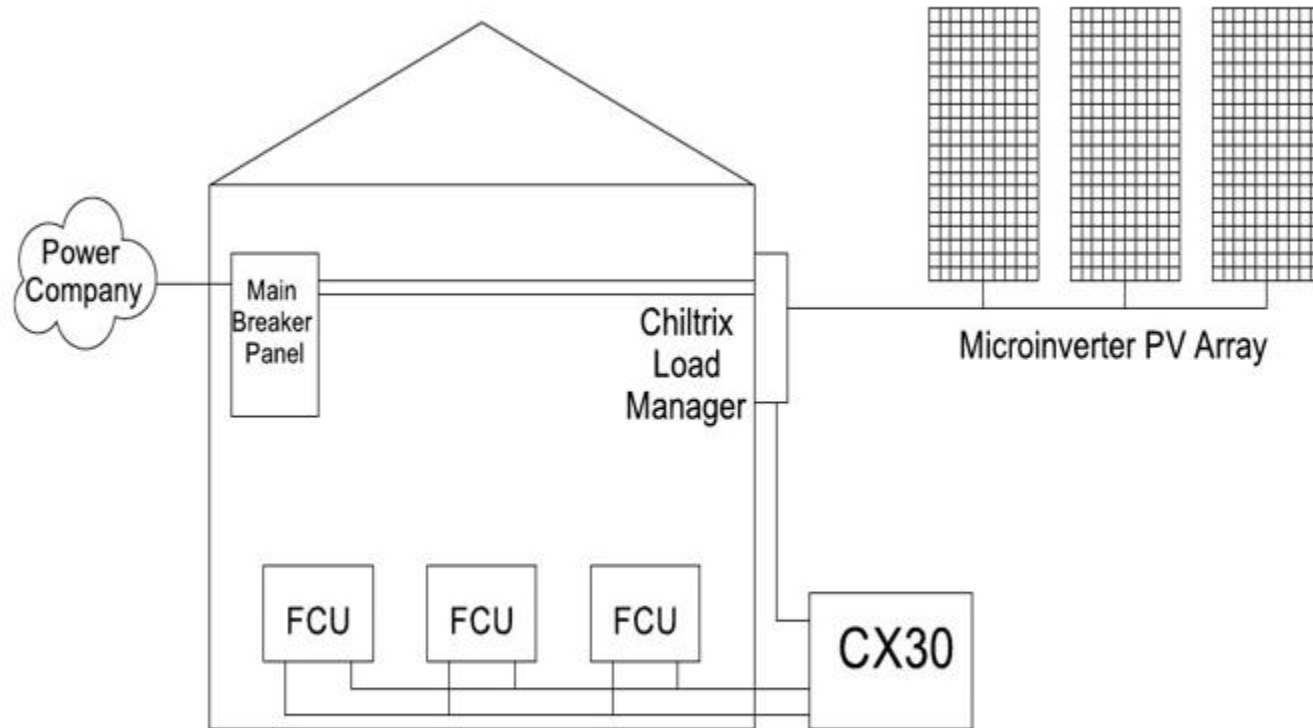


Chiltrix Solar Chiller Options

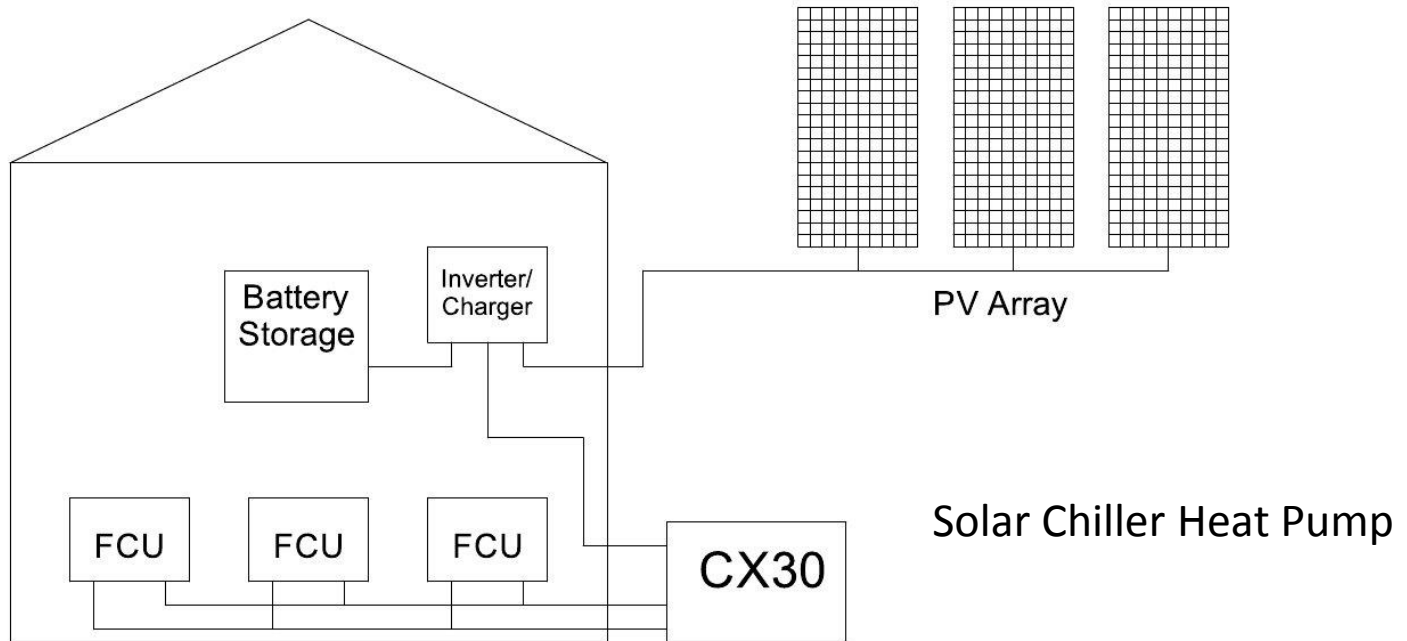
PV (Photovoltaic off-grid, grid-tied, and solar thermal options)

Shows a grid-tied PV solar powered chiller.



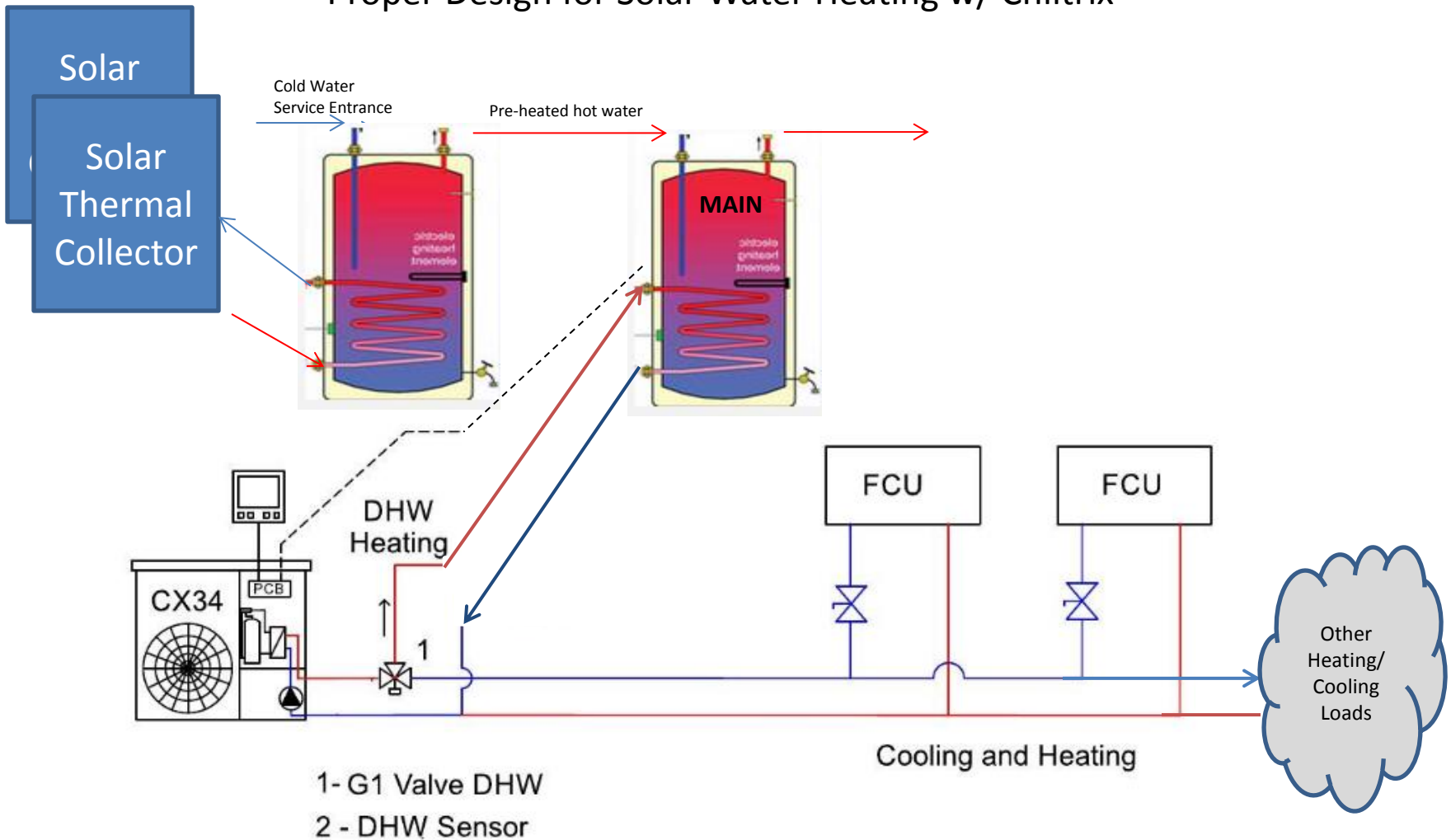
Microinverter PV should be sized to match the expected annual energy needs of running the chiller for heating and cooling. Larger systems can use a string inverter in a similar manner. When solar power exceeds the needs of the chiller, extra power is sent to other electrical loads. When solar power is less than chiller requirements, additional power is pulled from the grid. If solar power exceeds all loads, excess is sent to the power grid for a credit to be used later, requires net-metering.

Proper Design for Chiltrix w/ Off-Grid Solar



Standard PV panels should be sized to match the maximum daily energy needs of running the chiller. When solar power exceeds the needs of the chiller, extra power is sent to the batteries. When solar power is less than chiller requirements, or at night, power is pulled from the batteries as needed. Solar array and batteries must be properly sized based on location and duty cycle.

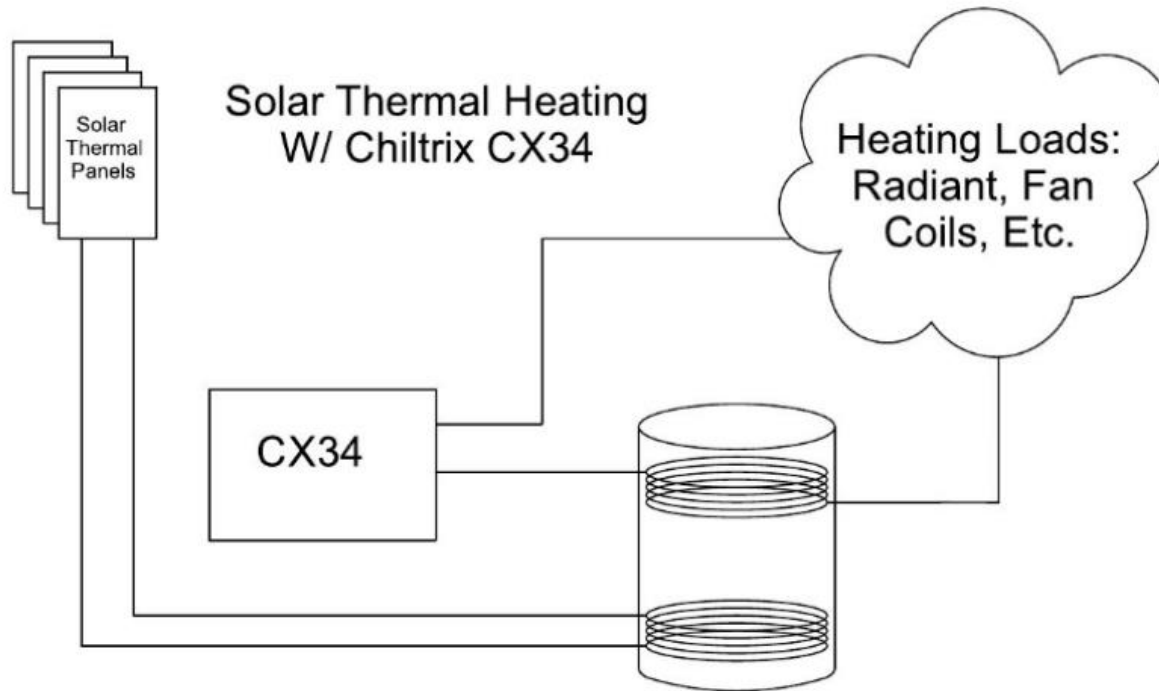
Proper Design for Solar Water Heating w/ Chiltrix



Any properly designed solar water heating system always uses a 2-tank solution with a pre-heat tank as shown above. In this example Chiltrix is the backup to the solar water heater. When the main tank has a lot and hot water is removed, it is replaced by water that has already been heated. The pre-heated water may be hot enough that the main tank does not need to do anything, or if not hot enough, the main tank trims up the temperature as needed.

Proper Design for Solar Space Heating w/ Chiltrix

Below is a very simple way to use solar thermal space heating as primary where the CX34 stays off or at a low speed until all of the solar energy is used up. Essentially, the solar thermal is primary and the CX34 is backup. This drawing shows a 2-coil atmospheric tank however single-coil tank designs can also work fine.

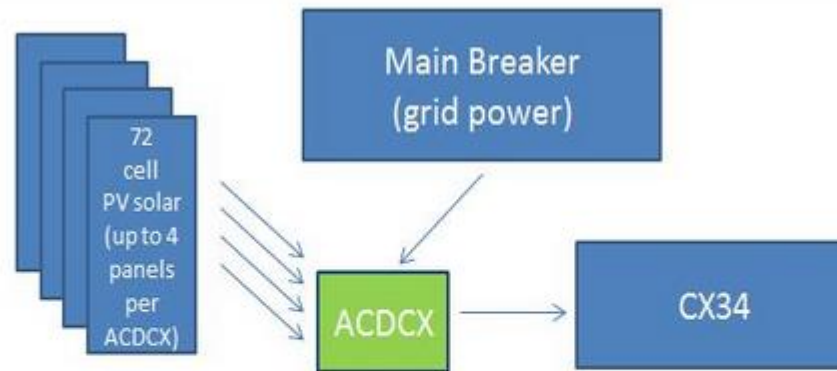


Above shows an atmospheric tank with two coils. Single coil designs and various tank options are also possible.

Chiltrix w/ Off-Grid Solar Direct

A new option is to use solar directly with grid backup. Up to 4 solar panels can provide a significant portion of the needed power, any extra power that's needed is pulled from mains power. No power is exported and no net-metering agreement or special meter is needed.

NEW!



At times when solar power is enough to handle the load, no grid power is used. If there is not enough solar power, the needed extra power is pulled from the grid. Solar power is never sent to the grid.

The ACDCX product is scheduled for release in Q3 2019.
UL Listed.



The Chiltrix CX34 is a 220v appliance, a self-contained heating and cooling system with remarkable efficiency and therefore perfect for solar power. It has an AHRI Certification with record-setting performance.

Any of the standard system designs shown here

<https://www.chiltrix.com/documents/chiller-options.pdf>

can be optionally configured with one or more of the solar designs shown in this document.

See a fast-read 2-page overview of the Chiltrix system here

[CX34 System Overview](#)

There are hundreds, if not thousands, of ways to use the Chiltrix system, with or without solar. Please [contact Chiltrix](#) to discuss your requirements.