

Update on Westmill Solar Transformer Issue – 10 June 2022

Transformer No 3 (TX03) fault diagnosis and repair:

The transformer was delivered to the UK factory of GBE (manufacturer) in Leeds on 7th April and various testing was completed to identify the fault and confirm viability for repair.

Investigations by the GBE engineers confirmed that there was evidence of a short circuit within the windings of the transformer. The exact cause of this is not known, although it could have been the impact of external arcing possibly caused by a lightning strike.

To repair the transformer would have involved the unit being shipped to the GBE factory in Italy where the windings would have to be replaced. The transformer would also have been required to be upgraded in line with current Tier 2 Eco Directive (2021) which were not standard when the unit was originally built back in 2011. Factoring in additional export and import costs associated with the UK's exit from the European Union – it was agreed that it would not be economic to repair the unit.

This assessment was agreed with the loss adjustor and TX03 will be scrapped.

Proactive monitoring of the other Westmill Solar transformers.

The problem with TX03 was unexpected and the reasons for its failure are not yet known - our transformers are 10 years old and no longer under warranty, but transformers typically have a life-expectancy of up to 25-30 years.

Monitoring and testing of the transformer stations is a standard part of the planned maintenance. Additional testing was undertaken of the three remaining transformers and no issues were identified. Going forward, we will continue to work with BSR to ensure that best practice on maintenance of our transformers is undertaken.

Lead time of the new transformer.

Due to the quoted six-month lead time, we made an early decision to order a new transformer from GBE – this is expected to be delivered to site in September/October. We are in direct contact with GBE to see how this lead time can be expedited, and that the Westmill Solar transformer be prioritised above others currently in production with GBE Italy. Given the value of the losses that we are incurring through lost generation, we have advised that we may be willing to cover higher costs associated with this.

The timely installation of the new unit will be managed by BSR as it comes available.

Hiring a transformer.

We have been working through various options to find a temporary replacement of TX03 to cover the peak generation period over the summer months whilst the new transformer is in production. This has not been straightforward due to the non-standard design of the transformers at Westmill.

However, we have now confirmed the hire of a suitable transformer which is fit for purpose with some modifications from a UK-based specialist transformer engineering company. We are currently working with BSR to confirm final costs and contractual details. Subject to no new issues being identified, we are planning for the transformer to be operational by mid-July.

Estimated cost of lost generation.

Subject to the hired transformer being operational by the end of July, we have calculated that we could lose around £400,000 of revenue during the period. We expect that most of this sum will be covered by our business interruption insurance.

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