

Summary of EarthLinked® Heat Pump Systems in B’rush Ski Lodge

Installation Year: 2008

Location: Mt. Hotham, Victoria, Australia



When most North Americans think of Australia, they think of the Outback or the Great Barrier Reef—not skiing moguls! The 28-year old B’rush Ski Lodge at Mt. Hotham in the Victorian Alps, 2.5 hours Northeast of Melbourne, was spending too much money for too little comfort each winter. They asked EnergyCore Australia, a geoexchange heat pump supplier and EarthLinked Sales Representative in Melbourne, to suggest ways to improve their comfort and operating cost.



“With the new system in place, the building has been spectacularly comfortable—unquestionably the best in its 28-year history, and it was achieved with substantially less energy,”

according to Murray Neilson, a ski club member who monitored the system performance. ***“It has been very comfortable and universally acclaimed by all guests.”***

The quantum improvement was achieved by the new heat pumps working in tandem with the new hydronic floor system. Neilson continues: ***“Another spin-off has been a staggering and unexpected 70% reduction in firewood consumption, saving up to another \$1,000 per year. The traditional fireplace is a very popular, universal ski lodge feature. However, this year the building’s comfort has significantly curtailed its usage.”***



6-ton (21 kW) EarthLinked® SW-072 units were installed to provide hot water for a new radiant hydronic heat distribution system. Although the ground temperature is normally 5.8°C (42°F) at their 1,750 meter (5,740 ft.) elevation, the hydronic water temperature output was 38°C (100.4°F), the COP was 3.8; and at 41°C (105.8°) the COP was 3.0.

As a result of the operation of the new system, LPG consumption was limited to use in cooking. In comparison with the previous season, there was a reduction of 98.4% and a savings of Au\$35 per day (\$62 LPG reduction minus \$27 power increase).