

Baekke School



Baekke School, Denmark

Annual electricity consumption: 128,000 kWh
 Annual heat consumption: 14,709 Therms

Energy Centre Solution

- 1 x XRGI® 20
- 1 x 264 Gallon Storage Tank
- 4 x 16 kW Heat Pump
- Boiler

Commissioned

December 2018

Energy Centre Performance

Electricity coverage:	65 %
Heat coverage:	100 %
XRGI®:	61 %
Heat Pump:	39 %
Boiler:	0 %

Outcome

Annual carbon reduction:	29 %
Annual energy reduction:	23 %
Annual cost reduction:	approx. \$20,750

Creating A Better Future The Efficient Energy Center at Baekke School

Baekke School is a municipal school with approx. 280 students from grades 0-9 and part of a larger modernization project of the municipality of Vejen. The project also comprises two other schools, Andst School and Jels School, as well as the Broerup municipal office.

With regard to heating, the starting point of all four buildings was a Viessmann gas boiler, in the case of the Baekke School, one rated at 200 kW. In order to reduce the operating costs for energy, the energy centers of the four buildings were equipped with heat pumps, which were to be controlled by the installation’s hydraulic regulation system.

However, after two years of operation, it became obvious that the power consumption had increased massively due to the heat pumps. Therefore, the four installations were upgraded again, this time with XRGI® mini-CHP units. Besides the power, the XRGI® units also provide heat, reducing the operating times of the boilers. In this way, considerable savings in energy costs and CO₂ emissions were achieved.



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