



Energy Conversion & Conservation Center



# MICRO-CCHP: COMBINED COOLING, HEATING AND POWER

*Micro-CCHP is an advanced cycle to provide cooling, heating and power by combining micro gas turbine, absorption chiller and heat recovery unit.*

## ADVANTAGES

- Very high system thermal efficiency
- Low Emissions
- Independent of power grid.
- Peak-load shaving

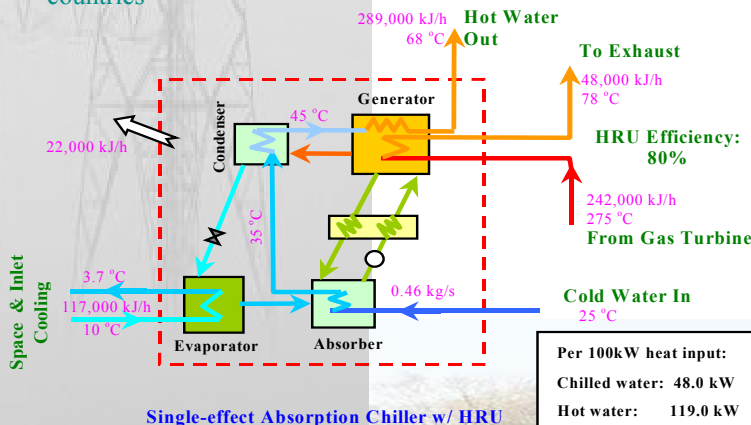
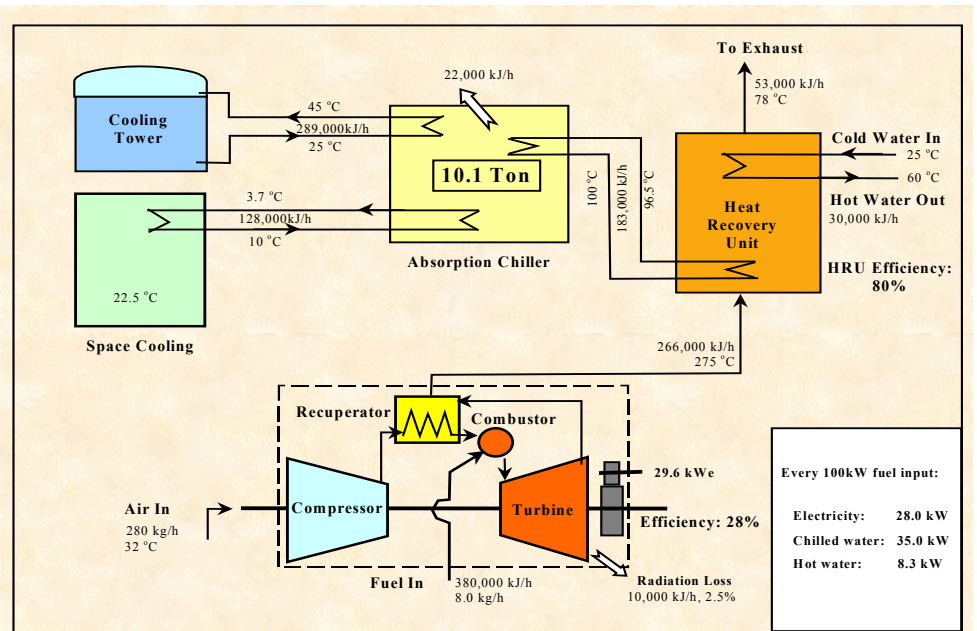
## APPLICATIONS

- ❖ Residential Community
- ❖ Supermarket/Restaurant
- ❖ Hotel/School
- ❖ Office
- ❖ Rural areas in underdeveloped countries



## RESEARCH ACTIVITIES

- ✦ Demonstrating the combined cycle with commercially available units
- ✦ Improving the cycle by introducing turbine inlet cooling from absorption chiller.
- ✦ Improving the cycle by integrated design of absorption chiller with heat recovery unit.
- ✦ Optimizing the operational conditions
- ✦ Transferring new technologies to industry



## Challenges

- ⬆ Reliability
- ⬆ Operation and control
- ⬆ More compact design
- ⬆ Efficiency

