



Energy Sparks Case Study Northampton Academy Heating

Energy Sparks helped Northampton Academy cut their gas consumption by 40% and save £34,000 plus more than 80 tonnes CO₂ in their first year

“The main thing for me was, don't assume it's right without checking, take time to have a look, as it is worth it for everyone.”

- David Reed, Facilities Manager, Northampton Academy

Northampton Academy is a large secondary school of 1,700 pupils in the East Midlands. They joined Energy Sparks in December 2022 and since then the site team has been working hard to reduce the school's energy consumption.

As a former plumber and domestic energy assessor, Facilities Manager, David was sceptical that Energy Sparks could show him anything he didn't already know about the school's heating and he wasn't convinced that significant improvements could be made. However, when he received alerts from Energy Sparks about high gas use when the school was closed, he took the time to investigate what was happening.



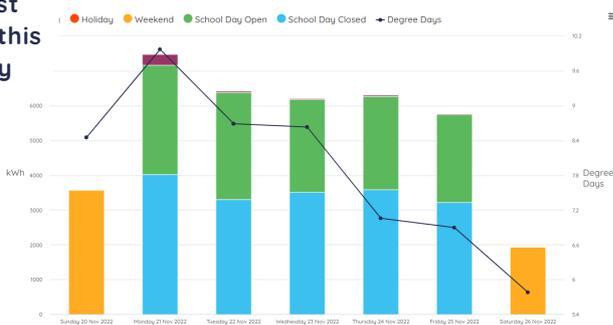
Last weekend 7,900 kWh of gas was used costing £450. Switch off the heating at the weekend to save energy!

David noticed that the heating was on over the weekend when there was no one in the school. For example, the school spent £270 on Sunday 20th November 2022, heating an empty school.

It wasn't clear from the Building Energy Management System (BEMS), but the heating was set to be on for most of the weekend, with only a short break in the middle of each day. With no one in the school to check these times, it was only when David saw the Energy Sparks gas use charts that he knew this was happening.

The school has underfloor heating which takes a long time to heat up but also retains heat well. The heating is now off for most of the weekend, with just a few hours on Sunday evenings to warm up the school for the week ahead. This has saved the school on average more than £200 each weekend.

Gas cost
£270 on this
Sunday



Two weeks with
a similar outdoor
temperature



Energy Sparks

Find out more about how you can reduce your school energy costs by visiting <https://energysparks.uk> or emailing hello@energysparks.uk.

Energy Sparks Case Study

Northampton Academy Heating

The school saw a 40% reduction in gas use since the previous year. This saved over 450,000 kWh which reduced energy bills by over £34,000 and emissions by 82 tonnes CO₂!



That's the same amount of CO₂ as emitted by flying around the world ten times!

Changing set temperatures

Heating set temperatures were changed to reflect advice given on the Energy Sparks website. Using Energy Sparks gave David and his team the confidence to know what temperatures to set in different areas of the school and to educate room users about the reasons. He was able to use the Energy Sparks analysis to check on the impacts of the changes, particularly during the periods of adjustment and experimentation.

Approach to the holidays

During autumn half term, contractors and site team members were on site so some heating was needed. The temperature was set to 15°C and heating times reduced. All doors were kept closed to allow individual room thermostats to do their job at controlling the heat and turn off when not required. For the Christmas holidays, the school was closed and by checking the weather forecast, David knew there was no risk of frost damage. The heating was switched completely off and scheduled to come on in advance of the new term starting.

The table below comes from the school's **Out of school hours gas use analysis** page and shows gas consumption and savings during these holiday periods.

Holiday	Period	Use (kWh)	Average daily usage (kWh)	Cost (£)	CO2 (kg)
Autumn half term	22 Oct 2022 to 30 Oct 2022	17,700	1,970	£1,350	3,720
	21 Oct 2023 to 29 Oct 2023	11,400	1,270	£869	2,400
	% difference	-35%	-35%	-35%	-35%
Xmas	17 Dec 2022 to 02 Jan 2023	84,300	4,960	£6,410	17,700
	22 Dec 2023 to 07 Jan 2024	24,000	1,410	£1,820	5,040
	% difference	-72%	-72%	-72%	-72%

“To be honest, what we've done is nothing extreme or that special. The main driver and trigger was actually the Energy Sparks programme because it inspired me and triggered us to be more focused on what we were doing.”

- David Reed, Facilities Manager, Northampton Academy

To find out more about the heating systems configuration advice we give to schools, visit our [heating advice page](#). For more information on Energy Sparks, email hello@energysparks.uk



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