Input paper: [[1]](#footnote-2) ENAV29-5.2.6

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

**□** ARM **X** ENG **□** PAP **□** Input

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

Agenda item [[2]](#footnote-3) 3.2

Technical Domain / Task Number 2 …………………………………

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Radio and visual hindrance caused by solar parks next to waterways

# Summary

The enclosed report is a translation (Dutch to English) of a report made commissioned by of Rijkswaterstaat, a subdivision of the Ministry of Infrastructure and Water management, about the radio and visual hindrance caused by solar parks next to waterways. This report is mainly focussed on Inland shipping but could also apply to maritime waterways like around the Netherlands the Scheldt area and Eems-Dollar

## Purpose of the document

This paper is provided to assist the ENG and ENAV committee in their activities to mitigate disturbance on shipping.

## Related documents

* ENAV29-5.2.6.1 Report on Radio and visual hindrance caused by solar parks next to waterways (part 1 and 2)

# Background

Due to the transition to renewable energy, Rijkswaterstaat (in short: RWS; part of the Ministry of Infrastructure and Water Management) receives an increasing amount of permit requests to build solar parks near highways, waterways and other locations managed by RWS. These permit requests should, among other things, be judged on whether the solar park is a hindrance to nearby traffic.

In the past, The Dutch organization for applied scientific research (TNO) has calculated the hindrance to nearby traffic caused by individual solar parks. In this report a wider perspective is adopted. To keep up with the increasing number of permit requests a generic guideline or assessment method has been developed in the current project. This guideline or assessment method should end the necessity to start an entire research project for each individual (proposed) solar park.

With regard to the electromagnetic hindrance, it is noted that the “Conformité Européenne” (CE) label on photovoltaics (PV) installations does not warrant the absence of interference on nautical communication. Without additional measures, the impact of high-frequent emissions can be significant. To warrant the quality of communication in those cases mitigating measures to the infrastructure would be needed (additional locations with relay stations, directional antennas, etc…) with substantial financial consequences.

Although the Radio communications Agency Netherlands (AT) observes that -in particular- professional PV installations mostly do conform to the emission standards, this does not warrant that (future) PV systems won’t cause interference or disturbances. The risk of network degradation is most prominent for C2000 followed by AIS/Radiotelephone Service and GNSS systems. A maximum increase in system noise by 3dB should be tolerated.

Beyond that, the minimal audio (SINAD) and data quality (AIS) cannot be warranted resulting in reduced coverage than desired or required.

Due to this hindrance extra costs could be necessary to mitigate the hindrance by for instance PV installations

# Discussion

The discussion might be if after reading this report further research is needed.

# Action requested of the Committee

The Committee is requested to:

1. Review the report “Radio and visual hindrance caused by solar parks next to waterways” as input, as appropriate, to assist IALA in their deliberations.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-2)
2. Leave open if uncertain [↑](#footnote-ref-3)