

4<sup>th</sup> May 2007

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To the Board;

Application for co-generator status:

CHH Pulp and Paper are making this application under the schedule G9 of Part G for approval for co-generator status for the single turbine of the Kinleith Pulp and Paper site at Tokoroa; operated by CHH Pulp and Paper. Up to the recent rule changes around offers and dispatch (Rule Change 48) we have been operating under Exemption 13 and its subsequent variations.

The turbine is an Allen Steam Turbines Ltd non-condensing type installed in 1998. The Kinleith Mill is an integrated Pulp and Paper mill where the turbine is fuelled by steam generated for process use throughout the site. It acts as a reducing station to control the pressure of the steam to make it suitable for process use through out the mill; electricity is a by product. As such it is tightly coupled to the industrial process. Refer supporting information in Appendix A.

There is no significant seasonal variation in the operation of the plant as the turbine is fuelled by steam only. Generator output may be fractionally higher overall in winter due to increased process heat requirements due to lower seasonal temperatures.

Respectfully yours,

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## Appendix A: Supporting Information:

In regard to the new Dispatch rules for co-generation and the subsequent notification CHH Kinleith as owner/operator of a 41 MVA non-condensing turbine fuelled by steam produced for process use by an integrated Pulp and Paper Mill producing primarily Market Pulp and Linerboard; is applying for Co-generator status as defined in Part A;

**co-generator** means the owner of an **industrial co-generating station**. For the avoidance of doubt, rules specifying **co-generators** only apply to the **industrial co-generating stations** owned by the **co-generator**.

**industrial co-generating station** means one or more **generating unit**:

(a) that is connected to the **grid** or to a **local network**.

In this case; GXP KIN0112.

(b) that is reliant on a co-located **industrial process** because:

(i) it derives its fuel source from that co-located **industrial process**; or

The turbine is a non-condensing type that reduces 4500 kPa steam generated from Kinleith site boilers to both 1250 kPa and 450 kPa for process use on site. Figure 2. below shows a diagram of our steam distribution system. Note the Turbine acts as the central pressure control station.

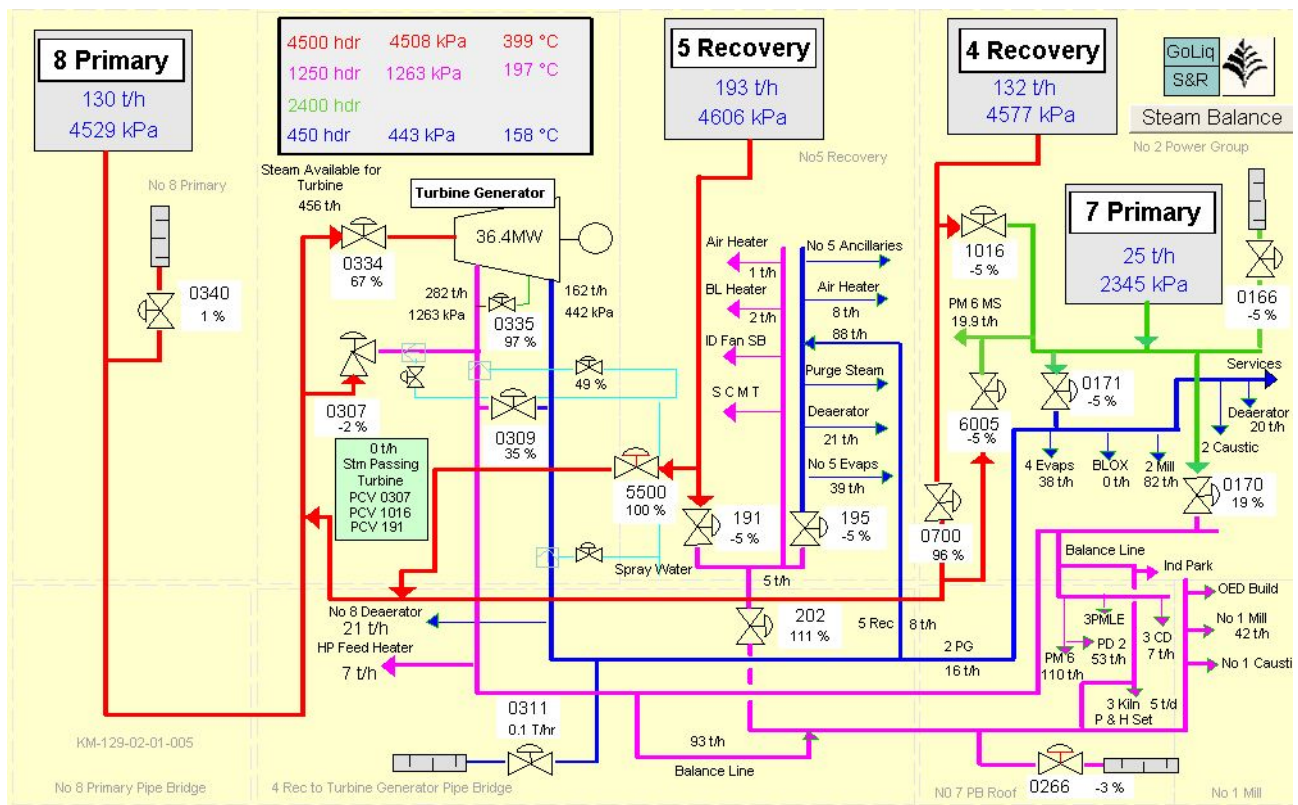


Figure 1. Steam system overview; snapshot of mill during normal operation.

(ii) it provides some or all of the **electricity** that it generates to that co-located **industrial process**; or

The Kinleith site is a net importer of electricity; the electricity generated as a by-product is

exported (Generation minus PM6 use) through GXP KIN0112. Most of the site's electricity demand is imported through GXP KIN0111 and note that without the plant running that is supplied electricity through KIN0111; the Kinleith site would not have sufficient steam demand and therefore generated power to become a net exporter in any expected situation. Below Figure 2 shows the relationship of the GXP's to the generator.

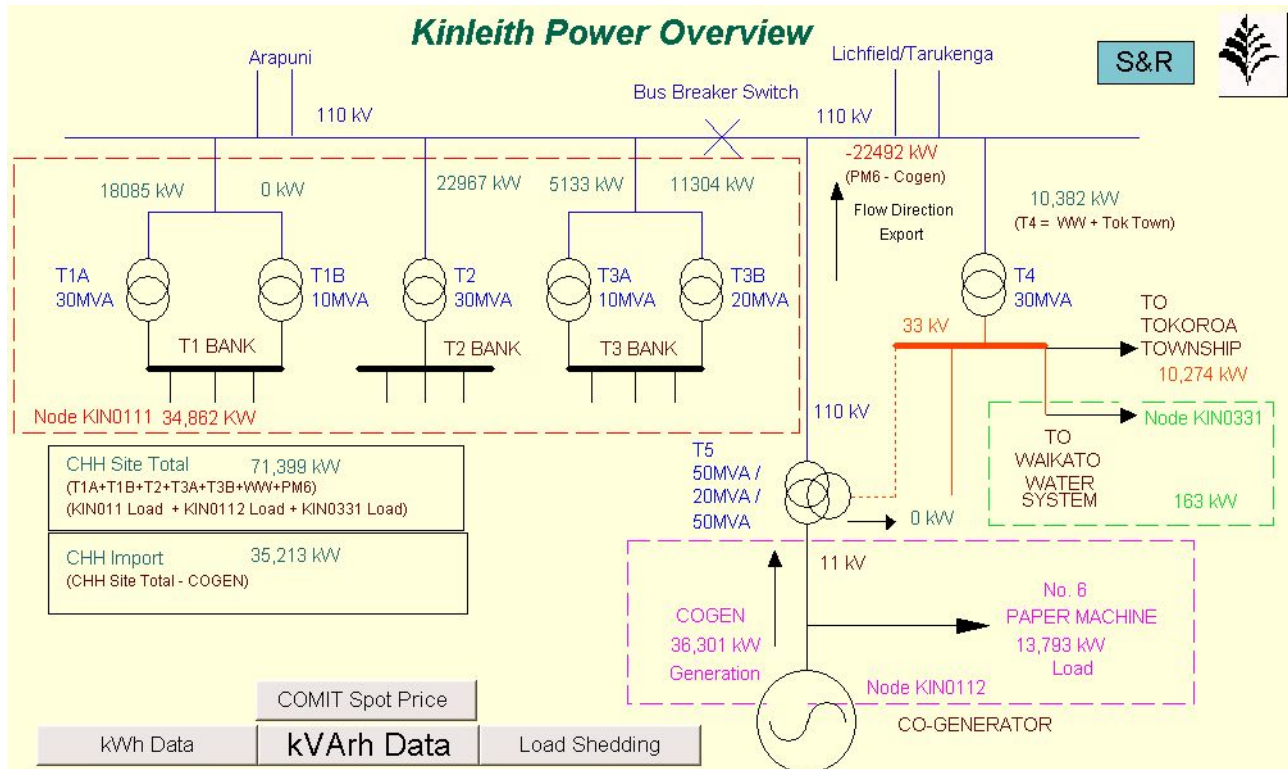


Figure 2. Relationship between GXP's KIN0111 and KIN0112 and Kinleith site.

(iii) it provides some or all of any by-product of generating **electricity** to that co-located **industrial process**; and

Steam for process use is the primary product. Some power is consumed by PM6 prior to export from GXP KIN112.

(c) that is tightly coupled to an **industrial process**; and

The non condensing turbine is an integral part of the pressure reduction system to provide steam at the correct pressure and temperature for process uses. When steam generation rate changes due to changes in steam demand from users then the available steam to the turbine varies and hence the generation. See Appendix B.

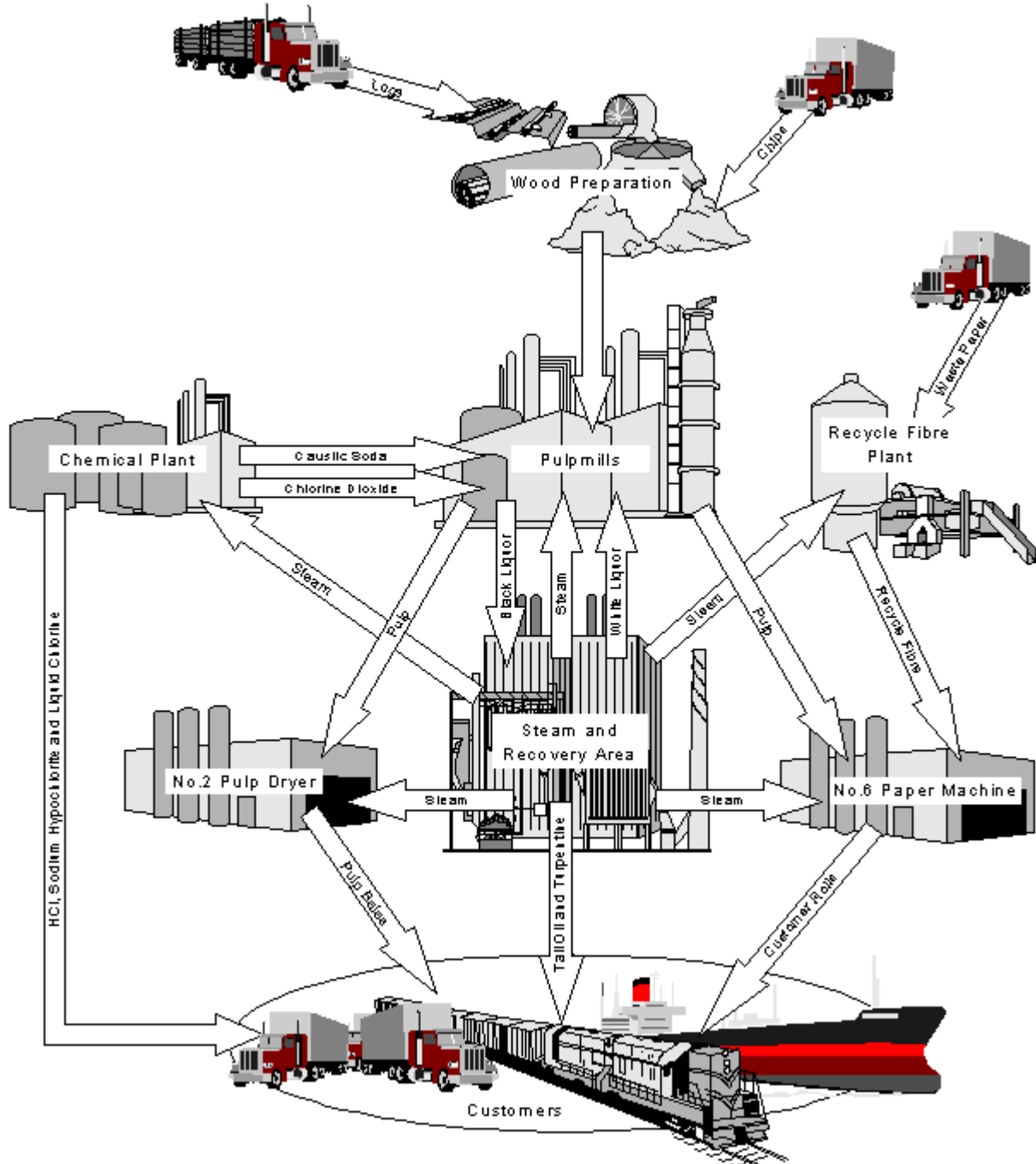
(d) that has been approved by the **Board** under schedule G9 of part G.

**Industrial process** means a process that has a primary purpose of producing an output other than **electricity**.

The Kinleith Pulp and Paper mill is an industrial process with the primary purpose of converting Wood into Bleached and Unbleached Market Pulp; various grades of Linerboard mainly Kraft Liner Board; Kraft Top Liner Board; White Top Liner Board and Semi Chemical Fluting. Market Pulp is an additive to many paper grades and Liner Board is a key component in packaging.

Steam is generated primarily from Black Liquor which is the residue of the pulping process; it is a mixture of dissolved organic material, mainly lignin and hemi-cellulose and spent pulping chemicals and water. It is concentrated via evaporation to a point at which it can be burned in the Recovery Boiler's; this is to both recover the inorganic chemicals for reuse in pulping and the energy from the combustion of the organic component of the liquor. Additional steam is generated from Wood Waste and Gas to provide the remaining process heat requirements the Mill circuit requires.

Figure 3. Diagram of relationships between major plants at the Kinleith Pulp & Paper mill



With the turbine being a non-condensing type whose primary purpose is to reduce the high pressure steam generated to a temperature and pressure that is suitable for heating and drying. The steam requirement of the mill is variable due to the complex interrelationship between multiple large steam users;

Linerboard paper machine (PM6)

Pulp dryer (PD2)

Large continuous digester (2CD)

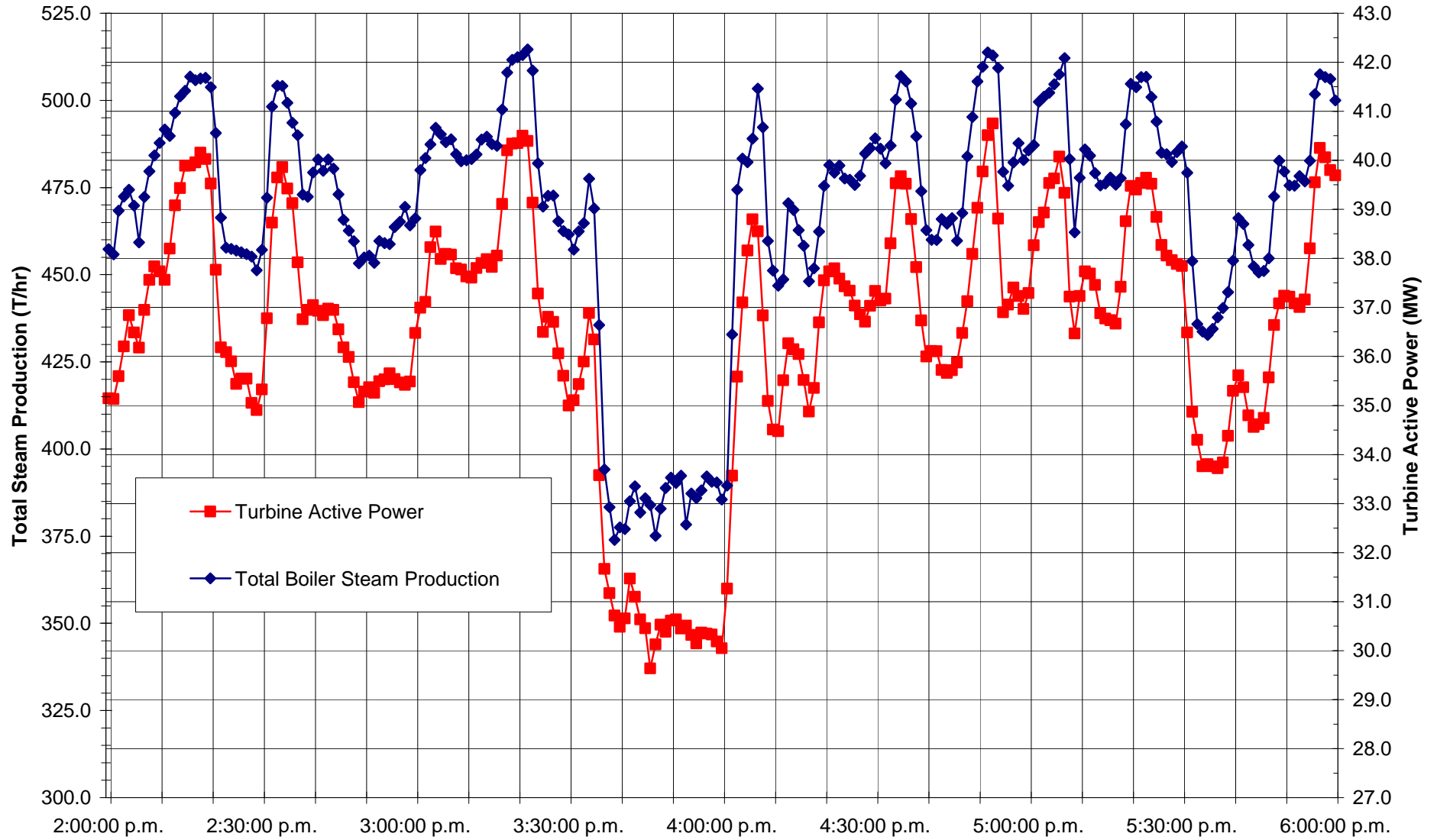
Batch pulp mill (No.1 Mill)

2 x Evaporator sets (No.4 and 5 Evaps)

In addition auxiliary steam usage to support these operations such as deaerator steam; hot water heating comprises an additional variable load.

Plant failures or process interruptions are common in such operations and seldom predictable.

Appendix B – Steam Generation Vs Active Power – Typical profile during a sheet break on PM6 - 28<sup>th</sup> March 2007



Appendix B – PM6 and No.1 Pulpmill Steam Usage Vs Active Power – Typical profile during a sheet break on PM6 - 28<sup>th</sup> March 2007

