



CONTACT

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FUNDING

ASHRAE Grant \$4900

Local Chapter in-kind

Local Industry in-kind

PARTNERSHIPS

Chapter SA mentorship

DURATION

8 months to design and build

PROFESSOR DAVID TING

Professor David Ting is a mechanical engineering professor in the thermofluid area at the University of Windsor. He has been involved with ASHRAE chapter since 1997, and served as the University of Windsor ASHRAE Student Branch since 1999.

STIRLING ENGINE MICRO CHP

University Of Windsor

OUR STORY

This project significantly boosted our ability to teach better. As we strive to further sustainable living, it is critical to reduce building energy consumption. Waste and free heat can be taken advantage of via a Stirling engine. At the smaller scale such like a residence, this is best exploited via combined heating and power, that is, Stirling Engine micro CHP. Students who are exposed to this project have a better appreciation of energy utilization and renewable energy in HVAC. These students also have an edge when it comes to promising career choices.

OUR PROJECT

The project was to design and construct a lab scale natural gas burner powered Stirling engine micro-CHP for combined power generation and heating. The natural gas burner provides the heat source to run the engine for producing electrical / mechanical power. The waste heat is captured for space and water heating. See <https://www.youtube.com/watch?v=m785Gwf6Ops>

