

To:

**The General Manager
Thanet OFTO Limited
350 Euston Road
Regent's Place
London
NW1 3AX**

DIRECTION UNDER PARAGRAPH 10 OF AMENDED STANDARD CONDITION E12-J4 OF THE OFFSHORE TRANSMISSION LICENCE

Whereas:-

1. Thanet OFTO Limited (the "Licensee") is the holder of an offshore transmission licence (the "Licence") granted under section 6(1)(b) of the Electricity Act 1989 (the "Act").

2. In accordance with Paragraph 10 of Amended Standard Condition E12-J4:

a) the Licensee considers that the transmission service reductions on the Licensee's transmission system commencing on 5 March and ending on 28 April 2016 and commencing on 5 September 2016 and ending on 10 October 2016 were caused by an exceptional event;

b) the Licensee notified the Gas and Electricity Markets Authority (the "Authority") of the event, which resulted in two transmission service reductions, on 8 March 2016, within 14 days of its occurrence;

c) the Licensee has provided details of the reduction in system availability that the Licensee considers resulted from the exceptional event and further information required by the Authority in relation to the event; and

d) the Authority is satisfied, for the reasons specified in the Annex to this direction, that the event notified under sub-paragraph (b) above does constitute an Exceptional Event as defined in Amended Standard Condition E12-J1. Accordingly, the Authority is satisfied for the purposes of paragraph 10(d) of the Condition that the Failure Events were an Exceptional Event.

3. The Authority gave notice in accordance with Paragraph 12 of Amended Standard Condition E12-J4 of the Licence to the Licensee on 29 March 2018 (the "Notice").

4. No representations were made by the Licensee in response to the Notice.

This direction constitutes notice pursuant to section 49A(1)(c) of the Act.

Dated: 14 May 2018

Cathryn Scott, Director, Wholesale Markets & Commercial

Duly authorised by the Authority

ANNEX 1

REASONS FOR ACCEPTANCE OF AN EXCEPTIONAL EVENT CLAIM SUBMITTED BY THANET OFTO LIMITED UNDER PARAGRAPH 10 OF AMENDED STANDARD CONDITION E12-J4

1 Notification

- 1.1 Thanet offshore transmission system suffered a cable failure on 5 March 2016 (the **Initial Failure Event**). On 8 March 2016, the licensee notified us that there had been a transmission service reduction on the Thanet transmission system that it believed was due to an exceptional event. Regular updates on progress were provided between March 2016 and January 2017.¹ A temporary repair was undertaken and services restored on 28 April 2016. A permanent repair was undertaken between 5 September and 10 October 2016 (the **Second Failure Event**). The licensee submitted the full facts of the claim for assessment on 27 January 2017, along with independent technical analysis, commissioned by the insurance assessor, ERA (the **ERA Report**).
- 1.2 The ERA Report concluded the likely cause of the Initial Failure Event was combination of two factors:
- Jointer error in the preparation of the copper to aluminium weld which led to a raised weld and hence a reduction of insulation thickness over the weld and
 - Poor amalgamation of the conductor screen tapes allowing insulation material to be forced under the tapes leaving the edge of the conductor screen tapes forming a stress raiser.²
- 1.3 This error would most likely have occurred during installation or repair of the cable prior to asset transfer. The error has resulted in a reduction of the thickness over the weld and leading to a region of high electrical stress and degradation of the insulation. This lead to the failure of the weld (i.e. the joint) and subsequently the failure of the cable.
- 1.4 The Authority noted that the affected joint was re-made following initial installation and before asset transfer i.e. in 2011.³ In response to our further information request, the Licensee stated that the 2011 event was caused by high mechanical loads and that current event was not the same or similar to the previous failure mode. The Licensee also referenced a report by Force Technology (the **FT Report**) in support of their statement.
- 1.5 The FT Report attributes the 2011 failure to high mechanical loads and very poor welding quality in the joint. The FT Report recommended that non-destructive testing was performed and electrical conductivity measured in the cable to ensure the quality of the weld. In response to our further information request about this issue, the Licensee advised that testing would have been irrelevant as the developer had replaced all the joints.
- 1.6 During tests undertaken following the Initial Failure Event, the uncovering of the

¹ Updates were provided on 23 March 2016, 14 April 2016, 29 April 2016 (cable services had been restored), 9 May 2016, 17 June 2016 & 17 Nov 2016

² Page 3 (Summary) of the [ERA Report](#) refers.

³ Page 43 of the ERA Report refers.

faulty joint showed that the fault current had caused damage to other sections of the cable. This meant that, in order to make the permanent repair, a much larger section of cable had to be uncovered. In order to do so, consent was needed to cut across a cycle path, which would result in a delay of nearly 12 weeks before services could be restored. Due to this delay, the Licensee, in agreement with relevant stakeholders, decided to undertake a temporary repair in the interim with the intention of undertaking permanent repair when consents were held.

- 1.7 The Licensee undertook the permanent repair at the same time the generator had taken a planned outage, to avoid any further disruption to the generator.

2 Exceptional Event requirements

- 2.1. Paragraph 10 of the Condition provides that the Authority shall adjust the value of the monthly capacity weighted unavailability to offset the impact of an Exceptional Event where:

- a) the licensee considers that any event on its transmission system that causes a transmission service reduction has been wholly or partially caused by an Exceptional Event;
- b) the licensee has notified the Authority that a possible Exceptional Event had occurred, within 14 days of its occurrence;
- c) the licensee has provided such information as the Authority may require in relation to the event; and
- d) the Authority is satisfied that the notified event is an Exceptional Event.

- 2.2. An Exceptional Event is defined in Amended Standard Condition E12-J1 of the offshore transmission licence as follows:

"an Event or circumstance that is beyond the reasonable control of the licensee and which results in or causes a Transmission Service Reduction and includes (without limitation) an act of God, an act of the public enemy, war declared or undeclared, threat of war, terrorist act, blockade, revolution, riot, insurrection, civil commotion, public demonstration, sabotage, act of vandalism, fire (not related to weather), governmental restraint, Act of Parliament, other legislation, bye law or directive (not being any order, regulation or direction under section 32, 33, 34 and 35 of the Act) or decision of a Court of competent authority or the European Commission or any other body having jurisdiction over the activities of the licensee provide that lack of funds shall not be interpreted as a cause beyond the reasonable control of the licensee. For the avoidance of doubt, weather conditions which are reasonably expected to occur at the location of the event or circumstances are not considered to be beyond the reasonable control of the licensee."

3 Decision

- 3.1 Pursuant to subparagraph 10(d) of the Condition, the Authority is satisfied that the Initial and Second Failure Events are an Exceptional Event, for the reasons set out below.

4 Reasons for decision

- 4.1 The Authority has considered the information provided by the Licensee regarding the failure events against the licence and the open letter dated 22 October 2014.⁴

The initial failure event

- 4.2 As evidenced by the ERA Report, the Initial Failure Event was the product of the assets failing due to a fault which most likely occurred prior to the Licensee taking control of the assets.
- 4.3 The Authority sought technical advice on the ERA Report and the Licensee's responses of 21 November and 12 December 2017. The Authority's technical adviser concurred with the Licensee's technical forensic analysis, concluding that a poorly made joint would have impacted the thickness of the cable's dielectric insulation at the point of failure, leading to the transmission service reduction. The Authority's technical advisers could not see any other obvious possible reasons for the failure. Furthermore, it considered that it would not have been reasonably possible for the Licensee to identify this fault as part of due diligence at the time of asset takeover, advising that cable commissioning test results wouldn't necessarily show this type of fault.
- 4.4 The risk of fault or failure of cable joint falls within a category of risk that licensees assume at the point of asset transfer. The possibility of there being a fault or failure on the apparatus is a type of risk that is foreseeable, and in respect of which licensees are expected to plan and put in place contingency arrangements. Even if the specific fault is not foreseeable, the type of risk is foreseeable.
- 4.5 However, notwithstanding this reasoning, as set out in the in the Blue Transmission London Array Limited exceptional event decision dated 30 October 2017 (the **London Array decision**)⁵, the Authority notes that licensees assume normal operational risk for the assets *only from the point of asset transfer*. Therefore, the Authority has previously recognised that, in respect of fault or failure of apparatus in circumstances where the causal trigger event leading to the transmission services reduction occurred *prior to* the licensee assuming normal operational risk for the assets, it is appropriate to deem the event as being beyond the reasonable control of the licensee for the purposes of the definition of 'Exceptional Event'.
- 4.6 The same reasoning is applicable on the present facts. As outlined above, the technical evidence provided to the Authority demonstrates that the most likely causal trigger event for the Initial Failure Event occurred prior to asset transfer, i.e. prior to the point at which the licensee assumed normal operational risk for the assets. It follows that the Authority is satisfied that the Initial Failure Event is 'beyond the reasonable control of the licensee' for the purposes of the definition of 'Exceptional Event'.
- 4.7 For the above reasons, the Initial Failure Event constitutes an Exceptional Event as defined in Amended Standard Condition E12-J1. The licensee has acted in accordance with the requirements of subparagraphs 10(a) to (c) of the Condition. Accordingly, the Authority is satisfied for the purposes of paragraph 10(d) of the Condition that the Initial Failure Event was an Exceptional Event.

The second failure event

⁴ [Link to our open letter](#)

⁵ This decision can be found on our website at www.ofgem.gov.uk

- 4.8 The Second Failure Event was necessary to complete the repair on the same cable in order to prevent further unplanned transmission services reductions arising from the same causal trigger event. As such, the trigger event for the Second Failure Event is the same as is outlined for the Initial Failure Event, above, and is therefore 'beyond the reasonable control of the licensee' for the purposes of the definition of 'Exceptional Event'.
- 4.9 On 17 June 2016, the Licensee told us that it expected the permanent repair would be undertaken between 15 September and 3 October 2016. At this time we advised the Licensee that we would treat the two outages as the one Exceptional Event and therefore the Licensee did not notify us of the second failure event within 14 days of the event occurring. We have since determined that we will treat each failure event as a separate Exceptional Event claim and in doing so recognise that 'related' events will share the same causal trigger event. However, in light of our advice to the Licensee in this claim, we consider that it is appropriate to treat both the Initial and the Second Failure Events as a single Exceptional Event claim.
- 4.10 For all future claims each failure event must be treated as separate failure event (and separate Exceptional Event claim) and be notified to us within 14 days.
- 4.11 Accordingly, the Initial and Second Failure Events constitute an Exceptional Event as defined in Amended Standard Condition E12-J1. The licensee has acted in accordance with the requirements of subparagraphs 10(a) to (c) of the Condition. The Authority is satisfied for the purposes of paragraph 10(d) of the Condition that the Failure Events were an Exceptional Event.

5 Authority's adjustment to the reported system incentive performance under Paragraph 11 of Amended Standard Condition E12-J4

- 5.1 In accordance with Paragraph 11 of Amended Standard Condition E12-J4, the adjustment to reported system incentive performance shall be based on the extent to which the Authority is satisfied that the Licensee had taken steps, consistent with Good Industry Practice, to manage the impact of the events on the availability of services (both in anticipation of the event and after the event has occurred). The Authority has considered whether the Licensee has taken steps in accordance with Good Industry Practice to manage the impact of the events and obtained technical advice to inform its assessment.
- 5.2 The Licensee is seeking protection for the full period of the temporary repair (the Initial Failure event) and the last 24 hours of the permanent repair (the Second Failure Event), as the majority of the permanent repair was undertaken during the period where the generator had also requested an outage to undertake generator works.
- 5.3 The Authority is satisfied that the Licensee took reasonable steps consistent with Good Industry Practice for the following reasons:-
- The nature of the fault meant that there was high impedance to earth, and these types of faults are notoriously difficult to locate. When the Licensee was unable to find the fault using TDR, they had to resort to further breaking down of the fault with the application of High Voltage DC pulses. The GIS switchgear at the substation, from where these pulses were applied, had to be degassed as per by switchgear manufacturer's recommendations; and

all this coupled with the sheer number of different stakeholders involved in the process, resulted in the length of time taken to identify the cause of the failure.

- The Licensee has in place (and had in place prior to the failure events) operational and maintenance procedures which are consistent with Good Industry Practice.
- After the occurrence of the Initial Failure Event, the Licensee took prudent and timely steps to identify the root cause of the fault, restore transmission services and mobilised appropriate resources to repair the fault in a timely manner.
- It was unfortunate that the spare joint kits the Licensee had kept proved to be defective. We are satisfied that it was not possible to test the spare joint kits while these were held in stock, as there aren't any test methods for doing so; only the manufacturer's quality control system at the time of their manufacture can ensure that joints sold are fit for purpose.
- The Licensee undertook a temporary repair that allowed transmission services to be restored whilst awaiting consent to access land and undertake the permanent repair. The Licensee undertook the permanent repair concurrent with the generators outage thus limiting the impact on the generators ability to export

5.4 The Authority is thus satisfied that, the actions of the Licensee and those acting on its behalf in restoring transmission services and undertaking the permanent repair to the cable were reasonable, proportionate and efficient.

5.5 Therefore, the Authority directs that the Licensee's reported system incentive performance be adjusted to offset the full duration of the six transmission service reductions: 198,765 MWh reported system incentive performance for incentive year 3 (beginning 1 January 2016), as follows:

- 5 March to 28 April 2016 195,165 MWh
- 9 October to 10 October 2016 3,600 MWh