

# Case Study

**Client:** StatoilHydro  
**Facility:** Hammerfest LNG Plant  
(Snøhvit Project)  
**Location:** Melkøya, Norway  
**Scope:** MeterNet System



## Overview

Snøhvit was the first major development on the Norwegian continental shelf with no surface installations. All production facilities are located subsea in water depths of 250-345 metres. The Snøhvit area comprises Snøhvit, Albatross and Askeladd fields and a total of 20 wells will be drilled to produce gas from these fields. The total output is transported to land through a 145-kilometre pipeline with a landfall on Melkøya island outside Hammerfest in the far northern county of Finnmark. The unprocessed wellstream arriving at Hammerfest is separated before the gas is cooled down to liquid form for export via special carriers. Carbon dioxide removed from the wellstream is returned offshore for re-injection. Condensate and natural gas liquids, (butane and propane) are also be separated out for export by sea.



**Panel Assembly**

## Metering Regime

The primary components of the metering regime are the condensate and LPG export system which quantify these products being loaded to sea going vessels. LNG is also exported to tanker and although no dynamic measurement is provided for this product the metering computer system retrospectively calculates the loaded mass and energy values based on a manually entered loaded volume, pressure and temperature in addition to calculated average density and CV. The system also includes several single stream installations. The LPG vapour returns uses a classical venturi meter while the LPG Ships Vapour Return Metering, Condensate Flare Gas Metering, Condensate Vapour to Incinerator Metering, LNG/LPG Vapour to Flare Metering, Warm Wet Process Flare Gas Metering, Cold Wet Feed Flare Gas Metering, Cold Dry Process Flare Gas Metering all employ ultrasonic meters.



**System Test at SGC Works**



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## Metering System

The metering installations employ condition based monitor and are equipped dual instruments in all locations. The systems have been designed to comply with Norsok requirements in addition to the relevant industry and international standards.

The Hammerfest facilities employ the SGC MeterNet metering computer solution. This versatile solution employs 100% redundancy of all components providing the highest level of availability a characteristic which is critical for installations in such remote locations. The modular construction of the MeterNet solution provides a compact design for multi-stream installations. The panel layout, as can be seen in the picture above, provides an ergonomic design both for operation and maintenance and is fully compliant with HSE requirements for access and safety.



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