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15 July 2019

Dear Mark,

Consultation on Ofgem's minded-to-position to revise allowed expenditure for Subsea Cable Costs under special licence condition CRC 3F

I would like to start by thanking you and the rest of the Ofgem team for the frequent and constructive dialogue throughout the development of our protection reopener and following submission. This helped ensure speedy and efficient progression of the reopener.

Unfortunately, we are extremely disappointed that, in its minded to consultation, Ofgem has proposed an allowance of **£42.5m**, relative to the **£58.9m** requested by SHEPD. We are concerned that the basis on which Ofgem has arrived at this position is flawed. It is also inconsistent with provisions for the reopener set out in the licence and at odds with some of the fundamental principles that underpin RIIO, particularly the TOTEX approach to setting allowances.

These concerns specifically relate to adjustments made by Ofgem in relation to:

- Incremental inspection costs
- Protection costs associated with subsea cable replacement following fault, and
- Volume of replacement activities

More detail regarding each of these points is set out in separate sections below. Following full consideration of all arguments presented by Ofgem, SHEPD is now seeking to recover **£54.0m** under this reopener, and further consideration of any further incremental inspection costs incurred during the remainder of this price control period, to inform and evidence our ED2 programme, to be considered at close out.

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1. Incremental Inspection Costs Associated with Protection Activities

As set out in our reopener submission, SHEPD requested **£6.2m** to cover incremental costs associated with inspection activities in RIIO-ED1, following introduction of the National Marine Plan (NMP). In its consultation on its minded to position, Ofgem has proposed **no additional allowance** to accommodate incremental inspection requirements. SHEPD is extremely disappointed that Ofgem has come to this initial position. We believe the rationale for this approach is fundamentally flawed.

We accept Ofgem's argument that inspection activities form part of a DNO's core activities and inform its understanding of asset condition, future maintenance, refurbishment and replacement activities. **With this in mind, core inspection costs of [] per km were excluded from our protection submission under this reopener.** However, following introduction of the NMP, the level of detail and evidence that needs to be collected during inspections to inform stakeholder engagement, Cost Benefit Analysis and Marine Licensing in relation to new protection activities under the NMP, increased significantly.

The base case under the NMP is now heavily weighted towards full burial and protection of subsea cables, rather than surface lay as was previously the case. More detail and evidence are required in relation to the location and positioning of subsea cables (including suspensions) as well as the marine environment to justify a lower level of protection in Marine Licences and avoidance of decommissioning. We believe the **incremental inspection costs of [] per km** are fundamental to this reopener and must be provided for.

There is clear evidence that the detail and evidence provided through enhanced inspections has helped secure more efficient methods and levels of protection under Marine Licences, which in turn has delivered significant financial benefits to customers. **Had SHEPD continued with previous inspection methods, the incremental costs to customers associated with additional protection requirements would have been circa £260m.**

Within Section 6 of our reopener submission we set out evidence of the importance of the enhanced inspections and how the additional evidence gathered has played a key role in stakeholder engagement around the nature and level of protection and decommissioning, the associated CBA analysis and final marine licensing provisions. This was succinctly summarised in **Figure 4: Inspection Requirement**. Drivers of enhanced inspections are set out in the column "Marine Licence", and drivers of "business as usual" inspections are set out under the column titled "CNAIM". An extract of the table is set out in Figure 1 below. As can be seen, there are three requirements that are specific to protection and Marine Licence activities only. While other requirements fall into both categories (e.g. details of cable position and depth of burial) the level of detail and accuracy required to ascertain the nature and volume of protection and decommissioning required is far higher than for business as usual activities

associated with provision of asset data and development of maintenance and replacement programmes.

Figure 1: Inspection Requirements

Inspection Requirement	Marine Licence	CNAIM
Document the cable position	✓	✓
Document any damage, exposure, suspensions, burial or other significant points of interest	✓	✓
Document depth of burial	✓	✗
Detail any debris in contact or in close proximity to the cable	✓	✗
Bathymetric surveying using Multibeam Echo Sounder (MBES) and Side Scan Sonar (SSS) to identify areas of scour, debris, trawl scars etc.	✓	✓
High Definition (HD) video recordings and still images of the cable inspection showing: date, time, location, depth, sea current and other points of interest that are deemed necessary (i.e. cable or protection damage, any discarded fishing equipment, discarded anchors, Priority Marine Features such as reef habitats, mussel beds, Heritage points of interest, etc.	✓	✗

In support of this argument, we have included extracts from the Scottish National Marine plan¹ below. Extracts highlight the requirement for additional detail and evidence of cable location and the marine environment. Specific sections which set out requirements are in bold.

Within the General Policy² section, General Policy 20 Adaptive Management notes that:

*“Adaptive management practices should take account of **new data and information** in decision making, informing future decisions and future iterations of policy.”*

This reference is particularly important when considering the output of the CBA and Marine Licence. Enhanced inspection data is critical to the development of options for possible levels and methods of burial, protection and decommissioning at the start of the process. Options are then used in early stakeholder engagement to develop CBA assessments. Without the level of granularity and evidence provided through enhanced inspections (particularly the quality of

¹ The National Marine Plan can be downloaded from [here](#)

² The National Marine Plan General Policy chapter states that ‘**All text in this chapter should be considered as planning policy.** The policies apply to all development and use and are supplemented by the policies in the sector chapters’

photographs and locational drawings showing depth and location of cables, depth of burial, seabed conditions, proximity to and nature of surrounding debris etc. as shown in the table above) NMP policy requires a cautious view to be taken, with enhanced burial and protection, to minimise safety and environmental risk.

In relation to decommissioning, enhanced data allows analysis to be carried out regarding the level of self-burial of cables and likely biodiversity on and around the cable. There is compelling evidence this has helped limit decommissioning requirements in RIIO-ED1 and delivered benefits to customers by way of significant avoided costs.

Furthermore, within the Sea Fisheries Section, Marine Planning Policy notes that:

*“Where existing fishing opportunities or activity cannot be safeguarded, a Fisheries Management and Mitigation Strategy should be prepared by the proposer of development or use, involving full engagement with local fishing interests (and other interests as appropriate) in the development of the Strategy. All efforts should be made to agree the Strategy with those interests. Those interests should also undertake to engage with the proposer and provide **transparent and accurate information and data to help complete the Strategy**. The Strategy should be drawn up as part of the discharge of conditions of permissions granted”.*

In conclusion, our ability to provide the relevant information required by the NMP, to determine efficient and economic methods and levels of protection and decommissioning for subsea cables, is fundamentally discharged through the visual evidence and site mapping collected through enhanced inspections carried out in RIIO-ED1. Without this detail there is a clear risk that the financial consequences for customers would be significant. **As such, we are unclear on what basis Ofgem has decided not to provide for any incremental costs incurred in RIIO-ED1.**

Of the £6.2m incremental protection costs set out in our reopener submission, **£1.3m** (2012/13) relates directly to the 95.2km of subsea cables we plan to replace in RIIO-ED1. The more detailed analysis provided through enhanced inspections for these projects is forecast to reduce the overall protection costs of these planned replacement projects by approximately **£200m**. **As such, we believe there is compelling evidence that these incremental protection costs are economic and efficient and must be provided for under the reopener.**

RIIO-ED2

We will be required to develop and submit our RIIO-ED2 Business Plan towards the end of RIIO-ED1. The subsea cable replacement programme that will form part of our Business Plan, and subsequent Marine Licence applications, will be based on evidence collected through the inspection programme carried out in RIIO-ED1.

While the RIIO-ED2 replacement programme and associated replacement costs can be informed by core inspection requirements as part of our “business as usual” activities, enhanced inspection data will need to be collected in RIIO-ED1 to:

- determine and provide evidence and justification for associated protection requirements and costs; and
- to provide the necessary evidence for Marine Licence applications for these projects.

As the relevant incremental inspection costs associated with the development and justification of our ED2 programme need to be incurred in RIIO-ED1, they fall within the scope of the protection reopener provided for in licence condition CRC3F.

As we have not yet completed our RIIO-ED1 inspection programme, we are unable to determine the relevant level of incremental inspection costs associated with our RIIO-ED2 subsea cable replacement protection activities at this time. **We therefore propose the relevant costs should be considered and provided for as part of the RIIO-ED1 closeout process.**

2. Fault Costs

The Fault Costs included in our reopener submission are the costs associated with protecting replacement subsea cables, installed following an unrepairable fault to an existing cable. The definition of Subsea Cable Costs set out in licence condition CRC3F includes ‘*costs incurred or expected to be incurred*’ in applying recognised and approved measures to protect cables. We have incurred **£3.7m** in protecting subsea cables replaced following fault in RIIO-ED1; evidence of these costs was provided in our reopener submission. We forecast a further **£5.7m** will be incurred over the rest of the price control period.

Rather than basing protection costs for the first 3 years of RIIO-ED1, on the actual number and details of faults that have occurred, we note that Ofgem has calculated an average annual fault rate based on experience over the previous 8 years (DPCR5 and the first 3 years of RIIO-ED1), and applied this average annual rate to all years in RIIO-ED1. While we can see the logic of using an average annual rate based on previous experience to forecast future costs, we believe it is fundamentally flawed to use this when actual data and evidence of actual costs is available.

In the absence of any suggestion that these costs are inefficient in Ofgem’s consultation, we believe full provision should be made for the **£3.7m** incurred in protecting subsea cables following fault to date.

Regarding forecast costs, we believe there is an error in Ofgem’s calculation. This is explained in more detail below.

SHEPD's Calculation

- SHEPD's submission was based on historical data over the previous 10 years.
- Analysis of this data gives a fault rate of 3.6 faults per annum.
- Data also shows that overall, only 44% of faults require end to end replacement.
- On this basis, for the remaining 4 years of RIIO-ED1 we forecast 6 cables will require end to end replacement following fault ((3.6 x 44%) x 4 years)

Ofgem's Calculation

In comparison, Ofgem's proposals are based on 1.2 faults per annum. Having reviewed Ofgem's calculation this is based on information submitted by SSEN in table CV26 of the RRP which shows fault rates per 100km of cable. This data is not relevant to the calculation.

- The table "Asset Additions/Activity Volumes" in CV26 shows the actual number of faults incurred each year. Over the 8-year period used by Ofgem this shows there were 26 subsea cable faults, giving an average fault rate of 3.25 faults per annum. This is close to the number presented by SHEPD.
- Applying this annual fault rate to the remaining 4 years of RIIO-ED1 suggests SHEPD will experience 13 subsea cable faults.
- Assuming 44% require end to end replacement, as set out above, gives a total of 6; this is consistent with the figure used by SHEPD in its calculation of associated protection costs.

On this basis, we maintain that as set out in our submission, Ofgem should provide:

- **£3.7m in relation to actual protection costs incurred in RIIO-ED1 in relation to end to end replacement following fault; and**
- **£5.7m in relation to forecast costs.**

3. Volume Adjustment

We note that Ofgem has set out in the consultation document that the protection costs requested by SHEPD equate to replacement of 95.2km of subsea cable. Ofgem has argued that as the Ofgem RIIO-ED1 final determination references only 85.1km, a downward adjustment of £4m should be made to our submission.

We believe the methodology used by Ofgem, in applying a simple straight-line reduction, based on average requirements is crude and lacks any basis, particularly when a detailed programme of work for the entire RIIO-ED1 period, with specific protection requirements for each cable is available. At the very least, we would expect consideration to be given to individual project requirements should any adjustment be justified.

To demonstrate this point, we note that Sanday North Ronaldsay has a forecast replacement length of 10.7km and protection costs of []. Removing this specific cable from the

programme would have resulted in a value that Ofgem argues is consistent with the final determination.

More importantly, we believe the argument that the final determination places a cap on the volume or value of replacement activities in RIIO-ED1 is flawed. One of the fundamental principles of the RIIO framework set by Ofgem is that it takes a TOTEX or total expenditure approach to allowances, providing licensees the flexibility to make trade-offs and do the right thing overall. It does not cap expenditure or volumes at individual activity or output level. Licence condition CRC3F reflects this approach and makes no reference to restricting Subsea Cable Costs under the protection reopener by reference to an allowance (volume or financial value) set in Ofgem's final determination. It provides for "costs incurred or expected to be incurred" after 1 April 2015. This results in Proactive Protection costs of £37.7m, rather than the notional £33.7m proposed by Ofgem.

To conclude, we fundamentally disagree with Ofgem's approach and believe the full costs of £37.7m submitted should be included in the reopener determination. SHEPD does not support Ofgem's proposal to reduce the volume of protection requested from 95.2km to 85.1km.

4. Conclusion

Taking into account the points raised by Ofgem in its consultation letter and the further evidence set out above, SHEPD believes there is compelling evidence to support a protection allowance for RIIO-ED1 of **£54.0m**. This is summarised in the table below (2012/13 prices).

	SHEPD's original submission	Ofgem's proposal	SHEPD's revised submission
Inspection Costs*	£6.2m	£0m	£1.3m
Proactive Protection Costs	£37.7m	£33.7m	£37.7m
Protection Costs Following Fault	£9.4m	£3.1m	£9.4m
Cost Benefit Analysis	£0.6m	£0.6m	£0.6m
Indirect Costs	£5.0m	£5.0m	£5.0m
Total	£58.9m	£42.5m	£54.0m

***Incremental Inspection Costs incurred in ED1 that inform and progress the ED2 programme to be provided for at close out and are not included here.**

We hope the detail provided in this letter is helpful. Once you and the team have had time to consider the detail we would appreciate an opportunity to have a further face to face meeting.



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It is important that we continue the regular and constructive dialogue to ensure appropriate and efficient settlement for SHEPD, that will allow us to meet our ED1 commitments and provide the service our customers and wider stakeholders require.

Yours sincerely

Beverley Grubb

Acting Head of Electricity Distribution Network Regulation