IceEnergy

# Ice Bear 20 Case Study
## Home in Santa Ynez, CA

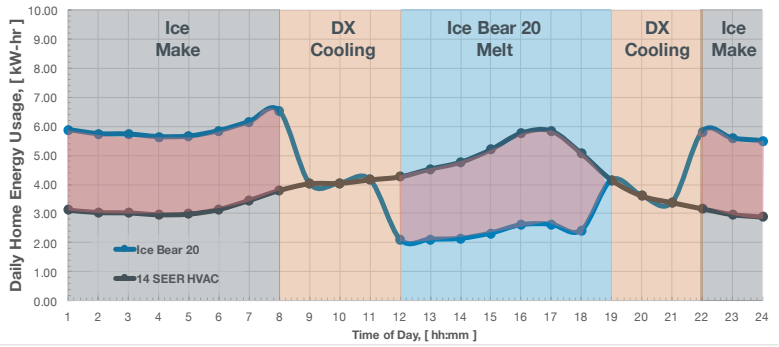
### Situation:

As summertime temperatures increase, air conditioners work overtime, straining the grid to peak demand levels and making everyone a lot less comfortable. Home-owners have started to install solar power at home to ease the pain, but they can't maximize the value of their installed solar system.

Over generation of solar energy cannot be put to practical use and air conditioning systems running during the hottest part of the day experience degraded comfort cooling performance. In more humid environments HVAC systems must run for longer periods of time to both remove moisture and heat.

### Solution:

The aging, inefficient air conditioning unit was replaced with solar panels and a new, high efficiency Ice Bear 20 energy storage and cooling unit.




A single Ice Bear 20 supplies 100% of a home's cooling needs. During peak periods when energy costs are high the stored ice provides cooling to the home. When energy costs are lower the Ice Bear uses its own compressor to deliver cooling directly or to make ice.

An Ice Bear 20 can store enough energy to provide 4 hours of continuous cooling. In a typical home in Southern California, this means the Ice Bear 20 can provide cooling from its storage tank for 7–8 hours of the day.

The Ice Bear 20 is also solar-aware. This means that at any time the Ice Bear 20 is standing idle and there is excess solar power being generated it will intelligently start providing cooling directly if required or start storing the energy as ice available for use whenever cooling is needed.

### Results:

Despite the extreme late summer heat, which drives temperatures above 100°F, installed Ice Bear units work flawlessly, delivering uninterrupted cooling comfort on and off-peak while displacing up to 14 kW of electrical demand. In a home with solar panels, the Ice Bear 20 allows the home owner to maximize the benefit that can be derived from these, by converting excess solar capacity generated into cooling.

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