CBRE BUILDING CONSULTANCY

BEST PRACTICE FOR ENERGY MANAGEMENT IN UNOCCUPIED BUILDINGS

The Government's strategy to combat COVID-19 is enforcing widespread home working. Previously busy office buildings are now experiencing very low occupancy.

CBRE

FIVE SMART STEPS

COVID-19 and empty buildings

Our Energy Management team recommends five smart steps to effective energy management in buildings with low occupancy. These best practice energy-saving strategies can be easily implemented through Building Management Systems (BMS) and ensure the continued integrity and efficiency of plantrooms, but offer a significant reduction in energy costs.

Avoid chillers operation and apply a hold off strategy for all cooling demand

A combination of reduced occupancy and the time of year means there should be little demand for cooling in buildings.

We recommend cooling demand is managed by lowering AHUs setpoint temperatures, so they provide free-cooling and applying hold off to all fan coil unit (FCU) cooling demand loads.

Lower AHU and FCU setpoint temperatures

In many cases, it won't be necessary to maintain the usual levels of thermal comfort in buildings.

We recommend that the supply temperature setpoint is decreased to reduce the demand on the boilers. This will also reduce the possibility of a cooling load developing and activating the chiller plant.

Modulate AHU supply and extract fan activity

Ventilation systems are designed to handle a defined capacity of occupants. Adjusting the fan activity to serve a fraction of this occupancy will ensure the appropriate amount of comfort is provided, given the reduced occupancy.

We recommend the amount of fresh air is reduced so that comfort can be maintained but at a lower energy cost. On top – where applicable – we suggest prioritising recirculation to further reduce loads on the boilers.

Review any morning warmup routines

Any early morning routine or plant warmup schedule used to optimise systems should be terminated. We recommend that extra care is taken to make sure no plant is operating outside of the necessary hours.

Ensure to implement valve exercise in case of low usage

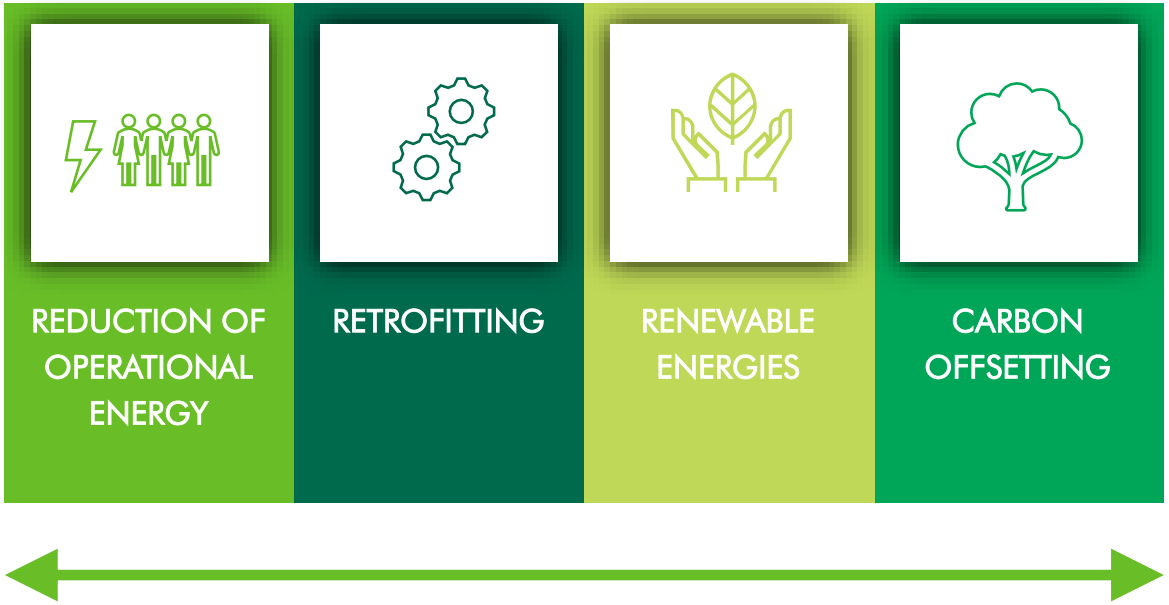
We recommend to implement periodic valve routine is adopted for low temperature hot water (LTHW) and chilled water (CHW) flow and return circuits so that water quality can be maintained throughout the system.

THE RIGHT APPROACH

Our Energy Management team has developed a variety of solutions to optimise energy footprints across a range of client portfolios.

Our goal is to match real time energy use to actual, measured need.

We're here to help you develop the most appropriated routine.



Reach out to see where we could help.

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