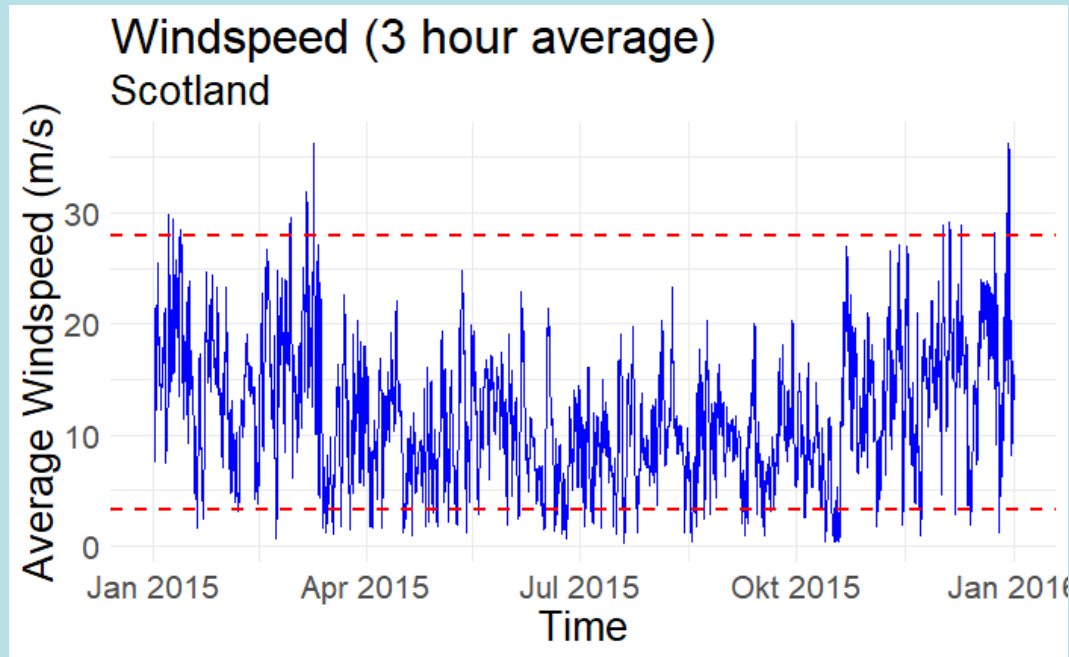


Insurance Proposal for European Wind Farms

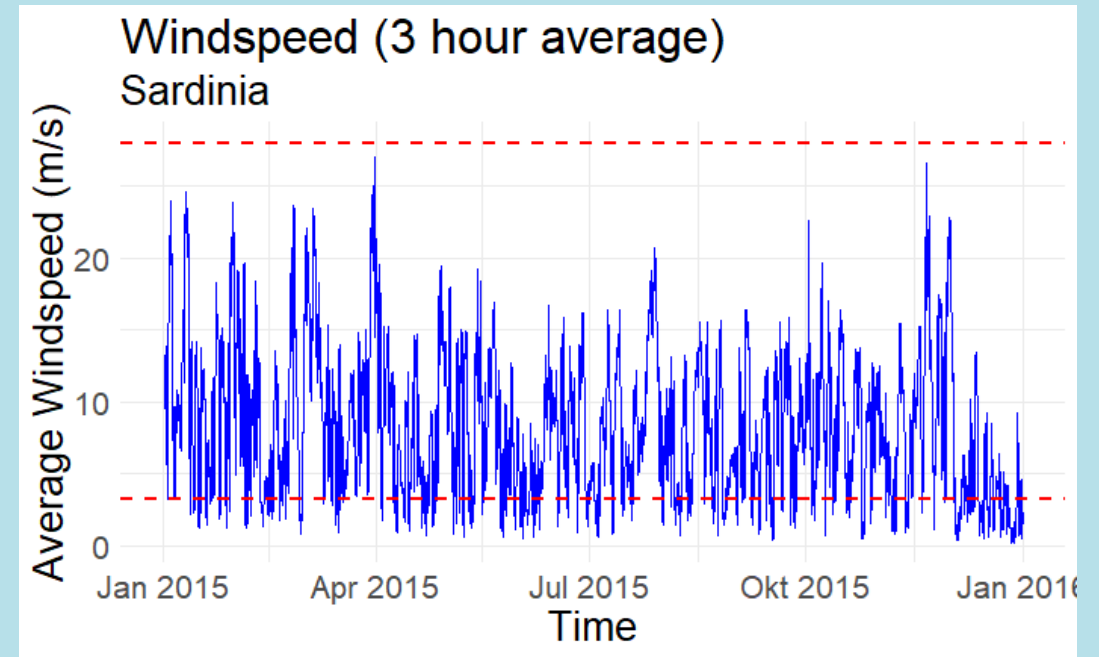
How Reliable is Your Wind Farm?

Onshore Wind Farms



- Cut-out loss less frequent than cut-in loss
- General low volatility

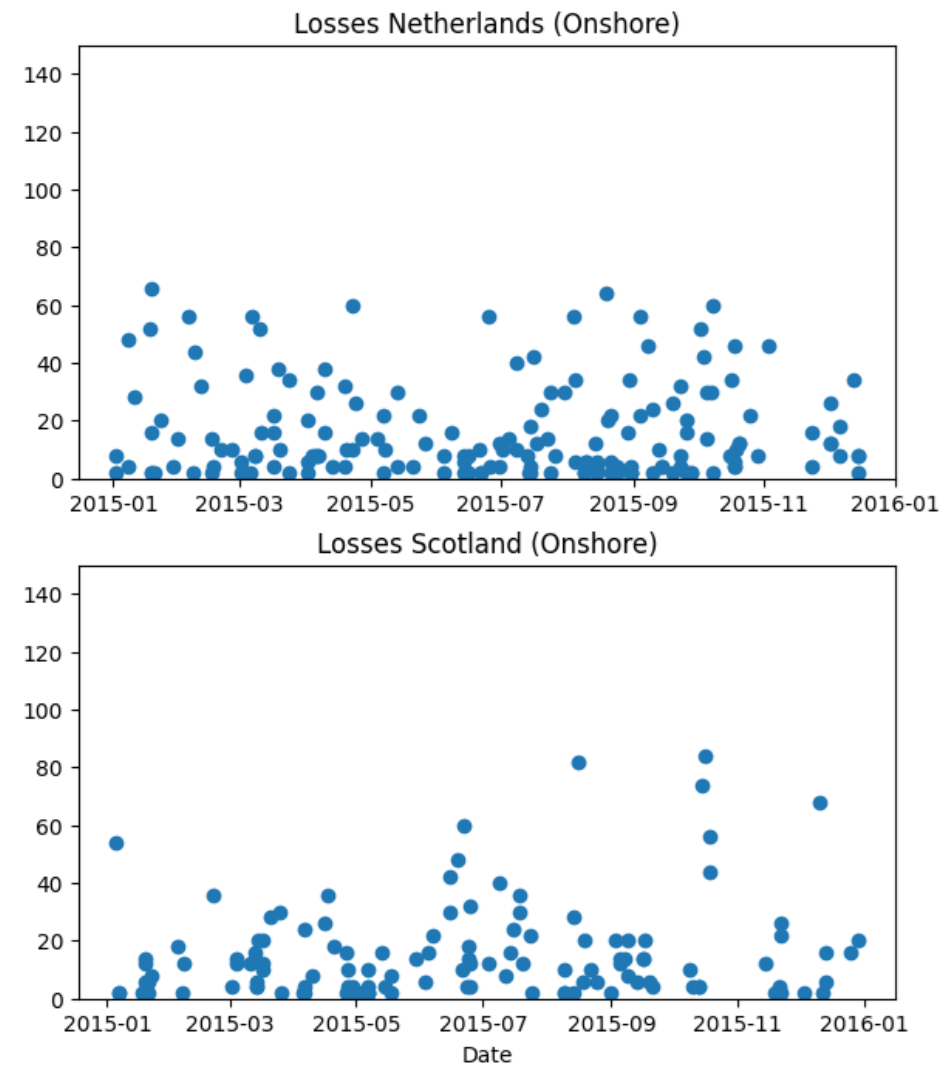
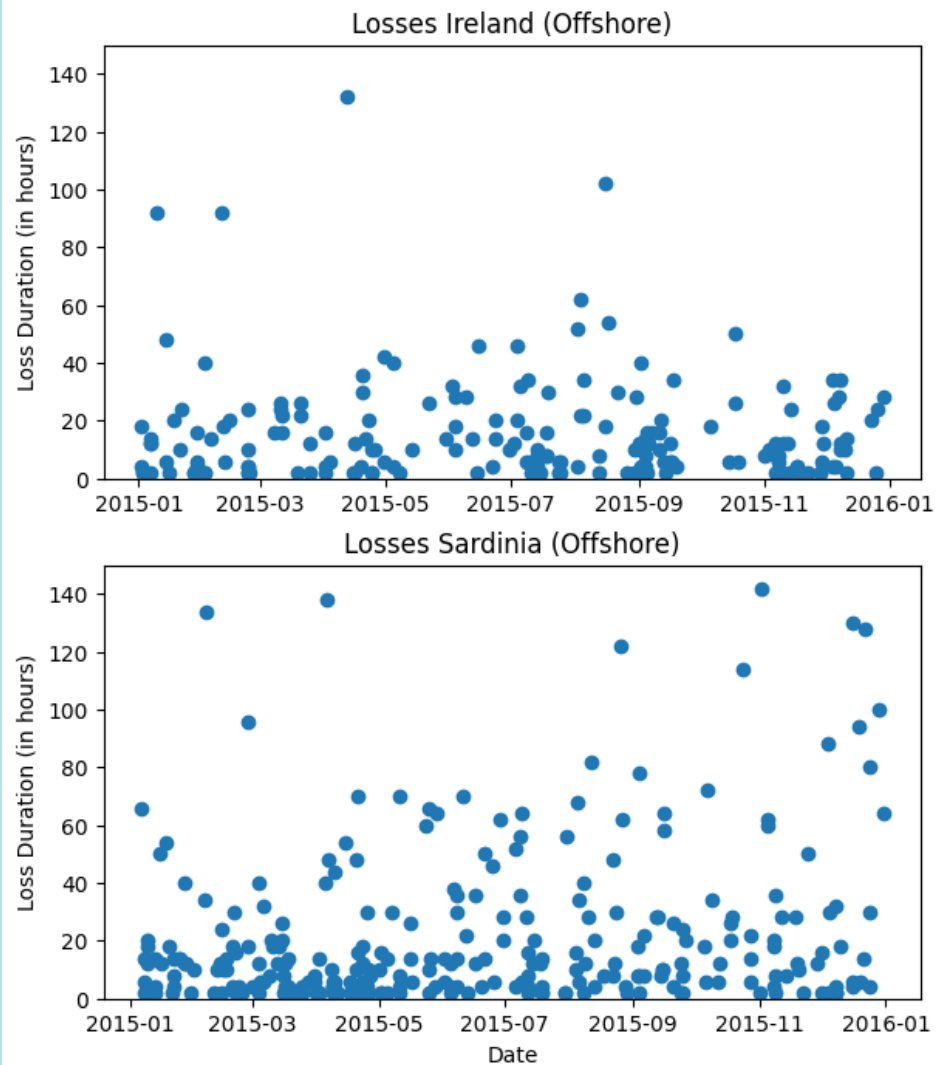
Offshore Wind Farms



- Frequent cut-in losses
- Higher volatility

How are European Wind Farms Performing?

Insights from Simulated European Wind Data (New European Wind Atlas (NEWA) during 2015)



In Focus: Appearance of Losses

Many Short- and Long-term Losses (Offshore) versus Fewer Short-term Losses (Onshore)

Offshore (Sardinia)

275

Number of loss-periods

25.21 h

Avg. length of loss-periods

36h

80th percentile

Onshore (Scotland)

124

Number of loss-periods

15.56 h

Avg. length of loss-periods

22h

80th percentile

Talking Numbers

Measured Impact of Loss Periods per Shore Type

- Policy Duration: One year (ensuring flexibility for climate changes)
- Loss calculation = Duration of the loss event * price for kWh * max power of the wind farm (in kW)

	Loss event duration	P(Onshore)	P(Offshore)
-	>80 percentile	0.068 (22 Hr)	0.145 (36 Hr)
	>90 percentile	0.030 (36 Hr)	0.046 (64 Hr)

- Costs to customer: Expected Loss + further costs for the insurance product
- Final premium for the wind farm owner depends on several factors like the size of the portfolio of the insurer

MunichRE Windsure

Our Proposed Solution for your Wind Farm

Feel Free to Ask Questions! (Group 6)

Thank You For Your Attention!