**Description:** this project will take an existing 50kW induction generator chassis and control panel (formerly driven by a sterling engine manufactured in Ann Arbor, MI) and we will retrofit it to be driven by a 1.9L Volkswagen TDI diesel engine with a bi-fuel control system. The waste heat from the unit will be captured for a combined heat & power, or CHP, installation.

**Aims & Objectives:** produce a functional CHP system running on diesel & natural gas to be installed in a campus building HVAC system.

**Budget Estimate:** over $100,000 in equipment has already been secured. An estimated $50,000 is still needed for parts, (including engine controls), installation & student labor.

**Resources Available:** tools & work space at the CERC and support from original unit manufacturer.

**Equipment Already Procured:** 50kW induction generator, chassis, diesel engine, bi-fuel control system, touch-screen HMI display, & power meter.

**Deliverables or Outcomes:** if successful and approved by OU Facilities Management, the unit will be installed in a campus building to provide heating and electrical power.

**Major Tasks:**
- select & procure engine controls
- install diesel in chassis
- install engine & bi-fuel controls
- program test & validate the engine controls & operation
- install unit in a campus building