
BROWN THOMAS

Patrick Street Store, Cork

Energy Optimisation of HVAC and Building Controls Systems



Sirus energy Team achieves energy savings of 190,000 kWh and avoids almost 100 tonnes of CO₂, in 6 months since project completion.

Brown Thomas, situated in the heart of Cork City, is a high-end department store catering to a large clientele. The building has four floors, three of which are open to customers, with a total sales floor area of roughly 5,300 m².

Project Funding. The Energy Efficiency works in BT Cork were funded jointly by Sirus Group and SEAI. Brown Thomas incurred zero upfront costs, nor any risk. The initial 20% of the total project capital cost was provided by SEAI under the Better Energy Workplace (BEW) Programme 2012. The remaining 80% of funds were provided by Sirus under an ESCO type contract.

Project Works. The building is presently served with conditioned air from five roof mounted air handling units (AHU). Originally, the AHU were operating at fixed volume airflow during store opening hours. The total AHU motor electrical load is 129kW. In addition, there are two chillers providing CHW to AHU cooling coils which have a combined electrical load of over 250kW, which includes the associated pumping loads.

The average daily HVAC electrical load, prior to project implementation, was approximately 1,500 kWh. Since implementation of the efficiency programme in late November 2012, the average daily HVAC load has been reduced to 484 kWh, resulting in an average daily saving in the region of 1,000 kWh per day.

The BMS optimisation of the HVAC system prioritises free cooling

Building Energy Solutions

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FINAL CLIENT

Brown Thomas

LOCATION

Patrick Street Store, Cork, Ireland

SERVICES PROVIDED

Initial Energy review;
Energy consumption analysis;
BMS optimization; Modifications of HVAC; Installation of sub-metering; Re-commissioning.

ADDITIONAL FUNDING

SEAI – BEW Grant Programme
DURATION
Year 2012

REFERENCE CONTACT

Mr. Steve Gamble Facilities
Manager Tel: On request

PARTNERS

SEAI

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Installed VSDS

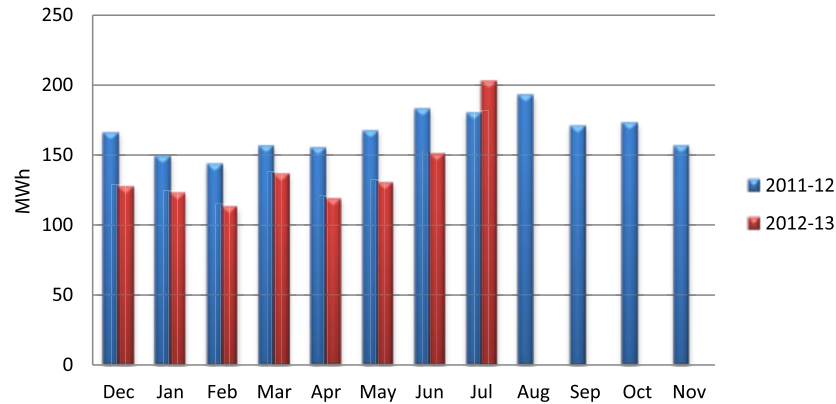


and utilises a temperature deadband to achieve significant energy savings from reduced fan power and chilling power.

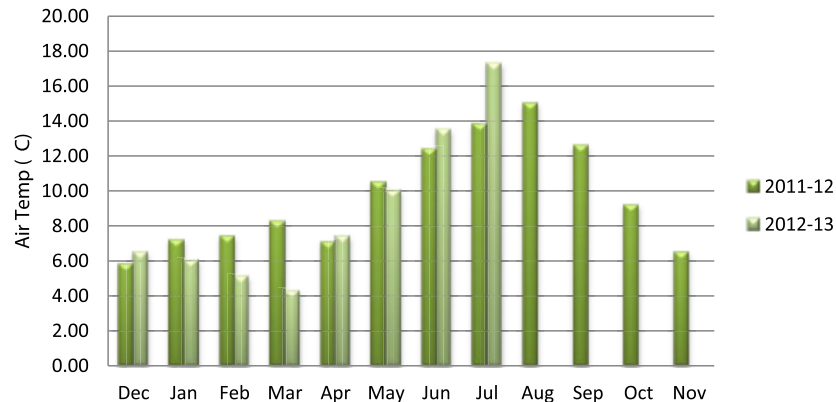
Monthly Energy Savings

The total energy saving achieved since implementation of the Energy Optimisation works in November 2012 are 218 MWh of electrical energy. This equates to approximately 106 tonnes of avoided carbon emissions.

Annual Comparison - Total Electrical Consumption



Met Eireann Mean Ambient Temps - Cork Airport



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