

GATEWAY PRIMARY SCHOOL REDUCE ENERGY CONSUMPTION BY 26%

“ The system did exactly what I was told it would do. ”

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Background

Gateway primary school is a community school in Marylebone, London with an Ofsted grade of excellent. It has a total of 692 pupils within the age range of 3-11 years. There are six grades and twenty one classrooms.

The School engaged Enistic in June 2011 to help keep track of its energy consumption, engage pupils in the school's energy efficiency practices, reduce carbon emission and help include energy efficiency practices within the school curriculum.



GATEWAY PRIMARY SCHOOL, LONDON

How we did it?

An Enistic solution was installed at various metering points in the School, including individual classrooms, library, HVAC, kitchen, halls, lighting, the ICT area, computers and the nursery. A monitor with the Enistic dashboard was located in the dining area showing live energy consumption in each classroom. This made energy consumption more visible and engaging for staff and pupils.

With the high visibility of energy consumed, pupils were gradually introduced to a culture of energy saving through simple behaviours; such as switching off unused appliances and lights. Gateway Primary's Sustainability Teacher, Edel Boyle said Enistic was particularly useful during the school's Sustainability Week because she was able to use the energy dashboard to organise energy saving competitions between classrooms. According to Ms Boyle, “The consumption data from each classroom really helped to keep pupils engaged. They told off teachers who forgot to switch off unused appliances”. Pupils were also able to make presentations using data from their class rooms. Furthermore, young eco-champions (pupil representatives at the school's Eco council) enjoyed the responsibility of switching off appliances left on standby and lights when not needed.

The school benefited from the expertise of Richard Ansell, the dedicated Energy Coach for Gateway Primary School. His monthly report interpreted complex consumption data and highlighted areas that needed immediate attention as well as recommendations. “Richard's monthly report was very useful and helpful” said Ms Boyle.

Outcome

Ten months after the Enistic installation there was a cumulative 26% (41637kWh of electricity) reduction in energy consumption. Hence, saving the environment 22 tonnes of CO₂ emission.

With sub-metering data generated from 100 smart metering points, the general energy consumption pattern of the school became clear. Behavioural change efforts thus became more strategic. It was easy to see where the most energy was consumed, which in this case, were the classrooms and the kitchen. It was also easy to observe a trend during term time and holiday period as shown in Figure 3.

There was an increased awareness of energy efficiency among pupils and teachers as they were more involved in the school's carbon management plan. For example students often reminded teachers to turn off unused appliances. Pupils also took their new energy efficiency practices home. Mary-ann, one of the eco-champions said: "At Gateway, we help save energy by switching off the lights and projector when we don't need it. When the classroom is bright enough, we don't need the lights. We also like being able to remind our teachers to turn things off. Doing this at school has helped me think about turning things off at home." Doubtless, there is now a stronger awareness of the environmental impacts of wasting energy among pupils and staff at Gateway Primary School. In addition, the school has saved 26% in energy costs as well as saving 22 tonnes of CO₂- all in 10 months. Gateway Primary school provides an exciting case study of how schools can reduce energy consumption and cut costs simply through behavioural change. Interestingly pupils were the main drivers. With savings made from the energy costs, Ms Boyle said they are looking at increasing the Sustainability activities of the school.

Graphical Results

FIGURE1
Summary of Total Energy Consumption before and after enistic

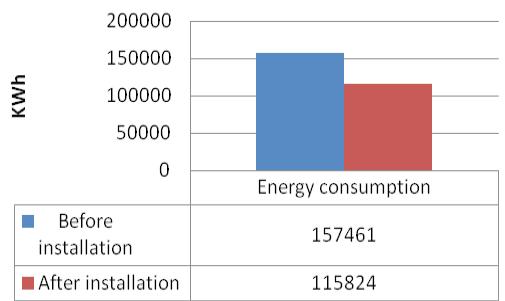


FIGURE2
Energy consumption in Gateway primary School 2010-2012

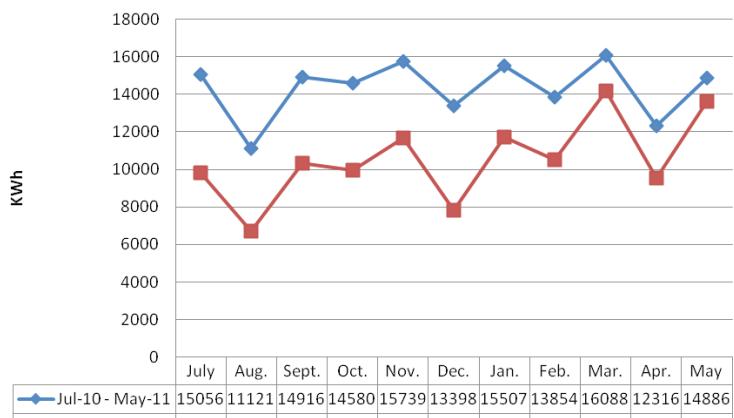


FIGURE3
Energy Consumption Trend

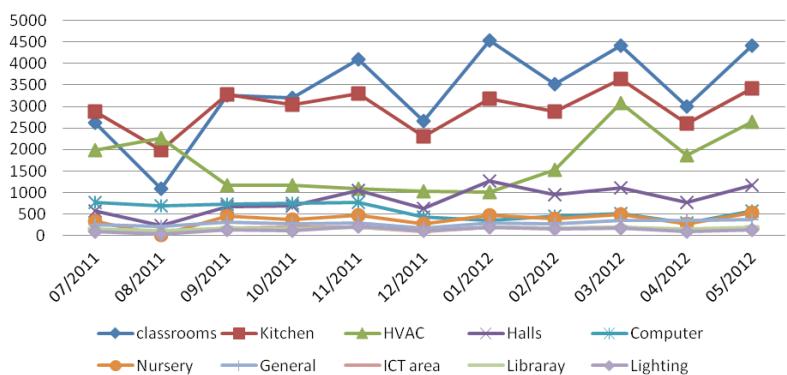


Figure 1: Gateway Primary School reduced energy consumption by 41637 kWh from their 2010/11 baseline with a resultant decrease of 22 tonnes of CO₂, 10months after the installation.

Figure 2: This graph shows a comparison of baseline electricity consumption and Enistic over 10 months

Figure 3: This graph shows energy consumption across various highlighted metering points