INTRODUCTION

What are CHP Systems/CCHP Systems?

Combined **H**eat & **P**ower Systems (CHP systems) and **C**ombined **C**ooling, **H**eat & **P**ower systems (CCHP Systems). These are on-site electricity power generation systems that utilize the waste heat that would otherwise be wasted. These systems can provide useful thermal energy in the form of hot water, chilled water or steam which can be used for space heating, cooling, domestic hot water and industrial processes. These systems allow facilities to create their own microgrids that can function autonomously when power from the electric grid is lost.

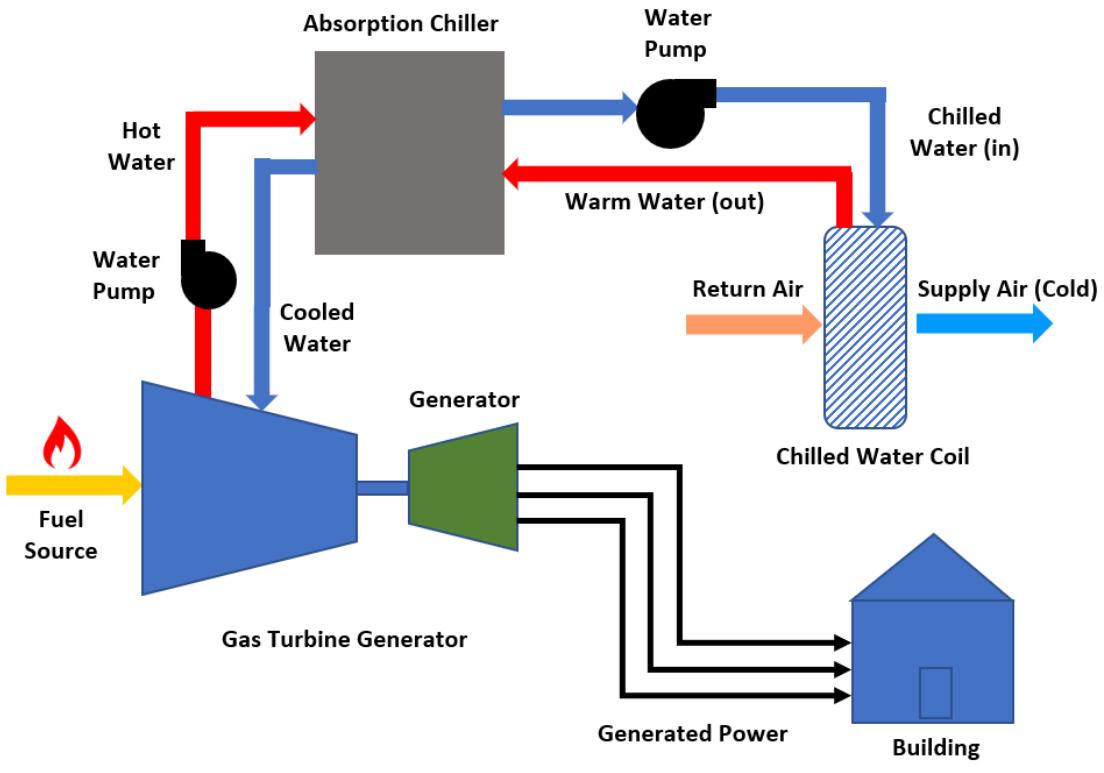
These systems can lower demand charges, reduce utility power requirements on buildings that cannot get enough electrical power and generate **FREE** cooling to the HVAC building system. Gas driven turbines are the most common generators and the cost of total generation / Kw (Kilowatt) will vary from city to city. Gas prices, electrical power rates, lighting schedules, grid power reliability, utility rebates and available capital will all factor into the decision whether CHP or CCHP is right for your grow facility.

Proper research into the available utilities, electrical power costs, natural resources and cost of installation are integral to making a good decision on whether to integrate CHP or CCHP into your facility.

Cogeneration: Combined Heat and Power (CHP)
Chilled Water Combined Heat and Power (CCHP)

Efficiencies: CHP up to 90%, CCHP 90% +

CCHP System Design Flow Diagram



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