

RAMPION OFFSHORE WIND FARM, UK

Stage three – metocean assessment

Addendum to Stage Three Final Report – Rev 3.0

To: LIC Energy UK Ltd.

Date: 11th September 2014

Subject: Turbulence intensity standard deviation

Further to the clarification provide by MHI Vestas on the 9th September, DHI has provided the additional output requested for turbulence intensity from the Met Mast data.

The table below shows the standard deviation in 10-minute turbulence intensity values as observed at the Rampion Met-Mast, binned by mean wind speed and directional sector. This table complements the existing Table 4.52 and Table 4.53 in section 4.3.6 of the main report.

Electronic versions of this data have also been provided.

Scatter table of standard deviation in 10-minute turbulence intensity, per wind speed and directional bin at turbine hub-height.

ROWF Met-mast
Stan. dev. turbulence intensity (2012-05-13 - 2014-01-21)
Wind direction [°] (82 mMSL)

	0	30	60	90	120	150	180	210	240	270	300	330
Wind speed [m/s] (81.84 mMSL)												
[1-3]	0.078	0.083	0.091	0.084	0.087	0.085	0.086	0.088	0.076	0.079	0.086	0.093
[3-5]	0.033	0.034	0.043	0.042	0.045	0.051	0.034	0.049	0.040	0.045	0.040	0.038
[5-7]	0.025	0.030	0.030	0.034	0.034	0.037	0.029	0.036	0.029	0.032	0.026	0.027
[7-9]	0.021	0.021	0.023	0.022	0.049	0.026	0.028	0.025	0.024	0.024	0.021	0.024
[9-11]	0.018	0.020	0.021	0.019	0.020	0.020	0.025	0.022	0.020	0.025	0.020	0.019
[11-13]	0.018	0.016	0.019	0.019	0.018	0.017	0.019	0.021	0.021	0.022	0.017	0.018
[13-15]	0.018	0.016	0.021	0.021	0.017	0.015	0.017	0.018	0.018	0.022	0.015	0.025
[15-17]	0.015	0.011	0.023	0.018	0.012	0.018	0.013	0.016	0.019	0.020	0.028	0.017
[17-19]	0.010	0.019	0.017	0.008	0.010	0.010	0.015	0.013	0.015	0.015	0.013	0.006
[19-21]	0.008	0.012	0.015	0.002	-	0.002	0.012	0.013	0.016	0.017	0.021	-
[21-23]	-	-	0.008	-	-	-	0.010	0.017	0.017	0.012	-	-
[23-25]	-	-	-	-	-	-	0.008	0.015	0.029	0.010	-	-
[25-27]	-	-	-	-	-	-	0.007	0.010	0.007	0.013	-	-