10kWe/50kWt - Village Industrial Power (VIP) / 50kWe - AgWatt

**Unique features:**
- Fuel Flexibility, Oil-less Steam Cylinder

**Capabilities:** Co-Generated Heat
  (low pressure steam), ease of use cooking

**Technical Details – 10 to 50kW range**
- 10kWe, 50kWt power/ 50kWe,
- Weight: 2,000- 10,000 lbs
- Size: 2m x 1m x 2m, Efficiency; (fuel to e): 10%
- Emission: min visible; CO < 500 ppm
- Boiler Exhaust = 300 C
- Engine exhaust = 120 C (saturated steam)
- Inlet temp; 300 C (superheated steam, 20 bar)
- Durability (10 plus years; run time insufficient for verification)
- Cost; (projected cost, US manufacture: $20,000; overseas: $10 –15,000)
- Noise; currently est. 80 db at full output, potentially much lower
Two 50kW CHP Units at Glencliff Nursing Home, State of NH
AgWatt/Village Industrial Power (VIP)

Development Needs

• Build and Test Integrated 50 kW plant
• Adapt to AgFuel Energy Crop Burner; test varied fuels
• Endurance testing; Optimization (pressure-displacement data logging, heat transfer analysis, speed increase to 1800 rpm)
• Cost reduction
• Feasibility – tailor the system to 1 to 5 kW range (specific cost)
• Automation
• Code approval for commercial and residential use