

III. Template to facilitate the submission of examples/good practices of strategies, policies and measures employed to implement obligations under any of the Protocols to the Convention

<p>Country:</p> <p>Norway</p>	<p>Sector:</p> <p>Offshore Oil and Gas Industry</p>
<p>Type of strategy, policy or measure:</p> <p>Regulatory (individual emission permits with flexibility mechanism), in combination with an agreement between enterprises</p>	<p>Level:</p> <p>National</p>
<p>What is the main objective of the strategy, policy or measure? When has it been implemented/or will be implemented?</p> <p>The main objective of the implemented strategy is to reduce emissions of non-methane volatile organic compound (NMVOC) from offshore crude oil loading onto shuttle tankers on the Norwegian Continental Shelf (NCS). These emissions contribute significantly to the overall emissions of NMVOC in Norway.</p> <p>The strategy was implemented gradually over the period 2002-2007, thus giving the industry sufficient time to respond to the new regulating regime.</p>	
<p>Background and driving forces:</p> <p>The driving force for implementing the strategy in 2001 was the need for Norway to reduce emissions of NMVOC in order to comply with the emission reduction commitments of the 1991 Geneva Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes (the VOC Protocol).</p> <p>Efforts to establish a voluntary agreement between the industry and the authorities on VOC emission reductions had just failed at that time, and it was therefore necessary to start regulating the emissions more strictly.</p>	
<p>Description of the strategy, policy or measure:</p> <p>The strategy chosen is to regulate NMVOC emission in individual permits, but at the same time allow the industry to cooperate in order to comply with the requirements in a cost efficient manner.</p> <p>NMVOC emissions from crude oil loading on the NCS have since 2001 been regulated by permits issued to the operators of the individual oil fields. The current emission limit is 0.68 kg NMVOC per Sm³ crude oil loaded. From 1 January 2020 the emission limit is 0.45 kg NMVOC per Sm³. Since VOC emissions for several reasons vary significantly between individual loading operations, and since VOC emissions offshore cause mainly regional (and not local) impacts on the environment, the pollution control authorities have accepted that each oil field operator comply with the emission limits if the annual average emissions from all loading operations on the NCS are below the emission limits. Provisions regulating this flexible mechanism are included in the</p>	

permits.

In order to facilitate cost efficient compliance with the requirements, oil companies in 2001 joined forces and established the VOC Industry Cooperation ("VOCIC") and an agreement called "VOC Agreement for outfitting of NMVOC Plants on shuttle tankers serving Norwegian Offshore Loading Oilfields". Parties to the agreement are more than 20 companies holding licenses to extract oil on the NCS. VOCIC coordinates installation of VOC abatement technology and monitoring equipment on shuttle tankers on behalf of the individual companies, runs a comprehensive monitoring programme and is responsible for data collection and reporting of emission data from all loading operations on the NCS to the pollution control authorities on a yearly basis. Technologies used for abatement of VOC emissions include condensation plants, absorption plants, increased pressure in cargo tanks etc.

Costs, Funding and Revenue allocation:

According to the annual reports of VOCIC, the total annual costs for the industry by complying with the current NMVOC emission limit are in the range of 12-15 million Euros, corresponding to 4-500 Euros per tonne NMVOC reduced.

Effect and impacts on air pollution abatement:

Along with reduced crude oil production, the implemented strategy has contributed to a substantial reduction of the NMVOC emissions from crude oil loading on the NCS over the last 15 years, thus ensuring compliance with the emission reduction commitments of the VOC Protocol.

During the years from 2001, when emissions reached their highest level, to 2015 Norway's total emissions of NMVOC were reduced by about 60 per cent, while emissions from offshore loading and storage of crude oil were reduced by about 80 per cent.

References/Further information:

VOCIC; NMVOC emissions from buoy loading on the NCS (Annual reports) (in Norwegian)

Contact: *Please insert your contact details below.*

Name: Bjørn A. Christensen

Country: Norway

Organization: The Norwegian Environment Agency

Address: P.O. Box 5672 Sluppen, N-7485 Trondheim, Norway

Telephone: +47 73 58 05 00

Email: bjorn.christensen@miljodir.no

Additional comments: *Please include any additional information you may wish to provide here.*