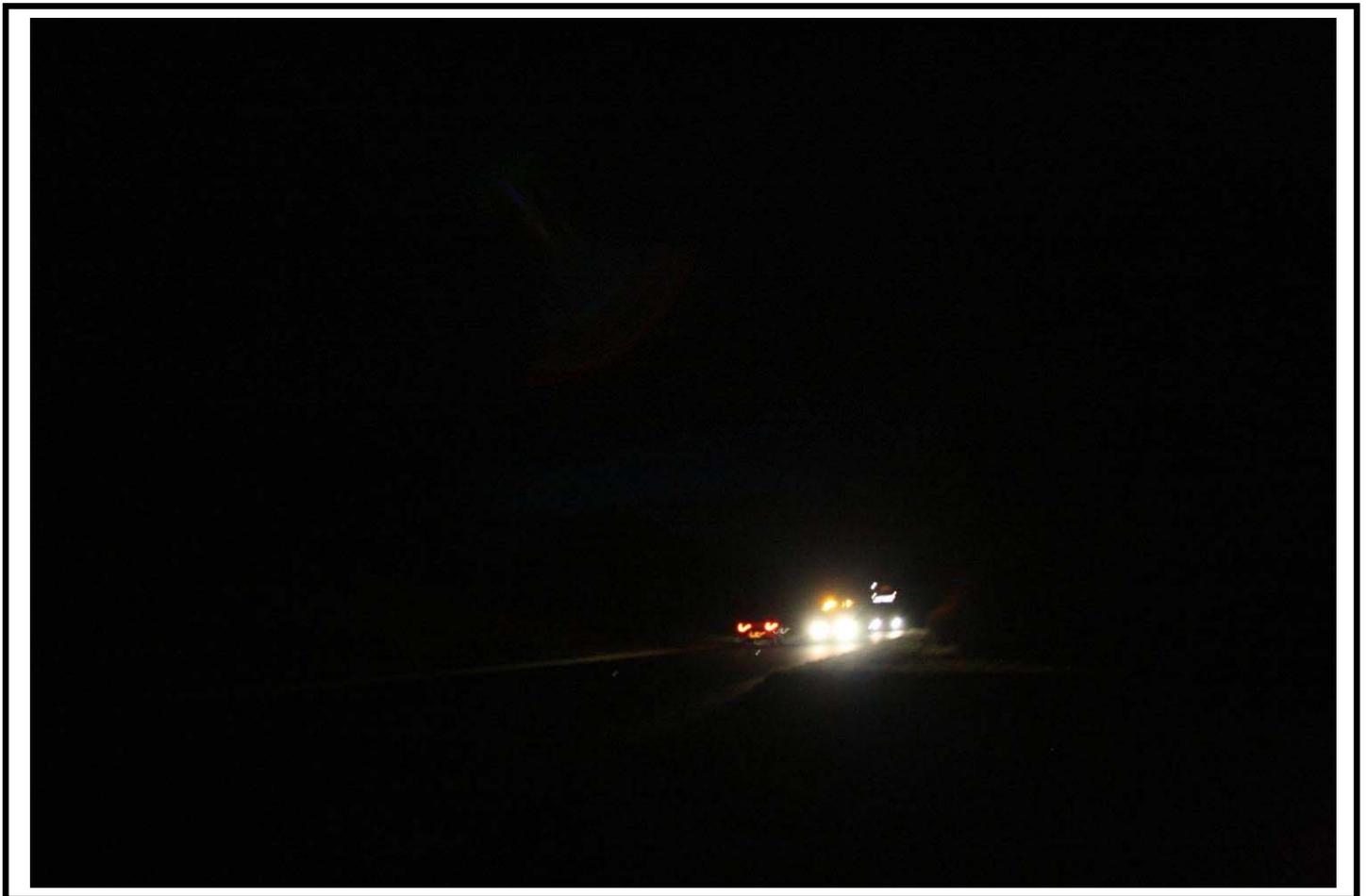


Dunneill Wind Farm

Transportation of Turbine Components



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Introduction

This is a short report on transportation planning, logistical & project management support and safety performance for the transport of turbine components to Dunneill Wind Farm, Co. Sligo.

Background

Following a series of incidents in 2009, SSE Renewables safety management reviewed transportation of wind turbine components across public roads in Ireland, with a particular focus on the next wind farm construction project, which is Dunneill Wind Farm, Co. Sligo.

Much consideration and planning is undertaken, with transport surveys, special loads permits and liaison with Project Managers to upgrade roads and temporarily change layouts where required, e.g. move signage, elevations of overhead wires, etc.

Two abnormal load routes were identified; from Larne Port, Northern Ireland and Dublin Port, Rep. of Ireland. Statutory authorities were consulted and preferred transport routes were identified.

Project Management & Logistics Planning

SSE Renewables & Vestas Celtic Project teams worked closely to ensure all aspects of transport were fully considered, in particular, SSE Renewables issued a safety standards document on the transportation of turbine components, which sets out best practice standards.

Mr. Richard Farmer, Vestas Project Manager led in coordinating Dunneill Transport Plans with Vestas transport manager, Mr. Robert Lowe, and logistics partner, McFadyens Transport Ltd. and their Safety Advisor, Mr. Richard Fox. Following initial meetings at the end of November, it was agreed to follow the SSER standards for the *transportation of turbine components*, aiming to set a new benchmark above current transport practices and to ensure contingency arrangements were prepared in the event of any incident.

With this in mind, Vestas moved forward with developing a hitlist for contents of the Dunneill Transport H&S Plan. McFadyens further developed supporting documentation and following a series of conference calls and reviews, the Plans were issued to a very good standard.

In addition to documentary support, an additional trial run was undertaken by McFadyens Transport, an SSER Director and ROI Construction Manager attended

and were impressed by the level of coordination and diligence in executing the run safely.

Component Deliveries – March

The first deliveries were scheduled in mid March from Dublin. James O'Hara & Paul Whelan carried out a full vehicle inspection and met with Charles McFadyen prior to commencement of the transport run. In addition, SSER undertook to accompany the convoy for additional surety that the transport plans were being fully adhered to.

The convoys were well coordinated and each driver was brought through a pre-commencement briefing in Dublin. The overall logistics operation was managed with good care and diligence.

SSE Renewables Project Manager & Safety Manager also carried out further inspections and participated in two more convoys, one from Dublin and the first run from Larne Port, Northern Ireland. An SSER Director also carried out a site inspection and was present during the arrival of the first convoy from Larne.

Recommendations

Invigilance and participation in convoys by Vestas personnel

It is not known whether anyone from Vestas actually carried out any site transportation inspections or participated in the convoys at any time. In order to effectively manage contractors some level of invigilance would have been expected.

Conclusion

Transport Management Plan

The plan was drafted and developed through a series of revisions by SSER; *Vestas*, *McFadyen Transport* and their Safety Advisor. Close coordination and cooperation was key, and the Teams are to be commended in their approach.

The overall planning, management and execution of the delivery phase for Dunneill Wind Farm was undertaken by all parties in a **very proactive manner**. SSE Renewables issued the Transportation Safety Standards to Vestas in November 2009. The Project Management Team played an important part in assuring that the standards would be implemented, best practice identified and fully engaged with the transportation company.

Overall, the transportation of all units was a success and was very much a team effort. Both Vestas and their haulage contractor performed very well and stepped up to the challenge successfully.

Observations			
1.0	General Observations		
1.1	<p>SSER Safety manager and Project Manager participated in a number of convoys and carried out inspections and observations during delivery from Dublin & Larne.</p> <p>Photos and comments are outlined below.</p>		
2.0	Observations		
			<p>Each cab and trailer unit were well marked out with new high grade reflective strips and hazard flare beacons.</p>



Diamond grade reflective strips along trailer unit.



Convoy from Larne to Dunneill.



Rest breaks and coordination to ensure that there was little buildup of traffic behind the convoy worked well.



Break to allow for local school runs to finish before commencement of journey again.



Effectiveness of third convoy vehicle: a scout escort van was provided, this improvement benefited the management of the journey, improved communications and was more effective in managing risk



Defensive driver positions were taken to manage oncoming traffic.



Position taken up to allow swept path cornering at roundabout.



Convoy just outside Sligo.



Convoy arriving on site.