Subsea electrification

Improving the capacity and life span of oil and gas fields

40% oil and gas recovery comes from the original oil in place. Improving production capacity and the life span of the field.

Subsea gas compression

Gas compression installation

The world’s first subsea gas compression station from the Åsgard field off the Norwegian coast, improving production capacity and the life span of the field.

Challenges for subsea development

- Most subsea oil and gas fields are found in remote locations with harsh environmental conditions, making it costly and dangerous to operate a topside platform.
- Subsea operations are limited to a depth of around 1000m, beyond which sunlight no longer penetrates the water.
- The two gas compressors are more than 40km offshore, each using 11MW.

Benefits of subsea installations

- Compressors are located close to the production well, increasing the productivity of the oil and gas fields.
- Gas can be compressed directly to an onshore plant, eliminating the need for expensive offshore infrastructure.
- Smaller and more efficient compressors can be used in remote locations.
- Water covers 70% of the Earth’s surface, and 40% of oil and gas recovery comes from remote offshore locations.

Sources:

- Åsgard project
- Deepest diving Soviet nuclear combat sub
- 1500m - Man’s limit in an atmospheric suit
- 278 million barrels = Enough to power the entire US for 2 weeks
- 4000m - 2000m - 3000m - 4500m - 300 million barrels
- Åsgard could improve recovery by up to 6%
- 6% - 40%
- Sunlight no longer penetrates 1000m
- Åsgard could improve recovery by up to 6%