

# Towcester Centre for Leisure

## Recreational Facility



### The Challenge

As one of many facilities owned by Parkwood Leisure, Towcester Centre for Leisure provides a range of health and fitness facilities to residents in the Northamptonshire town in which it is located. Featuring a large gym, a fitness studio, two adjacent indoor swimming pools, as well as a sports hall and 3G pitches, the site is characterized by a variety of needs for power as well as heat.

In the summer of 2017, facility administrators partnered with Capstone distributor, Pure World Energy (PWE) to design and install an on-site, combined heat and power (CHP) plant in order to help reduce energy costs and emissions.

### The Solution

The recreational facility's power system features a single Capstone C65 microturbine. Housed within an external enclosure specifically built for it, the unit is directly connected to the facility's main power and heating distribution located in an adjacent, indoor plant room.

The efficient, low maintenance CHP system provides roughly 50% of the site's power needs, including 356,000 kWh of electricity and 680,000 kWh heat generation per year.

The entire system was designed to minimize noise and visual impact for neighborhood residents as well as facility patrons. Capstone units are naturally quiet, operating at only 5 dBA (decibels) at 10 meters, but further mitigation was included in the flue design, which enabled sounds to be brought down to ambient levels. Further, the flue was painted black in order to satisfy planning requirements and ensure that the system discretely blended into its new environment.

### The Results

According to Pure World Energy, clients like Parkwood Leisure typically achieve a reduction in energy costs by 7-12% while making zero capital investment. "Towcester is one of many leisure centre sites across the UK powered by a PWE combined heat and power solution and it continues to reap the benefits of cheaper and cleaner energy," said Sean Fitzpatrick, CEO of Pure World Energy. The CHP system at Towcester Centre for Leisure has been operating since 2017 and consistently delivers much-welcomed annual financial savings as well as reduced carbon emissions of about 150 metric tons each year. ■

