

Water-cooled condenser will remove as much heat as is available or required, then air-cooled condenser rejects the rest

Control Panel, PLC Communications Panel and interface Electronics

Air-cooled condenser and fan assembly (unit-mounted for small capacity modular assemblies)

**Generator Module- capacity and voltage as required**  
**Engine Module**

Hot Water Supply piping from Hot Water Return piping back to Thermal Input Unit (CoGen Unit or Boiler) **Peak required temperature is 170°F but higher temperature is OK**

Dom Hot Water from water-cooled condenser  
Dom Water to water-cooled condenser

Air-cooled condenser inlet louver (small capacity modules only)

**For Larger Capacity Modules-**  
Refrigerant Low Pressure Liquid Piping from condenser  
Refrigerant Low Pressure Gas Piping to condenser

**Electrical Feed from UPS- Voltage, Phase and Peak kW to match loads- sent to distribution panels**

**Engine drives Generator via timing belt connection. Generator output feeds battery bank, battery bank feeds UPS system, UPS feeds appropriate voltage, phase and frequency to loads. As load power changes, battery bank supports excess load or stores excess output until generator can recover.**

## FreeLoader™ RT

### Thermal-Powered Refrigerant Engine/Generator

- > The "POWER" of a steam locomotive that needs less than 180F needed to make it work.
- > Can operate with ANY thermal input or fuel- works best with landfill or digester gas, but ALL Renewable Fuels are OK.
- > Provides LIMITED CoGeneration value- typically from pre-heating water that will need further heating.
- > Thermal-to-electricity ratio is about 15%.
- > Costs about \$1,000 per kW, including boilers.
- > **Typical paybacks are less than 15 months.**
- > **98% CO2 and 99% NOx savings.**