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This case study considers a business interruption claim made by a wind farm located on a Scottish island following a storm.

The wind farm consists of:

- 5x Enercon wind turbines.

On the evening of 19<sup>th</sup> November 2013 there was a storm with multiple lightning strikes in the area.

Resultant damage to:

- Communications
- Grid
- Active Network Management control panel

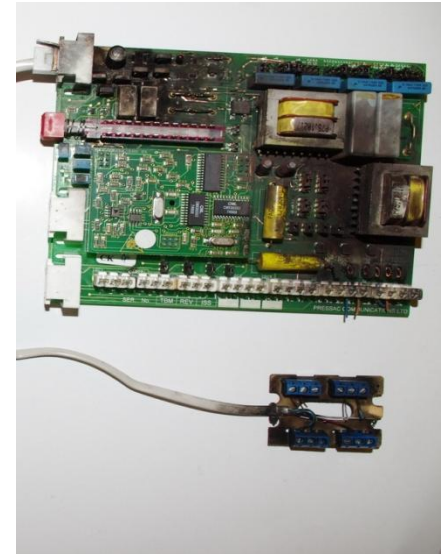
All 5 wind turbines were now unable to generate.



## Communications Damage

All BT circuits in the switchgear building were replaced, including the private circuit modem, three phone line boxes, the telephone and various interconnecting wires, customer broadband router, and Enercon router.

SCADA communications could now be re-established.



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## **Grid Damage**

A lightning strike took out part of 33kV grid requiring an overhead line pole to be replaced. Also a G59 fault at the substation, with the circuit breaker open.

## **Active Network Management Control Panel Damage**

Evidence of a lightning surge through the SSE Active Network Management (ANM) control panel. The same failure was also seen at two further wind farm sites nearby. Lightning protection system in the ANM panel was effective in isolating the control hardware but in doing so was damaged and could not be reset.

Communications, Grid and ANM issues resolved by 12<sup>th</sup> December, allowing the wind turbines to be restarted.



## Lost Generation Calculation

The business interruption claim was for 18 days - 19<sup>th</sup> Nov to 12<sup>th</sup> Dec, minus a 5 day policy excess (the first 5 days of downtime).

There are many different ways of estimating lost generation but in this case a comparison with another local Enercon wind turbine of the same model type was used.

Generation data from both sites for the previous 12 months was analysed and it was found that on average each of the clients five wind turbines produced 11.22% more energy than the reference wind turbine.

Therefore the lost generation to the client was estimated by taking the generation figures for the reference wind turbine, uplifting the figure by 11.22%, and finally multiplying by 5, the number of wind turbines which were down.

This yielded an estimated lost generation figure of close to 1,000MWh.



## Lost Revenue Calculation

In order to calculate the lost revenue figure the following components had to be considered:

- 1) Electricity market price
- 2) Price Guarantee Agreement
- 3) Renewable Obligation Certificates (ROCs)
- 4) Levy Exemption Certificates (LECs)
- 5) Re-cycled ROCs
- 6) Balancing Services Use of Service (BSUoS)
- 7) Line Loss Factor

Using the estimated lost generation figure and the above income stream components, the claim for loss of revenue was settled at over £110,000.



For further information on how we can help you with any insurance products or claims please contact:

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