Input paper: [[1]](#footnote-1) VTS58-8.7.1

Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **□** ENG **□** PAP **☑** Input

**□** ENAV **X** VTS **□** Information

Agenda item[[2]](#footnote-2) 8.7

Technical Domain / Task Number2 1.8.5

Author(s) / Submitter(s) China Maritime Safety Administration

Proposal on revision of G1185 - Enhancing the Safety and Efficiency of Navigation Around Offshore Renewable Energy Installations (OREI)

# Summary

Considering task VTS 1.8.5 in VTS 57-6.1.1.1 Annex work programme 2025-2027, the ARM Committee and VTS Committee jointly complete G1185 - Enhancing the Safety and Efficiency of Navigation around Offshore Renewable Energy Installations (OREI).

The VTS Committee formed a LIAISON NOTE (LN) regarding the revision of the G1185 and submitted to the 20th ARM Committee at VTS 57th meeting. The LN mentioned that G1150 specifically refers to protection of infrastructure such as OREI during the initiation and planning stage of VTS. The purpose of G1185 is to offer guidance, based on current best practice and knowledge, considering navigational safety issues in and around OREI, to assist maritime authorities, OREI developers and other stakeholders to plan and construct OREI. However, there is a partial overlap between some VTS waters and the planned waters of OREI, meanwhile the establishment time of VTS centre may be earlier than the construction time of OREI. Therefore, the VTS Competent Authorities or VTS providers should consider the impact of OREI on the safety of navigation and VTS equipment in any VTS area and its surrounding waters, as well as how VTS can provide better services to ensure the safety of navigation in the waters surrounding OREI.

**1.1 PURPOSE OF THE DOCUMENT**

The purpose of this proposal is to provide suggestions for revision of document VTS58-7.2.2.1, additional information and recommendations to the task group (1.8.5) for revision of G1185, and recommendations for the 2028-2030 Work Programme.

## 1.2 RELATED DOCUMENTS

IMO. Resolution A.1158(32) Guidelines for Vessel Traffic Services

G1150 ESTABLISHING, PLANNING AND IMPLEMENTING A VTS

G1185- ENHANCING THE SAFETY AND EFFICIENCY OF NAVIGATION AROUND OFFSHORE RENEWABLE ENERGY INSTALLATIONS (OREI)

G1121-NAVIGATIONAL SAFETY WITHIN MARINE SPATIAL PLANNING

G1111-2-Ed1.0-Producing-Requirements-for-Voice-Communications

G1111-3-Ed1.0-Producing-Requirements-for-Radar

G1111-4-Ed1.0-Producing-Requirements-for-AIS

G1111-7-Ed1.0-Producing-Requirements-for-Radio-Direction-Finders

G1070- VTS ROLE IN MANAGING RESTRICTED OR LIMITED ACCESS AREAS

VTS57-12.2.2 LN to ARM19 on the proposal of the revision of Guideline G1185

VTS57-6.1.1.1 Annex work programme 2025-2027

VTS58-7.2.2.1 G1185 Ed1.0 Enhancing the safety around OREI post ARM20 (ARM20-11.2.9.1)

# background

Since the 21st century, the construction of OREI has shown a rapid expansion trend globally, aiming to reduce carbon emissions and enhance energy security. From 2022 to 2025, the global offshore wind power industry has seen rapid growth. In 2024, the global cumulative offshore wind capacity was approximately 83.2 GW. By 2025, it is estimated to surpass 100 GW, with significant contributions from China, the UK, Germany, the Netherlands, and Denmark.

As of 2024, China's cumulative offshore wind power installed capacity exceeded 41.6 GW, covering coastal waters from north to south. China has established Marine Spatial Planning (MSP) at the national level, including ecological protection areas, ecological control areas, and marine development areas. The marine development areas are further divided into transportation areas, industrial and mining communications areas, marine recreation and tourism areas, fishery areas, special marine areas, marine reserve areas, etc.. Industrial and mining communication areas include the sea areas for renewable energy. China Maritime Safety Administration(MSA) has extensive experience in managing OREI and issued corresponding guidelines and management measures from the perspective of maritime supervision. As OREI becomes more widely distributed, with some of them located within VTS waters, it is particularly important to scientifically assess the impact of OREI on VTS and to take appropriate remedial measures during the design and construction stages of OREI.

# DISCUSSION

**3.1 Impact of OREI on VTS equipment**

OREI affects not only the detection performance of VTS radars, but also the signals of VTS system and ships’ navigational equipment such as AIS, VHF, and RDF. AIS and RDF devices assist the VTS system in tracking, identifying, and exchanging data on targets, and play an active role in collision prevention, search and rescue, and emergency response. The G1185 only considers the impact of OREI on communication and VTS radar. It is recommended that the impact on AIS, VHF and RDF be added to the G1185.

The requirements specified in part 3.6.2 of G1111-3 *Producing Requirements for Radar* may be used as supplementary performance requirements for VTS radar. For further details, please refer to the revised highlighted parts of VTS58-7.2.2.1 in Annex 1.

**3.2 Guidance on the impact of OREI on VTS**

G1185 clearly states that VTS mitigates the impact of OREI on navigational safety and efficiency, but the impact of OREI on VTS equipment increases the difficulty of VTS monitoring, especially in internal OREI waters. Currently, IALA has not issued any guidance for the Competent Authorities or VTS providers in responding to the impact of OREI on VTS equipment and navigational safety.

It is recommended that the VTS Committee establish guidelines on the impact of OREI on VTS in its 2028-2030 Work Programme to assist Competent Authorities or VTS providers in assessing the rationality of OREI site selection and the impact of OREI on VTS equipment. With reference to the G1111 series of guidelines, recommendations for remediation of equipment performance should be proposed, along with guidance for VTS providers to ensure the safety and efficiency of navigation in the surrounding of OREI. The specific task register is attached in Annex 2.

# ACTION REQUESTED OF THE COMMITTEE

The Committee is requested to consider the proposals in this document and take actions as appropriate.

**5 ANNEX**

ANNEX 1 Draft revision of G1185

ANNEX 2 task register 2028-2030

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)