

16 May 2007



Alinta

Alinta Energy (NZ) Ltd

Mission Bush Road  
Glenbrook  
PO Box 60  
Waiuku 2341  
New Zealand

Telephone (649) 375 8341  
Facsimile (649) 375 8176

Electricity Commission  
PO Box 10041  
Wellington

Attn: Mr Peter Harris

Dear Peter,

### APPLICATION FOR INDUSTRIAL CO-GENERATING STATUS

Alinta Energy (New Zealand) Ltd makes application for the Kilns Cogen Plant (GLN0332 ALNT EG) an embedded generator connected to GIP GLN0332 to be approved as an industrial co-generating station under rule 3 of section I of part G.

#### Kilns Cogen Plant Description:

The Kilns Cogen Plant is situated on NZ Steel's Glenbrook steel mill site and utilises waste heat and by-product gases from NZ Steel's ironmaking process to generate power.

The Kilns Cogen comprises of 4 fired waste heat boilers and a single 74 MW steam turbine/generator set. The kiln boilers recover heat from the 4 direct reduction kilns and melter gas (a by-product gas from the 2 electric smelting furnaces). Steam from the four boilers is supplied to a single 74MW steam turbine. Please see the attached high level process flow diagram.

The output from the Kilns Cogeneration Plant varies according to the kiln availability, process variability and process throughput rates and the melter process plant availability, process variability and process throughput rates.

The turbine operates in an "Inlet Pressure Control" mode ie the steam header pressure is maintained at constant pressure, and the plant output "floats" based on the energy being recovered from the kiln and melter processes.

In the main Alinta Energy has little or no control of the fuel being supplied to the Kiln Boilers - but it is our objective to convert all Kiln waste gas energy and Melter by-product gas efficiently. The Kilns Cogen Plant output can vary from 40 - 70 MW when the 4 process streams are operating.

The Kilns Cogen output does not vary seasonally per se, however NZ Steel generally has two planned Kiln shuts per year each lasting about 4 weeks, and typically occur in February/March/April and August/September/October periods. During these period the Kilns Cogen output reduces by up to 20 MW.

#### Application:

Alinta makes this application on the grounds that the Kilns Cogen satisfies the requirements set out in Part G schedule G9 and in Part A

Taking each of the requirements specified in Part A:

- a) "that is connected to the grid or to a local network"

The Kilns Cogen comprises of a single turbine/generator set and has a single point of connection to the Glenbrook Substation through connection to GIP GLN0332.

- b) "that is reliant on a co-located industrial process"

The Glenbrook Power Station of which the Kilns Cogen Plant is located on New Zealand Steel's Glenbrook Steel Mill site. The primary fuel sources for the Kilns Cogen plant are Kiln Off Gas and Melter Gas which are by-product gases from the iron making process. All electrical output from the Kilns Cogen is supplied to NZ Steel.

- c) "that is tightly coupled to an industrial process"

The kiln boilers are directly connected to the Kiln off-gas system. The Kilns Cogeneration Plant output is a function of the following:

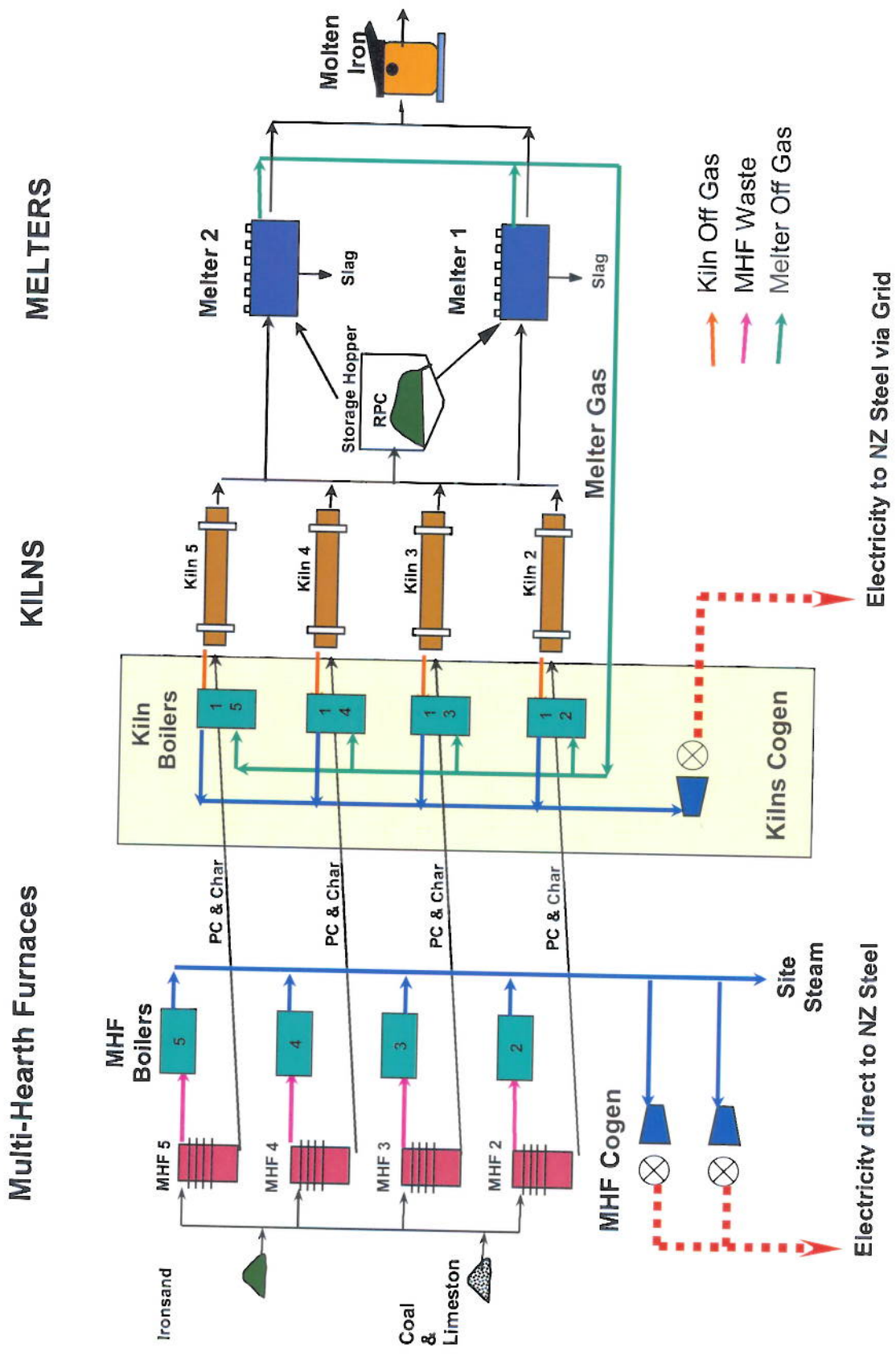
- The number of kilns operating
- Kiln process throughput rate
- Kiln process control parameters
- Number of melters operating
- Melter process throughput rate
- Availability of the Melter Gas gas handling systems
- The Kiln Boiler and Turbine availability

If you have any questions regarding this application I can be contacted on 09 375 8225.

Yours sincerely



John Simmons  
Plant Manager  
Alinta Energy (New Zealand) Ltd



NZ Steel Iron Making Process showing the relationship to the Kilns Cogen Plant