



Fully equipped modular buildings for power generation, transmission and distribution systems

Bespoke packaged modular buildings to house essential switchgear, transformers, VSD, UPS, control, protection and ancillary equipment for every stage of the electricity generation, transmission and distribution process. Portastor offers a complete project-managed, turn-key solution from a single supplier to save you time and money.





Plug-and-play building solutions for all switchgear, control and ancillary equipment

Portastor supplies fully equipped and tested modular buildings to house switchgear, control and protection equipment for every stage of the electricity generation, transmission and distribution process.

With more than 40 years' experience of designing, building, fitting out and installing bespoke equipment housings to meet the demanding specifications of power network operators, distributors and OEMs, you can rely on Portastor to manufacture and deliver safe, durable, protective buildings for your essential equipment.

Whether you need multi-room substation buildings incorporating switchgear, control and battery equipment, or stand-alone protection relay rooms, permit rooms or control rooms, Portastor offers a complete project-managed, turn-key solution to save you time and money, while minimising risks on potentially inhospitable or hazardous sites.

Our clients:

Network operators:

- » National Grid
- » BNFL
- » Network Rail
- » ESB (Eire)

Generators:

- » Ineos
- » Hunterson
- » Sellafield

OEMs:

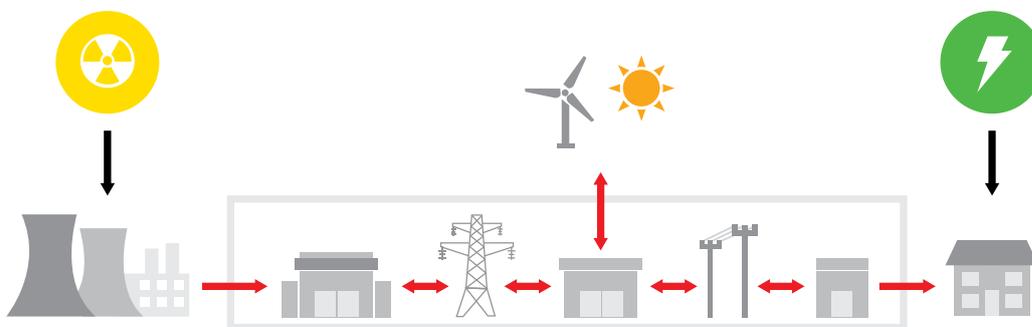
- » Siemens
- » ABB
- » Hawker Siddeley Switchgear
- » Schneider-Electric
- » Balfour Beatty

Electricity Distribution Companies:

- » Scottish Power
- » Scottish and Southern Energy (SSE)
- » Western Power Distribution
- » Electricity North West Ltd
- » UK Power Networks
- » Northern Powergrid
- » Electricity North West

Renewable Energy:

- » CG Power
- » Alstom
- » ABB
- » Siemens
- » Schneider-Electric



“Portastor took charge of every aspect of getting this building to site on time, which was essential to keep the challenging programme on schedule. We trusted them to meet our tight deadline, and they didn’t let us down.”

Simon Goldthorpe, Project Manager, CG Power Solutions UK Limited

Prestigious parent company – for your peace of mind

Portastor is a member of the Shepherd Group, one of the UK's leading family-owned businesses, with a 120-year history of quality craftsmanship in the construction and manufacturing sectors.

The Shepherd Group is a stable and growing business, with a strong ethos of integrity, openness and honesty. Today, the company is a diversified business leader in construction, mechanical and electrical engineering, modular buildings and bulk materials handling, delivered through strong brands including Portakabin, SES and Portasillo.

Such a well-established and reputable parent group gives you the assurance of a financially secure supplier with unrivalled experience in delivering major projects and a dedication to sustainability and corporate responsibility.

Portakabin

Quality - this time - next time - every time

Modular buildings
expertise – from the
market leaders

Shepherd Group company
Portakabin is the pioneer
and acknowledged market
leader in the design and
construction of modular
buildings.

Why choose modular off-site construction?

Choosing a factory-built modular building solution for your equipment offers significant time, safety, cost and quality benefits.



HEALTH & SAFETY

Constructed in a **controlled environment** minimising risk and delivering a significantly improved working environment.



50% FASTER

Reducing programme, **removing inefficiencies** by facilitating **parallel construction**.



WEATHER PROOF

As all construction is undertaken in our factory, weather conditions on site are eliminated. Allowing for **no loss of time** during production or installation.



PLUG & PLAY

With up to **95%** of the construction completed before arrival at site, installation is easier and with reduced risk.



60 ACRE SITE

Our extensive site means we can install **first and second** fit out stages before we get anywhere near your site, taking your project off the critical path.



REDUCE DISRUPTION

By implementing a large number of installation elements whilst in the factory, we **minimise time delays** and keep you on schedule.



ECONOMIES OF SCALE

Repetition of modular buildings **reduces production costs** by improving operational efficiencies.



SUPERIOR QUALITY

Factory **standard quality control** reduces risk and lowers whole life cycle costs.



REDUCES SITE LABOUR

Significantly **improving health and safety** and minimising disruption on site.



ENVIRONMENT

Factory production techniques are **much more efficient**, eliminating a large amount of material waste.



Modular equipment housings for demanding applications

Power generation:

Bespoke protection modules for new-build plants

At the electricity generation stage, Portastor supports the construction of new-build plants across the nuclear, biomass and energy-from-waste sectors. Our buildings are most frequently used to house protection and ancillary equipment connected to high-voltage substations. These 'protection relay rooms' are fully fitted out at the Portastor factory with everything from batteries, UPS and LVAC equipment to compressors and variable speed drives.

Your buildings will be fitted out and tested away from your live site, ready for rapid and safe installation by an experienced team in compliance with the strictest health and safety standards.

Transmission and distribution:

Substation buildings designed to your specifications

Portastor specialises in providing fully equipped substation buildings to house switchgear up to 33kVA, as well as associated control and back-up systems. Individual modules can be linked to create larger multi-room or open-plan buildings of any size or footprint, while stand-alone buildings can be partitioned to include separate switchgear rooms and manned control rooms. Multi-functional buildings can be designed to your specifications, incorporating everything from permit rooms and office space to battery, telecom and control rooms.

Heating ventilation and air-conditioning (HVAC) systems can be installed to meet individual specifications, with manned rooms maintained at a comfortable working temperature and battery rooms controlled separately to maintain optimum temperatures for battery performance. All necessary fire-detection and suppression systems will be fitted and buildings will be designed to meet minimum fire resistance specifications.

Substations located on sensitive or strategically important sites can be fitted with secure doors and other high-security features to protect the essential equipment within.

Renewable energy:

Supporting the growth of sustainable energy generation

Portastor packaged equipment buildings are used throughout the renewable energy sector to house grid connection systems, invertors, ring main unit (RMU's), switchgear and metering equipment. A typical grid-connection building may be split into three separate rooms to house switchgear, control panels and metering equipment and if necessary in separate climate-controlled environments.



For more than 40 years, Portastor has been designing, building and installing factory-built pre-equipped packaged equipment housings for essential control, automation and power equipment to meet the specifications of some of the world's most demanding industries.

The versatility of Portastor buildings means they can be adapted for windfarm applications, hydro-electric power plants, tidal power plants and solar PV installations. Because Portastor buildings are fully fitted out and tested in the factory, they are ideally suited for installation on remote and difficult-to-access sites where conventional construction would be problematic and expensive. Plug-and-play Portastor buildings are simply transported to site ready for rapid installation and connection.

In exposed sites where windfarms and other renewable plants are often located, buildings can be finished with a variety of exterior claddings, from wood to brick, to help them blend into the natural environment and comply with planning regulations.

Full compliance with ATEX and fire-resistance requirements

Your Portastor equipment housing will be designed to meet your fire-resistance specifications. Buildings with half-hour or one-hour fire resistance are routinely manufactured to meet OEM and National Grid minimum requirements. Buildings with higher fire resistance can be manufactured as required.

Similarly, we can provide ATEX-rated equipment to minimise explosion risks and meet the requirements of specific zoned areas on restricted or sensitive sites.

Case studies

Scottish Power/Community Wind Power, Aikengall Windfarm



To control the power supply into this new wind farm near Edinburgh, Portastor supplied two specially adapted 33kV buildings, one housing Scottish Power's switchgear and the other community wind power's control panels and switchgear. A third 33kV switchgear housing was supplied for the nearby Dunbar substation, where the windfarm is connected to the National Grid. By choosing a compact, self-contained equipment housing from Portastor, Scottish Power was able to clear a quarter-acre compound on its substation site and replace it with a single 35m² building.

Irish Electricity Supply Board (ESB)

When the Irish Electricity Supply Board (ESB) needed to renew and upgrade the substation housings at around 100 of its sites across the country, Portastor developed ten standard, repeatable building designs that covered all of ESB's requirements. By manufacturing these buildings in the controlled environment of its well-equipped factory, Portastor could assure ESB that every one of its substation housings would be completed to the same exacting standards.

"Portastor was chosen for its good value for money and the high standard of its buildings. We worked very closely with them to develop designs for the substation buildings that fulfilled all of our very strict specifications."

Brendan Linehan, Technical Manager, ESB



Complete end-to-end services from a single supplier



SIEMENS

“Portastor took responsibility for the whole project, and managed everything expertly on our behalf. The service we received throughout the project was very good and Portastor was always very quick to respond to any queries or modification requests from us.”

**Barry Greenwood,
Senior Project Engineer, Siemens**



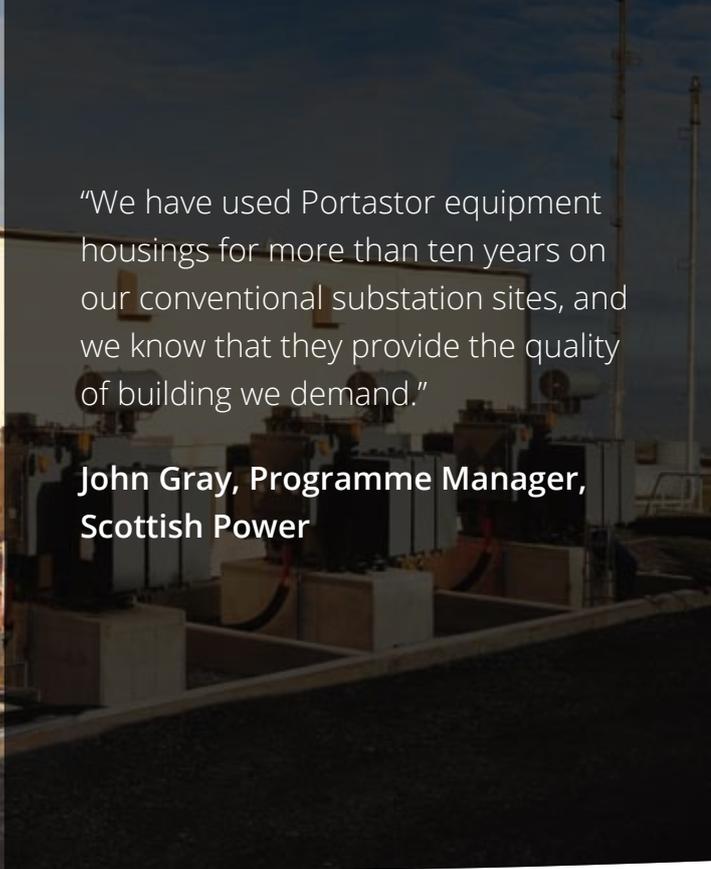
Portastor offers a complete end-to-end ‘consultation-to-commissioning’ service. We manage every stage of your project from initial design and consultation, through to manufacturing, first and second fit, testing, delivery, installation and final handover.

Our comprehensive project-management capabilities mean you have a single point of contact for your entire project, simplifying the process and providing total traceability and accountability from an experienced supplier.

- » Bespoke design
- » Installation of all OEM equipment
- » Interconnections
- » Factory acceptance testing (FAT)
- » Logistics and transport planning and management
- » Building installation on site
- » Commissioning
- » Servicing and maintenance
- » Facilities management

Design expertise to create bespoke industry-compliant buildings

Portastor has the in-house design expertise to create buildings that meet your exact specifications and comply with all National Grid, OEM and other industry-specific



“We have used Portastor equipment housings for more than ten years on our conventional substation sites, and we know that they provide the quality of building we demand.”

**John Gray, Programme Manager,
Scottish Power**

standards. We have vast experience of manufacturing buildings to meet the stringent specifications of National Grid standard DH18.

The versatility of Portastor modular building systems means they can be adapted to fit any site footprint, or configured in multiple storeys where space on site is at a premium.

OEM equipment fitted and tested under factory conditions

The vast manufacturing site at Portastor enables us to store and fit out equipment housings on a large scale for any project. All the OEM equipment you require can be fitted by our experienced in-house teams and fully factory tested prior to despatch.

Fitting out in our facilities keeps this complex engineering work out of your critical path and away from your operational site. It also guarantees you the consistently high standards of precision and accuracy that can only be achieved in a factory environment.

Safe installation and commissioning on ‘live’ sites

Your fully fitted equipment housings will be delivered to your site with all OEM equipment pre-installed and factory tested. Portastor then manages the efficient installation

and commissioning process on site, ensuring disruption is minimised and your buildings are installed to meet all your quality, safety and performance criteria.

Portastor understands the complexities of installing buildings on live substation sites where there may be low power lines. In these situations, we can tailor our solution based upon our vast experience.

Independent accreditations

ISO 9001, 14001 & 18001: Portastor manufacturing processes and management systems are accredited to the internationally recognised quality-management standard.

Electrical system standards: Portastor electrical system installations meet international standards including British Standards (BS), Republic of Ireland Standards, American National Standards Institute (ANSI) and International Electrotechnical Commission (IEC) standards, as well as local, country-specific regulations.



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Portastor quality assurance conforms to ISO 9001.

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