

PRIORITY ACTION ONE



WHAT ARE BACS AND BEMS?

Building Automation Control Systems (BACS) and Building Energy Management Systems (BEMS)—made up of hardware and software—enable automatic controls, monitoring, optimisation, and management to achieve the energy-efficient operation of technical equipment, such as heating, cooling, ventilation, hot water, lighting and electricity production within buildings.



WHAT ARE THE BENEFITS OF THE ENERGY SAVINGS ACHIEVED?

BACS and BEMS optimise and reduce energy consumption and as a result, reduce carbon emissions. They also facilitate energy system maintenance within buildings by detecting and diagnosing inefficient operation, and increase the comfort, convenience, well-being and health of occupants.



WHAT ARE THE ENERGY SAVINGS OPPORTUNITIES?

Though final figures have not been determined, estimations indicate that BACS and BEMS could improve energy efficiency by 15-25% in 75% of all buildings.



WHAT MAKES CALCULATING ENERGY SAVINGS CHALLENGING?

BACS and BEMS cover a wide range of product types, so mapping BACS and BEMS already installed in European buildings is quite challenging. It is also difficult to evaluate the energy consumption of buildings in terms of energy consumption per end-use type, ranging from heating and cooling to ventilation.



WHAT IS NEEDED TO IMPROVE ENERGY SAVINGS CALCULATIONS?

There is a need to find a way to estimate energy consumption for heating, cooling, domestic hot water, ventilation, and lighting across residential and non-residential sectors. In order to correctly estimate energy savings, consistent and reliable data must be obtained and baselines must be clearly defined.