



Greenhouse

P3P / APS Salads, United Kingdom



Who: P3P / APS Salads
What: 2 x B35:40V16AG2
When: 2013
Where: Kent, UK

CO₂, heat and power

APS Salads, who is one of the UK's leading commercial growers of tomatoes, wanted to expand their greenhouse and productive capacity on a site in Kent. Tomatoes, like all plants, need water, nutrients, light, heat and CO₂ to grow. The first four can easily be delivered economically. However CO₂ is expensive to deliver, and at a cost that cannot be justified in the growing industry.

In co-operation with other world leading energy experts, P3P designed and built a 15MW gas-fired Combined Heat and Power (CHP) Energy Centre alongside nearly 15 hectares of existing and new, state-of-the-art greenhouses. The process of using both the heat and power from the generating set results in more efficient and cleaner energy. But most importantly, by using also the carbon dioxide within the food production, this bespoke energy generation concept increases significantly the crop yield and simultaneously lowers the CO₂ emissions.

Two 7.5 MW Rolls-Royce Bergen B35:40 gas engines were used for this design. The robust design and low rpm of this engine, create the highest availability of plant giving peace of mind for the owner. The gas-fuelled engines are housed next to the greenhouses in a specialist acoustic building, together with a heat and CO₂ treatment system. The location is very beneficial to enable the heating of the greenhouses and delivery of CO₂ for the plant growing season while reducing the transmission losses as much as possible. The system was designed to be future proof for the growers who have further extensive greenhouse expansion in progress, which may include specialist lighting for all year round growing.



Bergen Engines is a subsidiary of Rolls-Royce Power Systems, supplying medium-speed gas and liquid fuel engines for a broad range of power generation applications. Bergen Engines supports your business with reliable power solutions from 1,400 kW to 9,600 kW per engine, and complete power systems that can deliver an output of beyond 200 MWe.

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