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**Cc:** Nikki Cooper <[ncooper@whistler.ca](mailto:ncooper@whistler.ca)>

**Subject:** Letter to Mayor & Council

Dear Mayor & Council,

Subject: The real cost of Whistler's Green 2010 Olympics DES heating systems

As one of eight owners of Cheakamus Crossing townhouses who replaced their DES heat pump system with a high quality electric boiler with optional instant hot water heating coil I can now look back and ask, "Were the claimed benefits of the heat pump system realized and, more important, were the associated costs worth it? Based on a cost/benefit analysis and my experience to date with the system that replaced my DES heat pump system the answer is a resounding no based on a number of factors.

Townhouses constructed for the 2010 Olympics Athletes Village are well-insulated, Whistler's climate moderate, high winds rare and DES heat pump systems do not provide air-conditioning. So any benefits are limited to space heating only for the associated portion of the annual hydro billing cycle.

A reasonable estimate of the cost of each heat pump system is \$35,000. The cost per SF of the mechanical room required for the heating system must be factored in. The mechanical room in my townhouse is approximately 100 SF. At \$300/SF the mechanical room added about \$30,000 to cost of my DES heat pump system. This brings the up front cost to approximately \$65,000 before my system was even turned on. Space heating accounts for about half of my \$126/month average hydro bill; \$63/month. If my DES heat pump system saved \$100/month on my hydro bill it would take 650 months or 54 years before any savings would be realized.

DES fees added \$48/month (38%) to my \$126/monthly average total hydro bill; 76% to my heating hydro portion. Replacing the existing water heaters every ten years with water heaters of the same size would add approximately \$7,500 or \$63/month. Critical annual maintenance adds another \$50/month bringing the total cost of operating my DES heat pump system, over and above hydro, to \$158.00/month. This does not include the cost of repairs and replacements of the heat pump and associated components.

But by far the most significant issue and source of justifiable concern is the fragility of the DES heat pump system.

In an article that appeared in the April 7, 2007 edition of The Star, Dave Hatherton, one of the pioneers of residential geothermal energy in Canada, saw the recognition of energy efficiency as a double-edge sword. Winner of an Ernst & Young award for Ontario that honours outstanding entrepreneurs from across the province Hatherton had a major concern; whether the geothermal

and solar industries could handle any increases in demand without compromising quality. Said Hatherton;

"This isn't just shipping iPods," referring to the complexity of a geothermal system. "It's infrastructure work and it's enormously expensive to go back in and make a fix if things go wrong."

There's no room for error, and any horror stories would surely be a setback for the entire industry. This made Hatherton nervous.

I used to share Hathertons' nervousness. Thankfully, this is no longer the case.

Respectfully submitted,  
David MacPhail

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