Completed Projects

Suspension of Air-cooled Chiller for Equipment Cooling in Laboratories

The HKUST laboratory equipment cooling system was supported by an individual air-cooled chiller. Air-cooled chiller is a good and simple solution to provide chilled water but the efficiency of the air-cooled chiller is low compared with the central water-cooled chiller plant.

This project is to extend the chilled water circuit of the central water-cooled chiller plant to support the HKUST laboratory equipment cooling system. The air-cooled chiller will be no longer in service after the expansion of the chilled water circuit and the expected annual energy saving is about 350,000 kWh.

More than energy saving, the suspension of the air-cooled chiller can help to reduce the use of HFC refrigerant, which is a potent greenhouse gas and is a thousand times more powerful than the carbon-dioxide. The reduction of HFC refrigerant usage can help to achieve the university's long-term sustainability goals.