

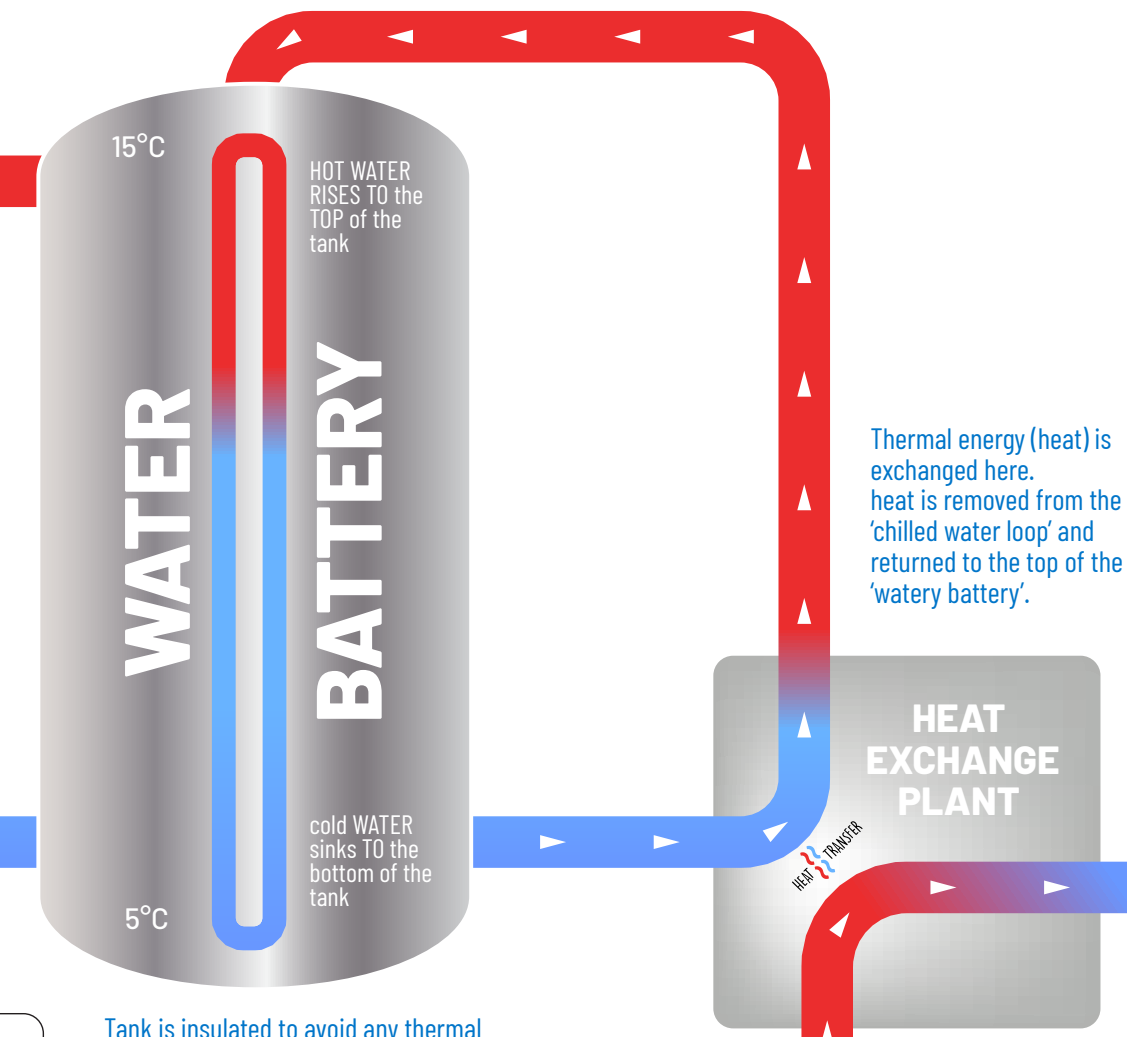
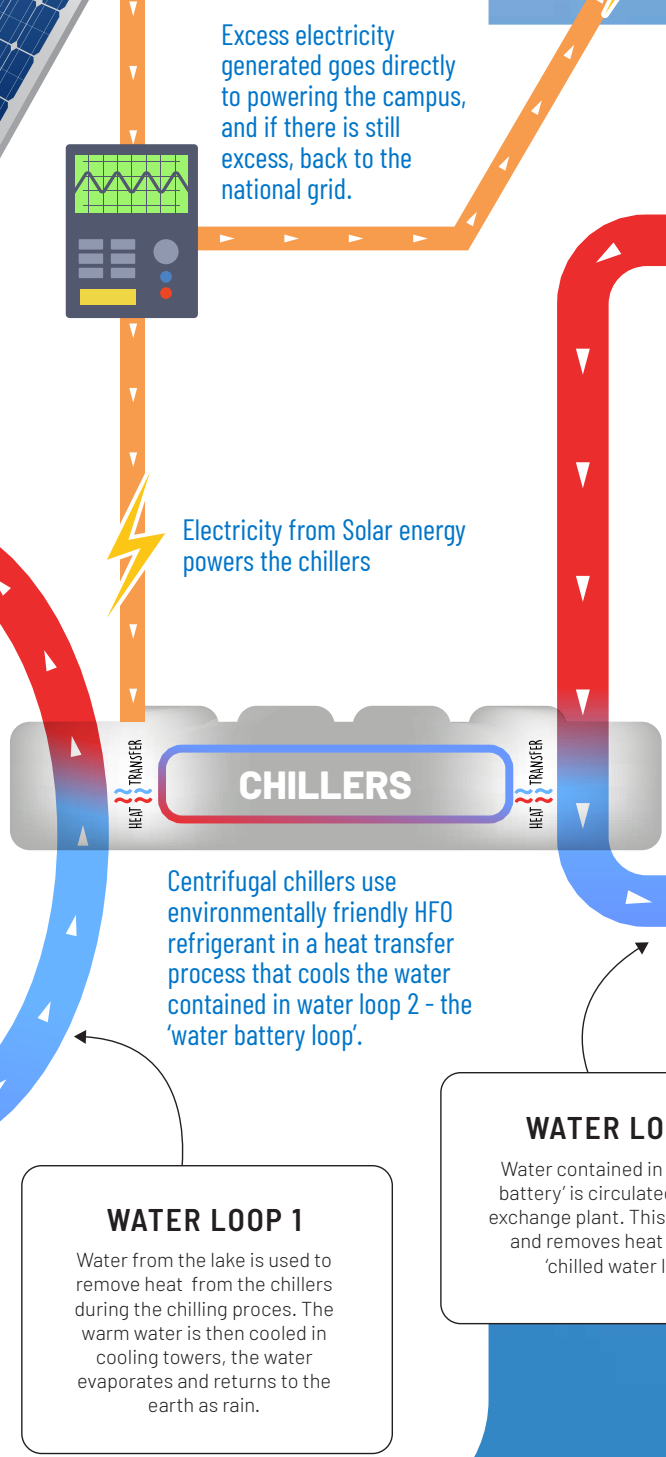
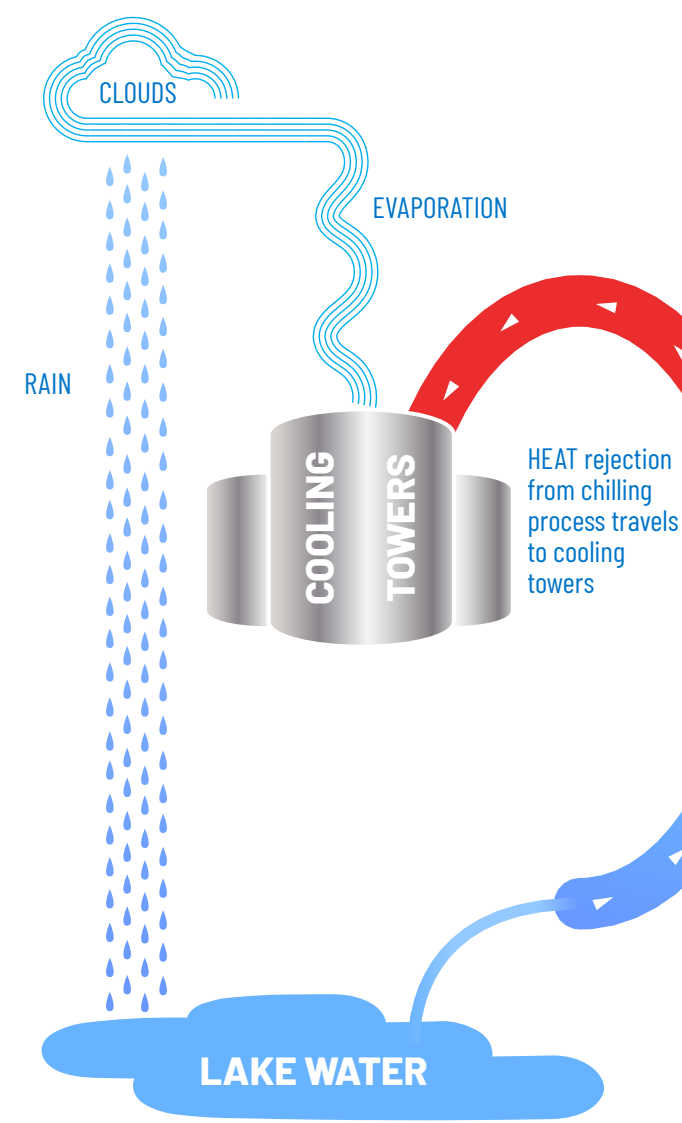
Solar energy

USC CAMPUS  
GENERAL  
ELECTRICITY



# CLEANER ENERGY

Our innovative system chooses the best source of energy based on changing weather conditions. Part of our unique system includes a series of closed water loops, where water is kept cool enough to use within campus air conditioning. This is achieved through a combination of heat-transfer technology and centrifugal chillers – all powered by solar energy.



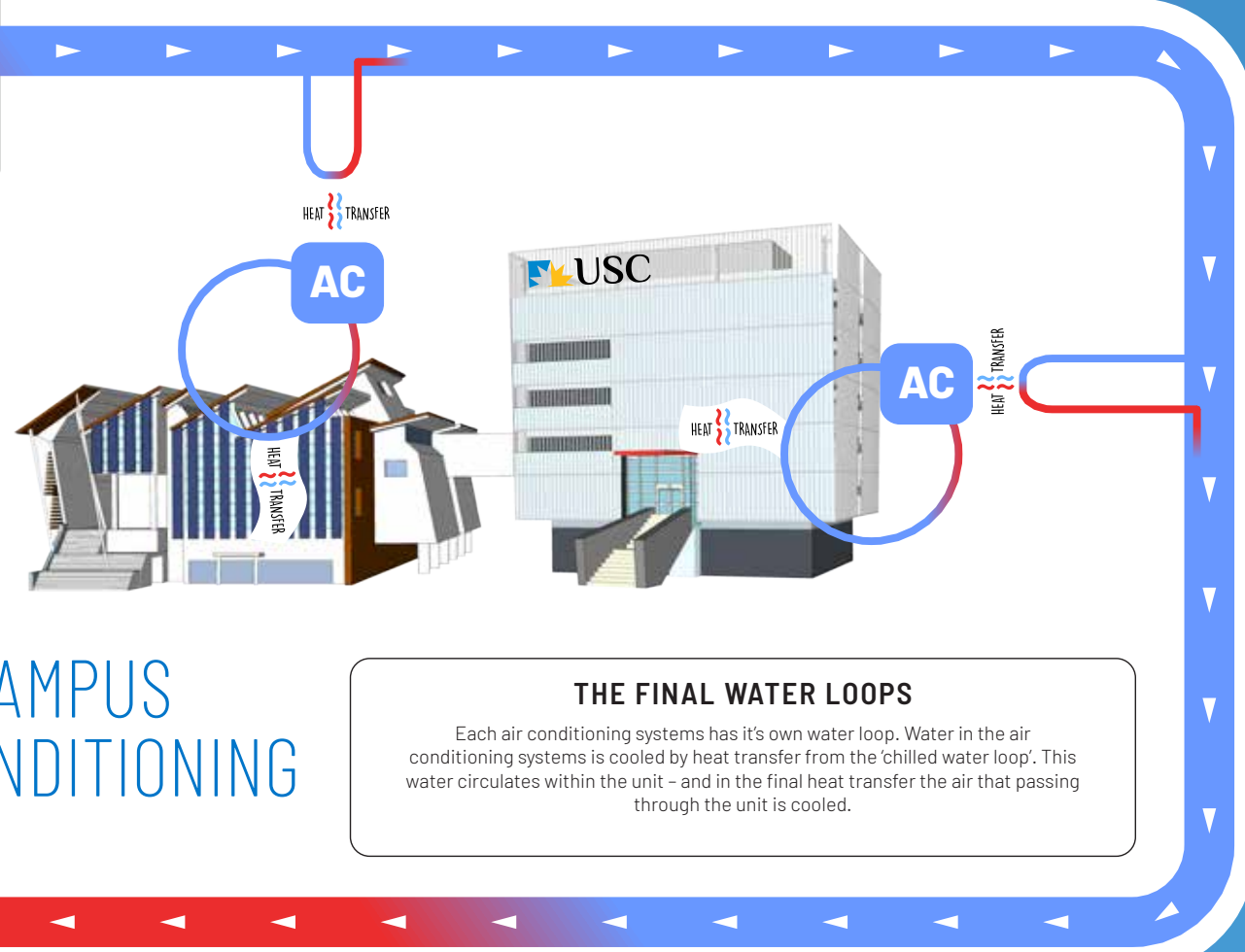
Thermal energy (heat) is exchanged here. heat is removed from the 'chilled water loop' and returned to the top of the 'water battery'.

**WATER LOOP 1**  
Water from the lake is used to remove heat from the chillers during the chilling process. The warm water is then cooled in cooling towers, the water evaporates and returns to the earth as rain.

**WATER LOOP 2**  
Water contained in the 'water battery' is circulated to a heat exchange plant. This plant cools and removes heat from the 'chilled water loop'.

Tank is insulated to avoid any thermal energy loss, essentially 'storing' the thermal energy, hence the name 'water battery'.

**WATER LOOP 3**  
This is the 'chilled water loop'. Water in this loop is circulated throughout the campus and used in a heat exchange to supply cold and remove heat from air conditioning systems throughout the loop.



USC CAMPUS  
AIRCONDITIONING

**THE FINAL WATER LOOPS**  
Each air conditioning system has its own water loop. Water in the air conditioning system is cooled by heat transfer from the 'chilled water loop'. This water circulates within the unit – and in the final heat transfer the air that passing through the unit is cooled.

