



Maritime &
Coastguard
Agency

From: Maritime and Coastguard Agency

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Safety Zones: Service Operations Vessels and maintenance work

Paper to NOREL 38, 4 June 2019

This paper presents the discussions and findings of the Technical Working Group (TWG) meeting facilitated by the MCA at Spring Place, Southampton on 1 May 2019, which discussed the need and justification for safety zones when a Service Operations Vessel (SOV) is connected to a wind turbine or offshore substation for routine operation and maintenance (O&M) work. The meeting comprised of representatives from Marine Scotland, Royal Yachting Association (RYA), Scottish Fishermen's Federation (SFF), MCA Navigation Safety Branch, HM Coastguard, three wind farm developers (Orsted, Equinor and EDPR) and two SOV Masters.

Background

1. NOREL representatives had previously been consulted on safety zone applications where the use of an SOV triggered a safety zone during O&M. It was requested at the last meeting (NOREL 38) that safety zones be discussed at a TWG, and the following items were addressed:
 - a. the general application of Safety Zones – the additional benefits they bring over other mitigation;
 - b. the use of SOV and other vessel types to trigger a Safety Zone;
 - c. views on potential proposed changes to the standard 500/50m Safety Zones;
 - d. suggested additional wording to clarify Safety Zone applications; and
 - e. application of Safety Zones around accommodation installations
2. A recent safety zone application had been received, and approved by the Department for Business, Energy and Industrial Strategy (BEIS), for a safety zone to be in place around a wind turbine or offshore substation with a radius of 150m when the SOV was connected (pushing on) and this distance had been negotiated with the local fishing representatives prior to the application. The safety zone is only in place when the SOV is connected to the wind turbine and ceases to exist as soon as the vessel disconnects from the turbine.

3. Currently, SOVs have around 22 marine crew and 40 offshore technicians on board. When an SOV is in a wind farm it utilizes its Dynamic Positioning to automatically navigate to the relevant wind turbine and the vessel displays Restricted Ability to Manoeuvre (RAM) status. The vessel connects to a turbine by a motion-compensated gangway that allows safe transfer of personnel and craning equipment up to 2.5m Significant Wave Height. The time the SOV is connected can be up to a few hours, although it was recognised this is normally much shorter. More typically, an SOV will approach a turbine, connect, offload personnel and cargo and disconnect in around 30 minutes. In an emergency the SOV could detach immediately.
4. When the gangway is extended, the vessel is approximately 21m from the turbine or substation. In the case of a wind turbine, the nacelle must be orientated 180° so that the blades are on the opposite side of the turbine from the SOV, to ensure the SOV does not strike the blades.
5. The SOVs often do the loading and unloading of the equipment required for the maintenance task.
6. It was noted that most SOV interactions are with fishing vessels and less occasionally, recreation vessels. The main problem SOVs encounter when approaching turbines is static fishing gear. Many static fishing lines/pots have inappropriate marking however it was recognized that new marking requirements were to be introduced in May 2019.

Discussion

7. The developers felt the main purpose of a safety zone is to provide a mitigation measure for the risks to personnel when transferring to and from the turbine. It also provides a buffer of clear sea room for when the vessel disconnects to allow it to safely manoeuvre off the turbine. However, it was noted that legislation only allows for the safety zone to be in place when the gangway connects. The SOV Master's preference was for a 500m safety zone rather than 150m to provide additional reassurance there would be safe sea room. It was noted that the primary focus of those staff onboard is the safe transfer of personnel.
8. They also felt that the transfer of personnel from an SOV was a dangerous activity and anything that would ensure their safety would only be of benefit. They operate large vessels in restricted sea room which can be difficult to manoeuvre given certain metocean conditions.
9. It was noted that justification is needed in a safety zone application to show what additional risk mitigation a safety zone, triggered by the use of an SOV, brings over and above good watchkeeping, seamanship and the COLREGs. The SOV is still under RAM status when connected therefore other vessels should already be keeping to a safe distance.

10. It was MCA's opinion that a safety zone triggered by an SOV does not provide additional risk mitigation to good watchkeeping, communications, seamanship and COLREGs. This opinion was shared and supported by the RYA however the SFF felt that there was no need for a safety zone during routine operation and maintenance and that COLREGS should suffice. It was also felt that it creates an unnecessary layer of regulation.
11. The MCA questioned whether an SOV should be considered as a major maintenance vessel under the 2007 Electricity Regulations (SI 2007 No.1948) since it considered SOV operations (walk-to-work system and craning equipment) during the operational phase of a wind farm as routine work and of short duration.
12. It was questioned what the disbenefits of a 150m safety zone were. It was noted that the irregular distance could be confusing to mariners since it is not standard in the legislation and is also an additional layer of legislation that is unnecessary given the existing requirements in place i.e. COLREGs, SOLAS and good seamanship.
13. Future applications for safety zones will be considered on a case by case basis and should consider the specific reference to the use of the SOV. The wording of the application should make it clear whether it includes or does not include the use of an SOV.
14. It was agreed by the group that safety zones are a necessary risk mitigation measure for accommodation installations whether they are anchored, jacked up or have permanent foundations.

Recommendations

15. Agreement on whether an SOV should trigger a safety zone when connected to a turbine was not reached, therefore a recommendation from this meeting was not achieved.
16. It is however recommended that:
 - a. developers are consistent with the current legislation and apply for 500m safety zones, not 150m;
 - b. safety zone applications should be clear whether or not it covers or does not cover the use of the SOV;
 - c. safety zones are a necessary risk mitigation measure for protecting the personnel on accommodation installations; and
 - d. MCA will continue to engage with BEIS, the Marine Management Organisation, Marine Scotland and others on their legal interpretation of the safety zone legislation.

End.