

ONE NK Leisure Centre

Leisure Facility



The Challenge

1Life Management Solutions Ltd. is a lifestyle and management solutions company that engages with people in local communities to promote healthy lifestyles, physical activity, learning and the arts. Owned by the North Kesteven District Council and operated by 1Life, the old and outdated ONE NK Leisure Centre in Lincoln, United Kingdom was in dire need of refurbishment as well as a replacement solution for its deteriorating combined heat and power (CHP) plant. ONE NK Leisure Centre is one of 45 local authority venues across the United Kingdom, and includes an academy school, theatre and onsite council services.

The Solution

In October 2015, 1Life turned to Capstone distributor Pure World Energy (PWE) to install two Capstone C65 microturbines for integrated CHP at ONE NK. The cost-effective energy system would be designed to be automatically run and managed remotely in order to make it easier for their local teams. This allows their staff to instead focus on their contributions to the core business and local community.

“Energy costs have traditionally been the second biggest expense for leisure operators after staffing, so it’s very encouraging to see more organizations in the sector recognizing the significant savings to be made,” said Sean Fitzpatrick, CEO of Pure World Energy. “Our successful partnership with North Kesteven Sports Centre demonstrates how applying an efficient and sustainable energy strategy has made a fundamental difference to their business and gives them a strong, competitive edge.”

After the old CHP system was dismantled, the more efficient Capstone energy solution was installed to produce 750,000 kWh of electricity and 1,300,000 kWh of thermal energy each year. With the use of an integrated heat recovery module (HRM), the thermal energy generated from the clean exhaust is captured and used to heat the leisure center’s swimming pool and contribute to space heating for the entire building.

Power Profile

Customer

1Life and Leisure in the community in conjunction with North Kesteven District Council

Location

Lincoln, United Kingdom (UK)

Commissioned

October 2015

Fuel

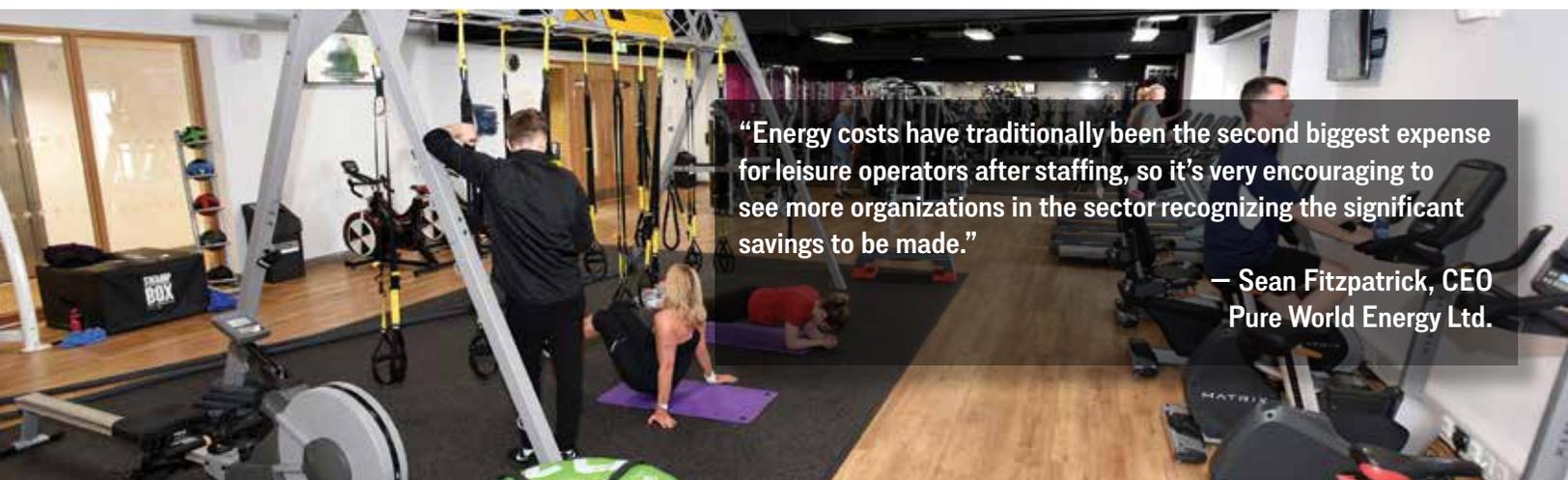
Natural Gas

Technologies

- 2 Capstone C65 Grid Connect Microturbines (CHP)
- Heat Recovery System

Capstone Turbine Distributor

Pure World Energy Ltd.



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The ONE NK Leisure Centre now saves about 10 percent of their utility costs.

The Results

Since being brought online in April 2016, the microturbine CHP plant as a whole has operated continuously and effectively for ONE NK. The customer now saves on reduced utility costs by about 10 percent annually, and the installation has lowered the leisure center's emissions by about 303 metric tonnes of CO₂ every year. The Capstone microturbines operate in conjunction with the local utility (Grid Connect) and generates 70 percent of the total onsite power.

"Partnering with Pure World Energy has enabled us to make significant financial savings whilst underlining our commitment to the environment and CO₂ reduction, better management and control of our utility usage, as well as on this occasion providing the opportunity to replace our old CHP unit with a new state of the art unit with no financial risk to us," said Neil King, Managing Director at 1Life.

The Capstone CHP installation served as a significant part of the £3.6 million refurbishment project, which was also awarded the 2016 Green Apple Silver Award for the Built Environment from the local authority. Furthermore, with the support of Pure World Energy, the North Kesteven District Council won a UK Leisure Industry award – the ukactive Flame Award for the 'Go Green' category – in both 2014 and 2015. ■

Capstone C65 Microturbine



A C65 provides up to 65kW of electrical power for CHP applications.