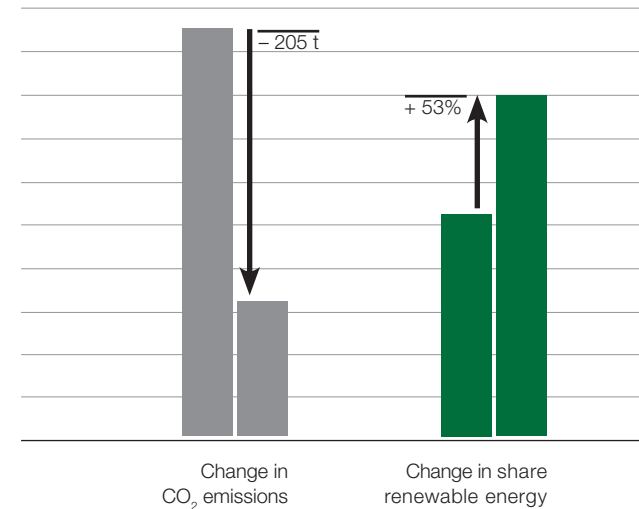
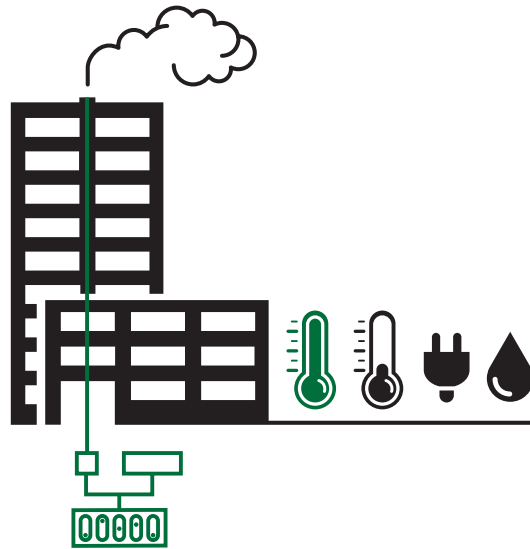


Practical example: CO₂ emissions

How does the EMS help to reduce CO₂ emissions?

An example will help to illustrate this. In a new Minergie-certified property the heating systems were optimised with a major impact on CO₂ emissions. In this building the heating is supplied by a gas heating system and a heat pump. The problem was that after the building phase was completed and these systems were taken into operation the gas heating system was producing 92% of the heating and therefore the benefits of the heat pump were not being used.

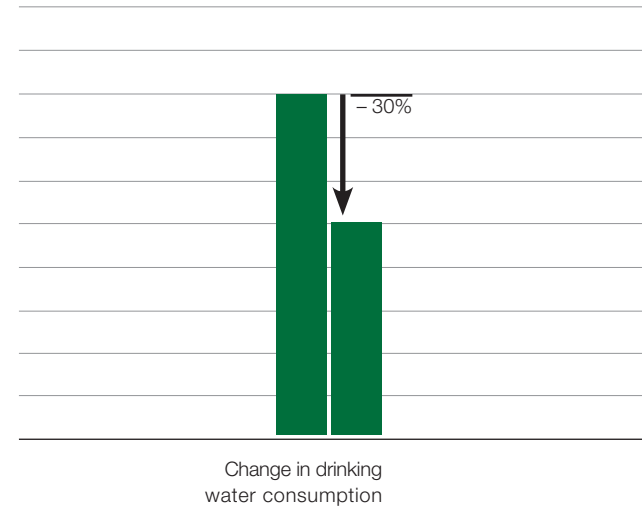
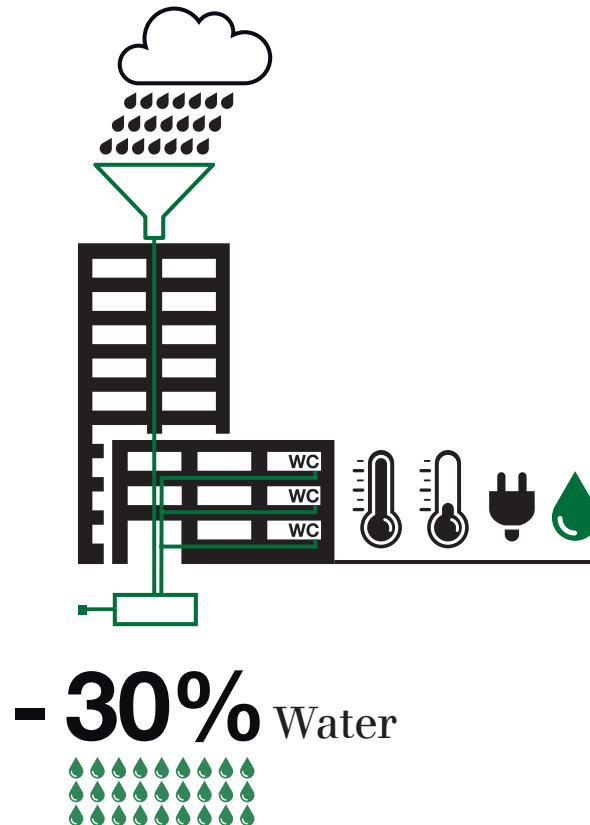
Without the EMS this situation would probably not have been recognized for a long time. By co-ordinating the control of these two heating systems a reduction in the CO₂ footprint was achieved and at the same time the share of renewable energy was increased. Saving achieved: 205 tonnes of CO₂, with a 53% increase in the share of renewable energy!



Practical example: Water consumption

One of Züblin's aims is to promote water conservation as well as energy efficiency. How do you go about achieving this?

Consumption of drinking water can be reduced considerably by a number of methods, for example the usage of rain water. In one building, for example, Züblin installed a water tank with a capacity of 30 000 litres. The rainwater collected from the roof is used for flushing the toilets, the largest consumer of water in an office block, and for watering the surrounding grounds. The annual saving of drinking water is shown in the chart below. Saving of 30% or 170 260 litres of water.



Practical example: Economic efficiency

The investment in an energy monitoring system is also intended to have a positive financial impact. What has the experience been so far?

In one case, for example, a not unusual fault in a cooling unit was identified with the help of the EMS. Such faults are sometimes not spotted for years. In this case the efficiency of this unit was below the normal level by a factor of 4. This meant that only one unit of cooling instead of four was being produced per unit of electricity. The financial losses for the tenant and owner were very considerable. As this fault was due to the advanced age of the unit, in this case it was replaced it with a new one. Thanks to this investment annual savings of 92 000 kWh or € 18 000 (assuming € 0.20 per kWh) in energy and costs were achieved. The investment costs for the EMS have already been more than paid back.

