

# **MyHEAT Residential: Geomatic Solutions to Support Urban Energy Efficiency**

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## **Abstract**

Energy consumption accounts for 84% of global carbon emissions, and Canadians are among the world's highest consumers of energy on a per capita basis. In Canada, buildings account for  $\approx 35\%$  of all emitted greenhouse gasses (GHG), 33% of Canada's total energy production and consume 50% of Canada's natural resources. Space heating provides one of the best opportunities for energy efficiency improvements and savings; however, the most cited obstacle to these actions is a lack of interest. This is little surprise when one considers, what does energy efficiency really look like? Where is it located, and how do residents know that their home is energy efficient, not the energy saving devices inside?

HEAT (Heat Energy Assessment Technologies) is a Free GeoWeb service designed to visualize the amount, location and cost of invisible waste heat leaving your home, communities and cities as easily as clicking on your house in Google Maps. HEAT incorporates Geomatics solutions for community waste heat monitoring using Geo-Object-Based Image Analysis and Airborne Thermal Infrared (TIR) technology to provide users with timely, in-depth, easy to use, location-based waste-heat information; as well as opportunities to save their money and reduce their GHG emissions. The (2011) Phase I project evaluated 368 Calgary residences, with Phase II (2012 -13) scaling up to 37,000+ and Phase III (2013-14) to the entire city (300,000+ homes). This will be followed by additional cities with 1M+ populations.

HEAT's mission is to integrate leading-edge Geospatial Technologies and key Behavioral Science findings to show 'what urban energy efficiency looks like', 'where it's located', 'what it costs' and 'what to do about it'. We believe that if people could see the invisible waste heat they generate and if they knew how much it cost (financially and to the environment), that they would want to take action. We want to show them how – To find out more, please visit us at [www.saveheat.co](http://www.saveheat.co)