AYMAN ASHKAR

VICE PRESIDENT

ABOUT DBR

DBR provides an alternative to traditional MEP consulting firms by providing better opportunities for our people and as a result, better expertise for our clients.

We hold ourselves accountable to preserve non-renewable resources with our ability to design innovative solutions at the leading edge of building sciences.

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HYBRID
GROUND SOURCE HEAT PUMP SYSTEMS

DESCRIPTION

The evolution of the energy code and ASHRAE standards for achieving zero energy buildings require more energy efficient HVAC systems than current conventional systems. Standard Ground Source Heat Pump Systems (GSHP) can meet the high energy efficiency requirements, but the high initial construction cost and the need for large borefields sometimes make the implementation of these systems difficult. In addition, this system may not always be feasible for some climate zones and soil conditions. The Hybrid Ground Source Heat Pump System (HyGSHP) can be a good alternative to traditional GSHP systems. It combines the energy efficiency of the GSHP system with lower cost conventional HVAC equipment. This presentation provides an overview of the HyGSHP system, comparison with a GSHP system and return on investment for both systems.

LEARNING OBJECTIVES

- Basic components of Hybrid Ground Source Heat Pump System (HyGSHP)
- Advantages and disadvantages of the Hybrid Ground Source Heat pump
- Design considerations and control strategies
- Cost and payback analysis

LEARNING UNITS

1 LU|HSW

CONTINUING EDUCATION AIA