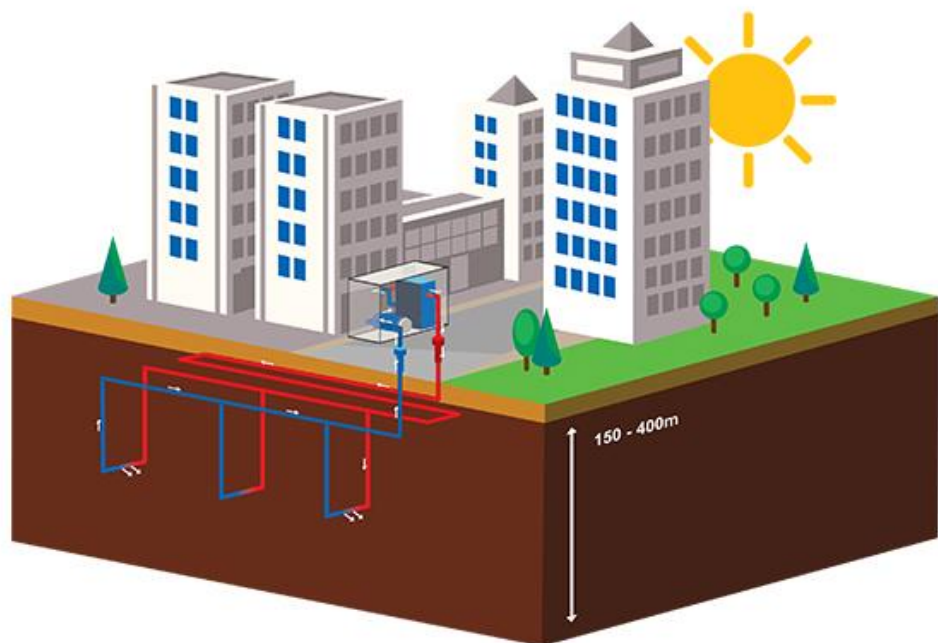


Ground Coupled Water-to-Water Heat Pump Chiller (Geothermal)



Geothermal systems harnesses the constant underground temperatures to efficiently heat and cool a building in winter and summer, respectively.

Objectives:

- ❖ Implement a renewable energy system to heat and cool SPPL
- ❖ Fully electrify the HVAC system to make SPPL net-zero building ready

Value:

- Potential annual energy savings: 275,000 – 350,000 kWh
- Potential annual cost savings: \$32k - \$41k
- Life expectancy: ~25 yrs for pump, 50+ yrs for ground loop
- Lifetime maintenance and equipment costs are expected to be **60% and 82% cheaper** than the conventional system, respectively
- Potential eligibility for \$20k - \$26k FOE incentives
- Potential eligibility for 30% direct pay from IRA (~\$1.35 million)