



CASE STUDY

Four Seasons Resorts Cuts Carbon Footprint to **Absolute Minimum**

“The Four Seasons hotel group is known for elegant rooms, exceptional service and superior amenities. Working with companies like Generac Grid Services, it was one of the earliest hospitality groups to add eco-conscious ingenuity to its repertoire. Using a hybrid heating solution, the hotel was able to displace 900 tons of greenhouse gas (GHG) emissions in just 11 months. **That’s the equivalent of taking 153 Honda Accord sedans off the road for almost four million kilometers of driving.**”

BACKGROUND

Managing operational efficiency at a resort like the Four Seasons requires creativity and innovation. With 2005 fuel prices the propane heating system at the Four Seasons Whistler, B.C., resort at over \$17 per gJ of propane, the cost to deliver heat to hotel buildings was well over \$23 per gJ when factoring in the propane system’s boiler. Add in the outdoor pool, spa and hot water demand, and it’s easy to imagine the impact of energy prices on the hotel’s operational expenses. In 2006, the hotel made the decision to install an Generac Grid Services hybrid

heating system at its Four Seasons Whistler Resort. The hybrid system automatically switches between fossil fuel and clean electricity to economically decrease greenhouse gas emissions from space heating and water heating. It improves efficiency of building central heating while reducing the greenhouse gas emissions associated with the burning of fossil fuels. It provides heat and hot water to commercial buildings by using high efficiency appliances powered by hydro-electricity.

How the Hybrid Heating System Works

Generac Grid Services' intelligent software monitors and manages the consumption of electricity in commercial and industrial buildings and automatically adjusts, in real time, the heating output of the hybrid heating system according to the thermal and electrical load of the building. This fuel switch from natural gas to a less carbon intensive energy source, like hydro electricity, reduces GHG emissions significantly, especially during marginal and intermittent loads when the fossil fuel boilers operate very inefficiently.

The resulting efficiencies enabled the Four Seasons to cut annual energy costs by more than \$250,000 and reduce greenhouse gas emissions by over 40%. In addition:

- 100% of the system financing was repaid from program financing with positive net cash flow.
- Energy cost reductions far exceeded expectations and conventional thinking.
- Installation was completed without any system shut down during high season winter occupancy.

With such a compelling payback in the business case, a second system was implemented at the Four Season Residences in Whistler in 2007.

