



### Project Value

CAPEX £4.5M  
CO<sub>2</sub> Reduction c. 25,000te/yr

### Project Scope

In Q4' 2019 Repsol Sinopec Resources UK delivered an electric grid solution to the Auk asset from Fulmar Alpha.

This innovative project comprised the integration of a previously installed 33kV subsea cable (year 2000) with the supply, installation and commissioning of two new 7.5mVA transformers. Structural additions were required on both assets together with a comprehensive safety review and resultant modifications to manage the new risks associated with the HV transformers. Despite some degradation to the communication link since installation useable cores were identified which meant the project could be completed with no subsea interventions.

By reusing equipment, finding suitable safe workarounds and minimising modifications the team were able to implement a significant improvement to the environmental performance of the asset group with the least possible impact.



### Good Practice:

#### Process:

Repsol Sinopec Resources UK progressed an inter-field energy strategy, evolving thinking beyond single asset operating perimeters, whilst seeking to capitalise on existing infrastructure. Repsol Sinopec's development of an electric power connection between Fulmar and Auk enabled greater generating efficiency and operational reliability, whilst reducing logistics and operating costs (OPEX). It clearly demonstrated the company's early commitment to reducing its carbon footprint.

#### Key factors included:



#### Optimise Infrastructure – Re-Purposing a redundant 33kV subsea cable linking the assets.

The cable had been laid circa 20 years ago by the previous Operator however the topside scope did not proceed at that stage. As part of re-instigating the project, Repsol Sinopec was able to utilise the original transformers and other ancillary items, which had been procured at the time and held in storage. This demonstrated effective use of existing stock and limited the requirement to procure new equipment.



#### Reduced Diesel consumption – 76% Reduction, from 2019: 8897 tonnes to 2020: 2087 tonnes.

Auk power generation prior to the successful completion of this scope was from 3 diesel driven Generators. These were emissions intensive and necessitated regular vessel operations to maintain diesel supplies on the asset. Providing power from Fulmar allowed the Generators to be utilised on a standby-only basis and significantly reduced logistical demand.



#### Use of spare power generation capacity – 10MW available from Fulmar to supply 2.2MW demand on Auk.

Fulmar asset is operating with no native production and had significant electrical capacity available, from more efficient power generation turbines which run primarily on gas.