Management and retirement of Safety & Environmentally Critical Elements (SECEs)

The North Sea has an ageing asset base, with over 50% of the offshore installations operating beyond their original design life.

Many of the structures have been in service for nearly 40 years and over the next 20 years, 90% of them will need to be completely removed and recovered to an onshore facility for either re-use, recycling or disposal. Furthermore, the UK has the most stringent regulations in place to protect workers and the environment from operation, abandonment, decommissioning and disposal activities.

As part of any late life plan, operators must ensure that they prepare adequately for Cessation of Production (CoP) and then work to ensure that the installation is hydrocarbon free. This will include plugging and abandoning the wells, making pipelines safe and then managing any residual hydrocarbon inventories down to zero.

Until entirely free of hydrocarbons, the possibility of a loss of containment and potential risk of its ignition remains a significant threat to the safety and integrity of the installation. Throughout this period, the integrity of all safety and SECEs must be sustained to minimise the risk or mitigate the effect of major accident or significant environmental incident.

Suitability of these barriers is described in detailed performance standards.

UK legislation introduced in the form of PFEER 1995 and SCR 2015, requires that duty holders for offshore installations have a verification scheme in place to verify the performance of their SECEs. This legislative requirement applies at all times and not only focusses on the operational phase but extends from the installation’s CoP through to its eventual removal to an offshore facility for disposal.

As the nature of the risks change through the decommissioning phase, the required SECEs will change and therefore the performance standards will require changing to match.
What ABB offer

By effectively reviewing the duty holder’s risk exposure and revising the required SECEs, ABB can help operators successfully and safely dispose of their offshore assets and reduce the costs of compliance.

ABB can help operators with their asset’s end-of-life management including the verification and assurance activities needed to maintain duty holder safety risk at ALARP until their installation no longer presents a threat to personnel safety and the environment.

Key activities where ABB can help include:
- Revising asset life plans
- Managing redundant equipment
- Planning for CoP
- Risk HAZOP and environmental studies
- Revising SECE verification / assurance schemes and guidance
- Project managing the decommissioning and onshore disposal phases

Why ABB?

ABB’s experienced consultants have worked with the major oil and gas companies operating on the UKCS and can provide unparalleled engineering expertise coupled with first-class safety advice and guidance to enable operators to dispose of their installations in a safe, environmentally friendly and legislatively compliant manner.