Dalkeith Schools Community Campus

Client: BAM FM

Sector: Education

Dalkeith Schools Community Campus is a shared campus with two secondary schools and an amalgamation of local Special Education Needs (SEN) schools. The campus is a complex of inter-connected buildings, allowing a high degree of interaction and shared facilities whilst maintained independence where required. The site is operated by BAM FM on behalf of BAM PPP who provide a range of soft and hard services through a dedicated site based FM team. As part of the building maintenance, BAM looked for way to reduce energy costs and carbon emissions, and the cognitive technology of CircoSense was identified as a potential energy saving technology.

The unit was installed in one of the schools within the campus in May 2017, and as part of the "Proof of Concept", underwent a trial to prove the savings which could be achieved at this particular site. The hot water system in the school is fed from a gas burner which is non-modulating. To allow for accurate measurement of savings, hour run counters were fitted across the gas solenoids to assist the measurement and verification process. After the trial period concluded, it was established that the CircoSense3000 had resulted in savings of 33.7% on the cost of heating hot water at the site. In addition, annual savings of 12.52 tonnes were made in carbon savings, with a payback period of 2.75 years.

Key Facts & Figures

- **'Proof of Concept' installation**
- **33.77% reduction in gas consumption for hot water**
- **No disruption to the facility**
- **12.52 tonnes carbon reduction**
- **2.75 years payback**

> "CircoSense was installed in one of the schools within the Campus, and resulted in savings in both hot water costs and carbon emissions."
>
> Craig McDonald
> Energy Manager
> BAM FM

How the savings were calculated at Dalkeith School Community Campus:

1. **Reading of hour run counters on gas solenoids on day one of trial**
2. **Reading taken after two-week baseline period, during which CircoSense unit is on "Bypass" mode to learn system usage**
3. **CircoSense unit changed from "Bypass" to "Active" and begins to reduce energy usage**
4. **Final reading taken after two weeks on "Active" and compared to baseline period**