

# POWERING THE FUTURE: SOLLATEK'S AVR FOR RELIABLE SUBSTATION UPGRADE



## Balfour Beatty

**Peterhead Substation**  
POWER SUPPLY PROJECT





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**Client:** Balfour Beatty  
**Country:** Scotland  
**Year:** 2022  
**Product:** AVR3PE800-08



AVR3PE800-08 Containerised Solution

Balfour Beatty teams up with Sollatek for the Peterhead substation to strengthen the renewable energy network. Sollatek's AVR's will ensure stable and efficient power supply with reduced maintenance costs.

			
Invested <b>£47.5 Million</b>	Installed <b>124 - 154 Turbines</b>	Generating <b>2.2 Gigawatts</b>	Powering <b>2.6 Million Homes</b>

Note that some projects are in planning, actual figures may vary on completion.

Balfour Beatty was awarded a £47.5 million contract by SSEN Transmission to design and construct a new 400kV substation in Peterhead, Scotland. This project forms a vital part of SSEN Transmission's East Coast Reinforcement program, aimed at strengthening the local network and facilitating the connection of renewable energy sources.

The expansive 25,625 sqm substation primarily focuses on ensuring a continuous and secure supply of

power to the North East of Scotland. Notably, Balfour Beatty's commitment to sustainability is exemplified by the installation of the environmentally friendly AirPlus gas, a first in the UK, for the 400kV Gas Insulated Busbars that connect high voltage equipment.

Sollatek was selected by Balfour Beatty to assist in the upgrade of the existing low voltage regulator system at the Peterhead substation. Through Sollatek's knowledge of SSEN's SP-NET-SSET 510 standards, Sollatek has

supplied industry-leading Automatic Voltage Regulators (AVRs) to be installed to enhance stability within the sensitive high voltage control systems.

Sollatek's solid-state AVRs, designed without moving parts, vastly improves reliability and reduces the risk of power outages or disruptions in electricity transmission. Designed to provide a steady voltage supply, they quickly adapt to variations in input voltage, managing continuous shifts of up to +/-30% of the nominal voltage. This prevents harmful fluctuations that could damage equipment or interrupt the transmission network, thereby delivering a reliable supply of electricity.

The AVR's ability to maintain a stable voltage level enables a swift response to harmful power fluctuations that could damage equipment. It also ensures the equipment functions optimally, allowing for a wide range of incoming voltage to be used.

The AVR is delivered to site in a steel container which simplifies the installation process, while also providing suitable shelter from the elements to maximise lifespan.

# SOLLATEK POWER PROJECTS UNITED KINGDOM

“The new substation at Peterhead is a key component in our reinforcement and improvement of the transmission network in the North East and East Coast of Scotland. Once complete, it will facilitate the connection of new renewable energy to supporting the transition to net zero emission.”

Russell Maxwell,  
SSEN Transmission Project Manager



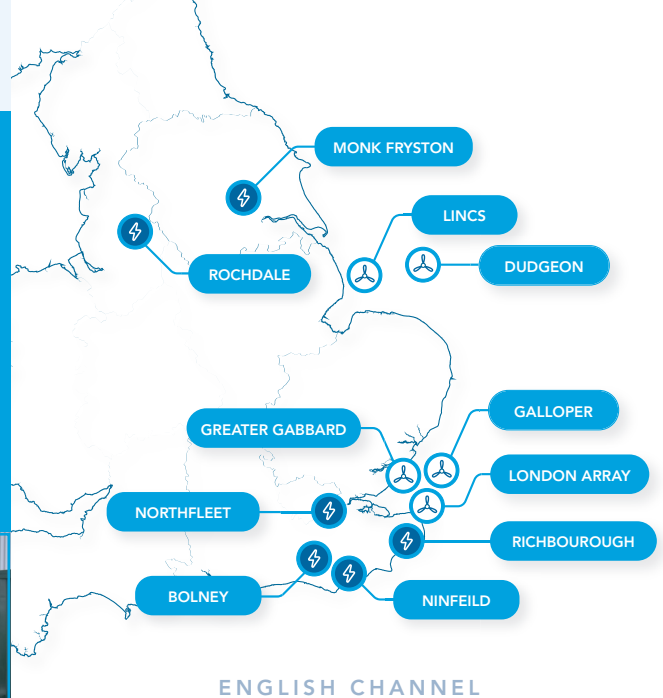
## Peterhead Substation POWER SUPPLY PROJECT



Model	AVR3PE800-08
Max Current	800Amp
Input Voltage	220/380 V ±30
Output Voltage	220/380 V ±4%a

### INCLUDED FEATURES:

- Automatic Voltage Switcher
- Input Circuit Breaker
- Output Circuit Breaker
- Class II Surge Protection Device
- Digital Meter
- Full containerised solution



Please note that the locations are approximations intended for illustrative purposes.



Sollatek Containerised Solutions on customer site.



## Sollatek’s expertise extends worldwide through local networks

Established for over 40 years in the United Kingdom, Sollatek is a manufacturer of innovative products in power control, energy saving, temperature control and solar energy. Operating from 12 countries and a global distribution network in 60 more. Sollatek has grown to become a household name, particularly

in harsh and demanding environments where reliability and affordability are essential to everyday life. The Sollatek voltage protection product range now includes full lines of voltage switches, stabilisers, conditioners and uninterruptible power supplies (UPS).

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### ISO9001: 2015 accredited company

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