

How BSC prioritised sustainability with a high-efficiency, HVO fuelled heating solution

Maintaining a warm indoor air temperature across 5,650m³ of exhibition space, despite plummeting outdoor winter conditions.



Designed a solution to deliver up to 40% fuel savings, enhanced by HVO fuel



Heating 5,650m³ of open space

1MW

Delivering 1 megawatt of heating capacity



Providing space-by-space temperature control



Bespoke equipment dressings to suit the show's visual aesthetics

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The British Society of Cinematographers (BSC) expo is Europe's specialist film and TV production show, widely recognised as the go-to exhibition to see all of the latest camera and lens equipment that the industry has to offer.

The two-day exhibition attracts anywhere between 5,000-10,000 delegates, all housed in Evolution London, a purpose-built temporary structure located in Battersea Park.

Considering that the BSC exhibition is held in February each year, it is crucial to deliver heating into the building so delegates don't feel the cold, and this year BSC looked to improve upon their prior heating packages and realise efficiencies when doing so.

Challenges

Previously BSC have been provided with 680kW solutions that are reliant on indirect diesel fired heaters (IDFs), which are known to be less efficient in delivering heat because they are continuously heating cold outdoor air and circulating this indoors. This makes them more expensive due to greater energy consumption – hence their search for a new approach.

In total, the space in need of heating accumulated to 5,650m³. This space was split into different areas; exhibition hall, catering hall, seminar room, and a cloak room – each of which would require a target 21°C temperature with fresh air introduction where necessary.

With a strong foothold in the film and TV sector already, we began working with the multiple stakeholders involved to design a bespoke package that would satisfy their objectives of greater efficiency and precise space-by-space temperature control.

Our equipment at a glance:

- 2x 500kW Boiler
- 2x 50kW Air Handling Unit
- 12x 20/40kW Fan Coil Unit
- 2x 1000L Fuel Tank fitted with Fuel Level Sensors
- 2000L of Hydrotreated Vegetable Oil (HVO) Provided, 1500L Used

“ It was a delight to work with the BSC team, the project management contractors, and the temporary structure engineers on such a notable event in the film and TV space.

Our engineers did a fantastic job designing, installing, and commissioning the system, smoothly handing over to the customer to manage from there.

Everyone involved has been a pleasure to work with, and this project really demonstrates a new way of thinking when it comes to temporary events heating.”

Zaw Hein

National and Strategic Account Manager, Sunbelt Rentals



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Solution

Taking into account the 4°C conditions outdoors, we designed an intelligent solution that would combat the differential in outdoor-indoor temperatures and provide up to 1 megawatt of heating with a high level of control.

The final solution saw 2 separate boiler packages feeding 2x air handler units and 12x fan coil units strategically placed for optimum return air and fresh air introduction where necessary, ensuring maximum heating efficiency and calculated fresh air requirements.

Housed in discrete equipment dressings and featuring their own thermostatic control, each air handling unit and fan coil unit was capable of controlling its local space temperature. This meant that once target temperatures were reached, the fan coils would automatically switch to maintain temperatures rather than continue to increase temperatures, on a space-by-space basis.

Result

Considering the intelligent capabilities of the setup, we provided BSC with a system to realise up to 40% efficiencies compared to their previous IDF-powered setup.

To compliment this, the space-by-space architecture of the circuit meant that BSC could enjoy a greater level of flexibility and control in delivering the perfect climate state for the delegates in attendance.

“ SCS Concepts worked with Sunbelt Rentals to find a more sustainable solution to heat the BSC Expo this year. We found working with the team easy and they were very thorough in their planning and offer to us. Installation of the system was seamless and the handover and running of the heating for the event was simple and well explained by the team. ”

Rob Saunders

Director at SCS Exhibitions Ltd.

