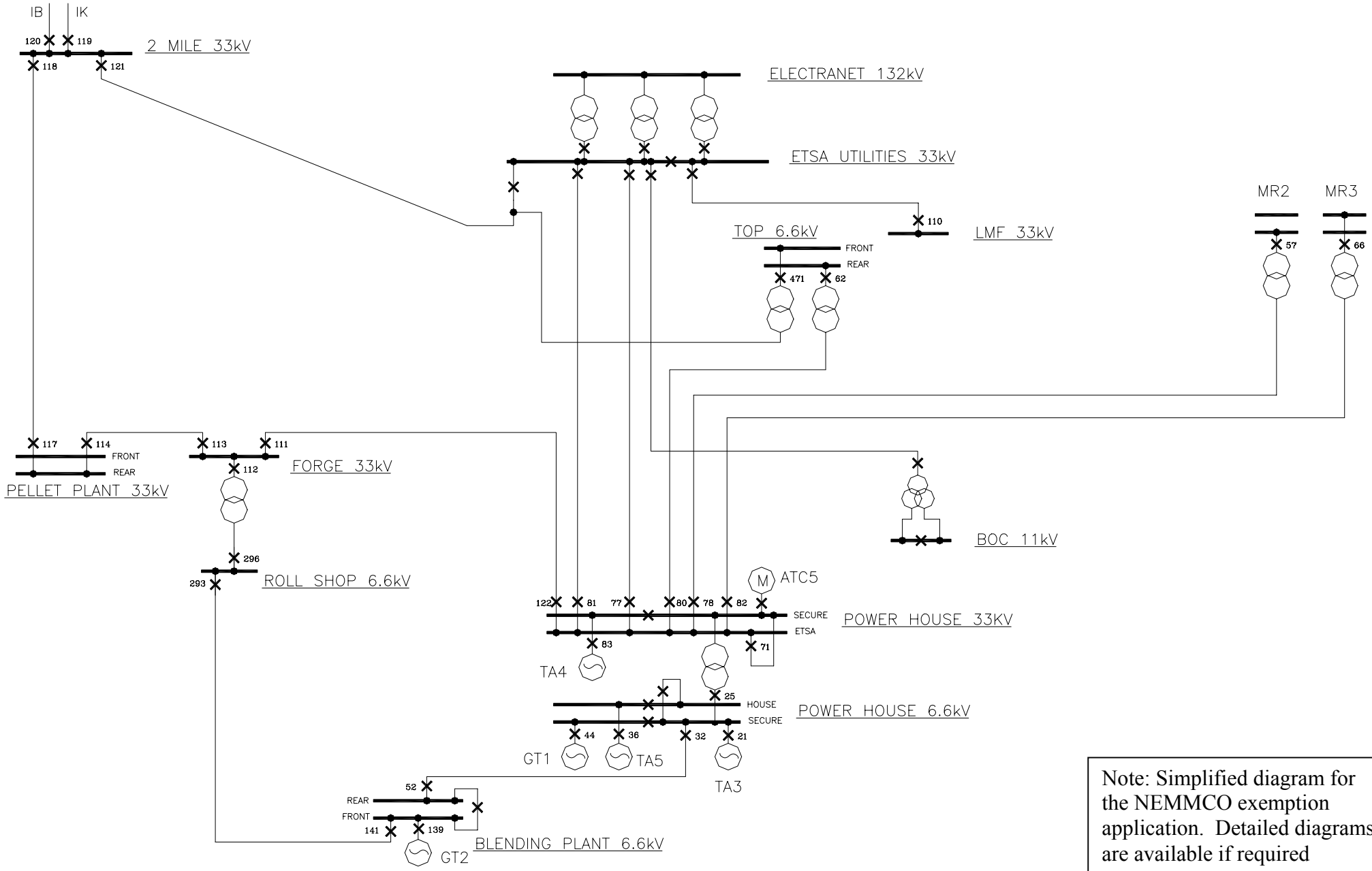
Specifically:

- No unit is greater than 30MW;
- Energy sent out is less than 20GWh per annum;
- The operation of the steam driven generators is linked directly to the operation and processes of the plant and therefore the load being served;
- Additional gas firing of the plant is only indicated to meet minimum requirements or, during higher prices in the NEM, for DSR; and
- The generator configuration is such that changes in on-site operation will not unduly impact NEM system security.

Process diagram for OneSteel Gas, Steam and Generation



Annexure 2 – Simplified Network Diagram



Note: Simplified diagram for the NEMMCO exemption application. Detailed diagrams are available if required

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SJS			3-9-03
Drawn	Checked	Approved	Date

WHYALLA WORKS
HIGH VOLTAGE POWER DISTRIBUTION
SINGLE LINE DIAGRAM

CAD Ref.

REV.

Development of the OneSteel Whyalla Network

Initial development of electricity reticulation at the Whyalla Site

BHP (now OneSteel) commenced operations at Whyalla (then known as Hummock Hill) in 1901 when the iron ore at Iron Knob was exploited as flux for the BHP smelter in Port Pirie. The Site developed much as all remote mines do to meet the commercial needs of the owner and with power supplied by operators to meet own needs. Electricity reticulation at the Whyalla site commenced in 1908 and reached the Iron Knob mine in 1922. The township of Whyalla was proclaimed in 1914 as a company town but only achieved separate status when the Town Commission was formed 1945. Power generated by BHP was supplied to its own works, associated industries and the Whyalla township until interconnection with the ETSA network (now separated into ElectraNet SA for transmission and ETSA Utilities for distribution) late in the 1950's.

Interconnection with the ETSA network in SA

When grid power reached Whyalla the power to the town and other facilities was progressively transferred to ETSA. These actions were done under the auspices of the Whyalla Steel Works Act 1958. This Act provided that the government facilitate on "just terms" for ETSA to construct transmission lines from Pt Augusta to Whyalla, take over supply of the reticulation to the town and for exchange of energy between ETSA and BHP.

BHP operated its network and power generation in cooperation with ETSA, progressively reducing energy exported off-site and increasing imports of electricity as the Whyalla operations grew and cheap electricity was available through ETSA. The power generation facilities were retained to use waste gas and provide a secure backup supply and occasionally used to provide demand side response.

The network remained to reticulate supply to BHP sites and still supplied loads that were either on-site or nearby and where transfer of the connection to ETSA was not cost-effective for the customers. Some customers were referred to BHP by ETSA when it was uneconomic for ETSA to connect and supply them and ETSA knew that it was possible for them to connect to the BHP network. BHP accommodated requests such as this where it did not detract from their operations.

[Confidential]

Current status of the network

The current network is operated by OneSteel to meet its own operational requirements. OneSteel negotiates commercial supply contracts with retailers, recently returning to AGL. These contracts aim to minimise the overall cost of energy to OneSteel and contain with incentives to operate it generation efficiently in conjunction with the NEM, including the potential to provide demand side response.

New site developments at Iron Duke (Project Magnet) are connected only to the ElectraNet SA network since that now provides a more cost-effective supply solution than OneSteel constructing its own network. It is therefore unlikely that OneSteel will develop more lines outside of the main Whyalla site unless they are close to the existing OneSteel network.

OneSteel continues to supply customers that were connected as the town, site and network developed and where it is not economic to change the nature of their supply. OneSteel has on more than one occasion discussed with ETSA Utilities transfer of customers to their network but it has always been too expensive for the customers. This concept will continue to be reviewed.

The customers supplied by OneSteel are supplied at rates at or below the equivalent published rate of AGL. OneSteel is therefore complying with the obligations imposed on industrial parks in the AER General Exemptions[1].

OneSteel still receives requests to allow access to its network. It is currently working with a customer that wants supply but where it is uneconomic to connect via the ETSA utilities or ElectraNet SA networks. OneSteel will allow such connections where the connection does not detract from its operations. The development work to allow this connection put to tender to minimise the cost of connection to the customer and the work is normally done by ETSA Utilities or Cowell Electric.

Future of the Whyalla network

OneSteel plans to retain its network and generation at the Whyalla site. This is necessary for its own operations. The company has no interest in maintaining supplies to other customers but will continue to do so while it is not cost effective to transfer them to ETSA Utilities.

[Confidential]

[1] Originally developed by the National Electricity Code Administrator and transferred to the AER on 1 July 2005. OneSteel is aware that these obligations are to be reviewed.

List of Customers connected to the OneSteel Network

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