

Stour Leisure Centre, Ashford Public Sector Decarbonisation Scheme

Grant value
1,739,416



£100,462

REDUCTION IN ANNUAL
ENERGY COSTS

99%

REDUCTION IN
ANNUAL GAS
CONSUMPTION



236,000 kWh

REDUCTION
IN ANNUAL
ELECTRICITY
CONSUMPTION



600 tonnes

REDUCTION
IN ANNUAL
CARBON
EMISSIONS



Ashford Borough Council received funding of £1,739,416 from the PSDS grant for the implementation of a decarbonisation project at the Stour Leisure Centre. These works will assist with the Council's commitment to be carbon neutral by 2030, reducing annual gas and electricity consumption and lower the carbon footprint. Leisure Energy was asked to carry out an in-depth energy survey, assist with the compilation of the technical aspects of the application and project manage the installation of new energy equipment.

Technical Overview

Leisure Energy undertook an appraisal of the energy usage and condition of equipment at the leisure centre for the submission of the grant documentation. The facility, constructed in 1972, was remodelled and extended in 2006 and has had further improvements during 2020/21. The energy spend in 2020 was calculated as approximately £390,000 with a carbon emission level of approximately 1196 tonnes.

The following issues were identified by Leisure Energy which would give rise to savings in carbon emissions and cost if addressed by the allocation of the grant money:

- No renewable technology currently at the leisure facility
- CHP was beyond economic life and oversized against requirements
- Only 2 out of 9 of the current boilers were operating fully but still not achieving the required 80° temperature
- Chiller for the air conditioning unit was functioning inefficiently.

The solutions developed for the new equipment and technologies installed are detailed overleaf.

THE PUBLIC SECTOR DECARBONISATION SCHEME (PSDS)

- The Department for Business, Energy and Industrial Strategy (BEIS) launched the PSDS, which was delivered by Salix in September 2020.
- The scheme offered £1bn of grant funding for capital energy efficiency and heat decarbonisation projects within the public sector in England.
- Information about the PSDS and further schemes can be found on the Salix website www.salixfinance.co.uk

Grant value
£1,740,000

Annual savings
£100,462

Annual gas savings
3,180,000 kWh (99%)

Annual electricity savings
236,000 kWh (9%)

Annual CO₂ savings
600 tonnes



“We have been really impressed with the extent of the works and how quickly the packages of work were implemented.”

**Paul McKenner
Head of Corporate Property
and Projects, Ashford BC**



Project summary

Upon award of the PSDS grant Leisure Energy’s audit recommended that Ashford Borough Council carry out a suite of interdependent works at the Stour Leisure Centre.

Energy Saving Measures

- New air source heat pumps
- Replacement AHU fan motors
- Installed low energy lighting and sensors
- New solar photovoltaic panels
- Pool pump motor upgrades
- BEMS upgrade
- Pool cover

Air source heat pumps

We installed 3 x ASHPs with 500 litre storage tanks. Several new LTHW heat exchangers were also fitted to interface with the existing heating circuits and pool water pipes.

Replacement air handling unit (AHU) fan motors

We replaced fan motors and controls within 3 of the air handling units in the facility.

Built-in software and connectivity provides constant real-time monitoring of energy use, speed, torque and temperature which allows automatic diagnosis of HVAC system issues.

This ensures maximum energy efficiency and enables demand-side management.

Low energy lighting and sensors

We replaced nearly 400 light fittings with specialist low energy lighting in the pool hall, sports hall, gym, studios and squash courts aswell as associated corridors and toilets. These lamps will reduce electrical loads whilst improving existing illumination levels. ‘Intelligent’ lighting controls, such as daylight sensing, were used where possible.

Solar photovoltaic panels

We installed an array of 598 photovoltaic solar panels on the centre’s roof to provide electricity to reduce the amount of electricity from the grid.

Pool water pumps and dosing system upgrades

To ensure that the chemical dosing, filtration and flow rates are maintained correctly, we installed 2 x variable speed drives to the teaching pool and dosing controllers to the competition and leisure pools, together with an overall pool water quality control system.

Building energy management system (BMS) upgrade

The existing BEMS system was obsolete and was replaced with a Trend IAQVision system which incorporates smart controls for the ASHPs, battery system, PV inverters and motors.

Pool Cover

Additionally, the Council paid separately for the installation of thermally insulated pool cover to be fitted which included a floatation boom, tow ropes and spool tapes which fitted to a low voltage motorised system.

Who we are

Leisure Energy is an energy saving consultancy, working with local authorities and leisure operators at their facilities. We help them to understand their energy usage, and manage it more efficiently by identifying energy saving measures through the installation or upgrade of plant and machinery, and adjustments in usage levels. Our unique approach enables them to monitor, reduce and control consumption through both investment and energy saving measures and lower the carbon footprint of their buildings working towards net zero.

Our client

Ashford Borough Council is a local government borough in the county of Kent. They provide services to Ashford, Tenterden and surrounding villages. Stour Leisure Centre is located in Ashford and managed on their behalf by Freedom Leisure.

Contact us

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