

Imagine cooling allows to true comfort levels for up to 95% less electricity. We use the cold of space to radiate heat away at night and stored cold in the form of chilled water to keep structures cool during the day.

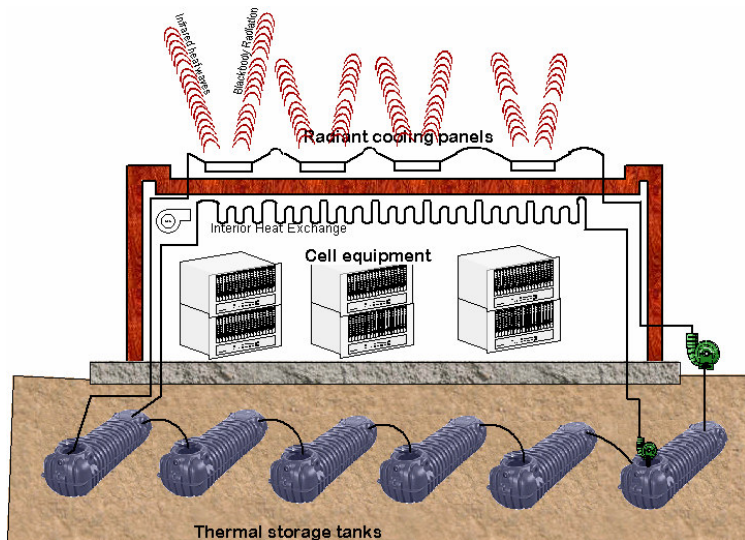
This system is ideal for areas operating from generators or Photo voltaic (PV) energy and batteries. In fact it saves so much energy that it is possible to cool over 25 buildings for the less than the cost of providing sufficient Photo voltaic electricity and batteries to power an EER 10 air conditioner for a single building.

The renewable cooling system works well for comfort cooling and is even more efficient in high heat load environments like cell sites and server rooms where we can capture and dissipate heat direct from the equipment.

When use for comfort cooling can cool 2 to 3 stories with space available on roof top. Cost per BTU of cooling is generally lower when used in high heat load environments especially when hot air streams coming out of radio or server cabinets can be directly captured and treated. The system requires ability to run fluid loops to local heat exchangers. We also need to store several thousand gallons of water in buried tanks or basements which requires local excavation.

Cost can vary depending on local weather patterns. Local contractor based installation costs extra. Cold can be delivered using fluid to air heat exchangers or radiant walls and ceilings. It is generally easier to retrofit fluid to air heat exchangers into existing HVAC systems.

41,000 BTU is 12,015 watt hours continuous or 3.4 ton. System design is to displace 984,000 BTU (288.3 KWh) per day. Storage is designed to store 2 days worth of cooling energy. A EER 10 air conditioning system moves 10 BTU per watt of power consumed



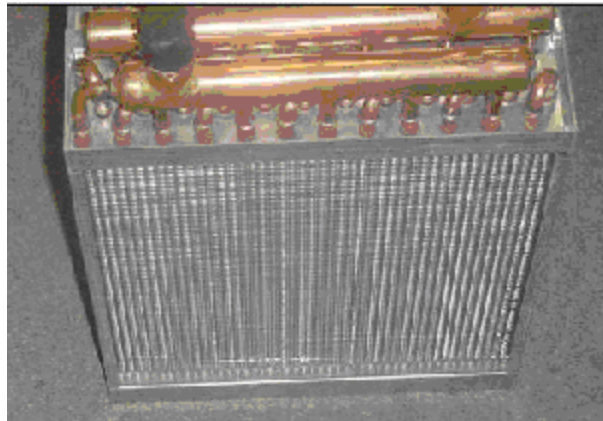
so it will consume 98.4 KWh to move 984,000 BTU of heat. We can do the same with less than 2KWh saving 96.4KWh per day.

A typical cell site may plan for a minimum of 4 days of battery backup. At 96.4KWh per day savings we reduce their battery requirements by over 385 KWh. The Photo voltaic panel array would be reduced by 296KW (Assuming 8 hours of full sun must deliver the full 96.4KWh in 8 hours of charge time). It requires 10 PV panels at 100 watt panel to produce 1KW so we would need 2,960 of the 100 watt panels to deliver the 96.4KW our systems saves.



At a installed cost of \$800 per panel this would have a market value of \$2,368,000 at \$800 per panel installed cost. The battery costs to store 385KWh at an installed cost of \$400 per KWh of storage would save an additional \$154,000.

There you have it our installed cost is less than 4 days of battery storage based on the energy we save. Our \$93,000 system cost for the high density 41,000 BTU system is less than 1/25th the cost of installing a photo voltaic grid to needed to produce sufficient power to operate a EER HVAC system. In other words you can equip 25 buildings with our system for the cost of the photo voltaic to power the HVAC system in one building.



Geoexchange pump can be used to extend operating capability into extremely hot regions such as Phoenix AZ and Las Vegas Nevada even during the hottest months.

See:
renewablecooling.com for
more details or
call 800-658-8745
or 435-657-2280

