

Peterhead Carbon Capture Power Station

Tom Snow, SSE Thermal

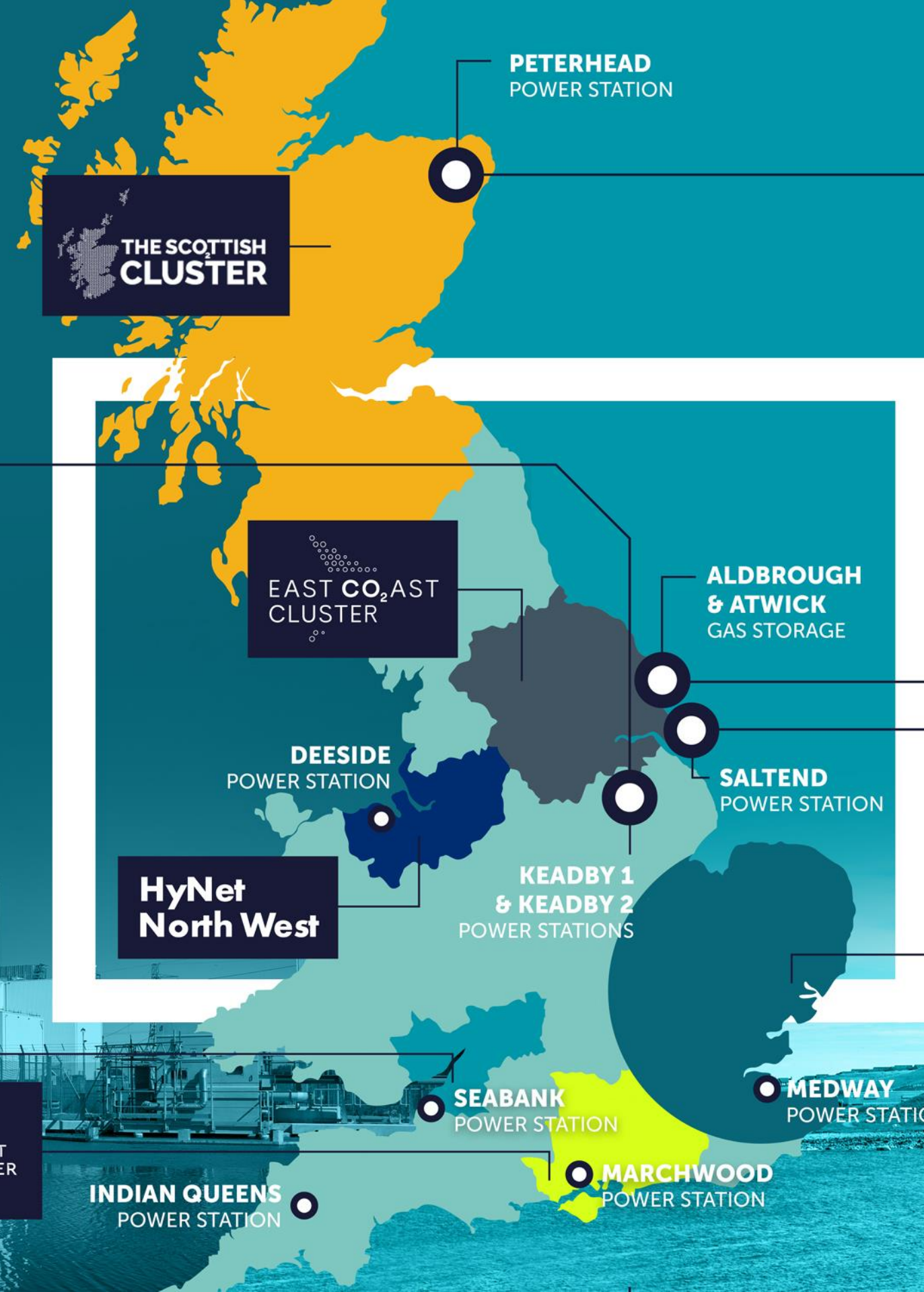
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PRESENCE ACROSS UK INDUSTRIAL CLUSTERS

KEADBY

- Carbon Capture Power Station
- Hydrogen Power Station



PETERHEAD

- Carbon Capture Power Station

ALDBROUGH

- Aldbrough Hydrogen Pathfinder
- Aldbrough Hydrogen Storage

SALTEND

- Hydrogen blending at existing power station

Bacton
Thames
NetZero.

PIVOTAL PETERHEAD

Integral to Scotland's energy system

- **First became operational in 1982** as an oil-fired power station.
- **Major repowering project in the 2000s** to convert it into an efficient gas-fired power station.
- Only major thermal plant north of Leeds, playing a **critical role in keeping the lights on** and providing **flexibility to the grid**.
- **Over 40 full-time employees** on site, plus apprentices – with a record intake in 2021.
- SSE has been exploring **plans to decarbonise Peterhead for more than a decade**.




CARBON CAPTURE AT PETERHEAD

A major step towards net zero for Scotland and the UK



- **SSE Thermal and Equinor** are developing plans for a new power station with CCS technology - **capturing around 1.5MT of CO2 annually, 5% of the UK's 2030 target.**
- The project **will ultimately replace the existing plant,** accelerating the transition to net zero.
- As a key early emitter, the power station will help **kick-start wider decarbonisation in the Scottish Cluster.**
- The project could see **£1.6bn spent in the UK, with £1.1bn in Scotland.**
- Over **1,000 jobs** would be created during construction, with around **240 jobs** supported during each year of operation.

PROJECT OVERVIEW

- **Design Capacity:**
 - Up to 910MW
- **Design Base:**
 - 1x Mitsubishi Power 701JAC Gas Turbine and Steam Turbine
 - Mitsubishi Heavy Industries Carbon Capture Plant with their proprietary KS21 solvent
- **Engineering Delivery Consortium:** 
 - Mitsubishi Heavy Industries [MHI]
 - Mitsubishi Power
 - Worley
 - Tecnicas Reunidas [TR]
- **Design Stage:**
 - Front End Engineering Design (FEED) Core Works [Bridging Phase]



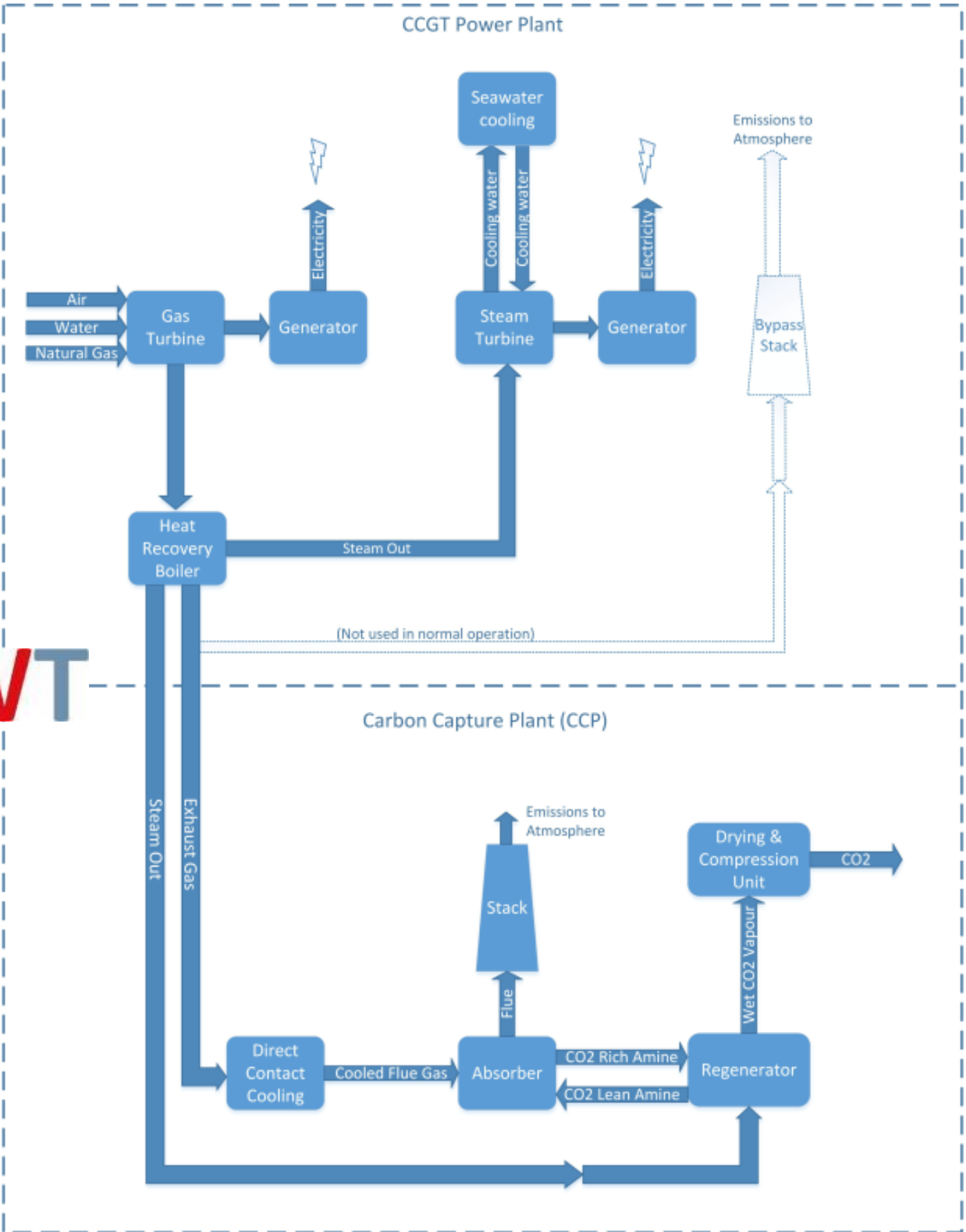
Scope Split

Combined Cycle Gas Turbine Power Plant

- Mitsubishi Power and TR Scope



MWT



Carbon Capture Plant

- Mitsubishi Heavy Industries Engineering (MHI) and Worley Scope



Peterhead Carbon Capture Project

Plot Plan

- Power Island
- CCP Island
- Balance of Plant
- PEHE B1 Interface
- CCR & Gatehouse

