



EUROPEAN COMMISSION  
DG Competition

***Case M.8239 - NKT / ABB HIGH VOLTAGE CABLE  
BUSINESS***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004  
MERGER PROCEDURE**

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Article 6(1)(b) NON-OPPOSITION  
Date: 27/02/2017

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Brussels, 27.2.2017  
C(2017) 1469 final

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

**To the notifying party:**

**Subject: Case M.8239 – NKT HOLDING A/S / ABB HIGH VOLTAGE CABLE BUSINESS**  
**Commission decision pursuant to Article 6(1)(b) of Council Regulation No 139/2004<sup>1</sup> and Article 57 of the Agreement on the European Economic Area<sup>2</sup>**

Dear Sir or Madam,

- (1) On 23 January 2017, the European Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 by which NKT Holding A/S ("NKT") intends to acquire the high voltage cable business and power cable accessories business of ABB Limited ("ABBC"). NKT and ABBC are collectively referred to as "Parties".

#### **1. THE PARTIES**

- (2) NKT, through its cables business unit, manufactures and supplies cable solutions. Its power cable operations are mainly carried out in Europe.
- (3) ABBC comprises two wholly owned businesses of the ABB Group which constitute parts of its Power Grids division. The businesses have a geographic focus on Europe and are active in the development, manufacturing and sales of:

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<sup>1</sup> OJ L 24, 29.1.2004, p. 1 (the "Merger Regulation"). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ("TFEU") has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

<sup>2</sup> OJ L 1, 3.1.1994, p. 3 (the "EEA Agreement").

(i) high voltage and extra high voltage power cable systems; and (ii) power cable accessories designed for use with power cables.

## **2. THE OPERATION**

- (4) The Proposed Transaction concerns the acquisition by NKT of ABB Group's high voltage cable business and power cable accessories business. Under the terms of the sale and purchase agreement signed on 21 September 2016 [business secret]. Pursuant to a letter of intent signed by the Parties on 23 January 2017, the ABB Group will also transfer its cable accessories business to NKT. The Proposed Transaction therefore constitutes a concentration pursuant to Article 3(1)(b) of the Merger Regulation.

## **3. EU DIMENSION**

- (5) The Parties have a combined aggregate worldwide turnover of more than EUR 2,500 million; the combined aggregate turnover of the Parties exceeds EUR 100 million in [...], [...] and [...];<sup>3</sup> the aggregate turnover of each Party exceeds EUR 25 million in [...], [...] and [...]; and the Union-wide turnover of each Party exceeds EUR 100 million. Neither of the Parties achieves more than two-thirds of their aggregate Union-wide turnover within one and the same Member State.
- (6) The notified operation therefore has an EU dimension pursuant to Article 1(3) of the Merger Regulation.

## **4. COMPETITIVE ASSESSMENT**

- (7) Both Parties are active with regard to the manufacture and supply of cables. Three main different types of energy cables (as opposed to telecommunications cables) can be identified: (i) power cables for the transmission and distribution of electrical power; (ii) general wiring used for electrical systems in buildings and industrial applications, internal wiring of electrical equipment and for power and signal supply of mobile devices, including for railways and automotive applications; and (iii) overhead bare conductors for the aerial transmission of energy which are not technically considered as cables as they are not insulated.
- (8) NKT is active with regard to: (i) general wiring; (ii) low and medium voltage power cables; (iii) high and extra high voltage power cables; and (iv) power cable accessories. ABBC's activities are limited to high and extra high voltage power cables and power cable accessories; accordingly, the overlap between the Parties is limited to high and extra high voltage power cables and power cable accessories. There are no vertical relationships.
- (9) In 2014, the Commission adopted a decision finding that undertakings in the power cable industry had infringed Article 101 TFEU and Article 53 of the EEA Agreement by operating a cartel; it imposed fines on the undertakings. The

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<sup>3</sup> As well as [...], [...],[...] and [...].

Parties took part in this cartel and were addressees of that decision. In its 2014 decision, the Commission found, in particular, that the cartel members had participated in a network of multilateral and bilateral meetings and contacts aimed at restricting competition for high voltage underground and submarine power cable projects in specific territories by agreeing on market and customer allocation. The cartel had two main configurations, one of which included Japanese and Korean producers refraining from competing for projects in the EEA, thus staying out of the European players' "home territory". The Commission found a single and continuous infringement of Article 101 of the TFEU and Article 53 of the EEA Agreement. NKT was held liable for its participation from 3 July 2002 to 17 February 2006 and the ABB Group for its participation from 1 April 2000 to 17 October 2008. The ABB Group was granted full immunity from fines under the 2006 Leniency Notice.<sup>4</sup>

#### 4.1. Market definition

##### 4.1.1. Product market for HV/EHV power cables

- (10) The Commission has previously concluded that energy cables should be considered as a separate product market, distinct from telecommunication cables and wires or enamelled and winding wires.<sup>5</sup> The Commission has also concluded in a number of previous cases that energy cables should be subdivided into separate product markets for: (i) power cables; (ii) general wiring; and (iii) overhead bare conductors;<sup>6</sup> and that power cables should be further broken down into: (a) low and medium voltage; and (b) high and extra high voltage.<sup>7</sup> The substantive merger analysis in this decision will focus on high and extra high voltage power cables (which are the sectors in which the parties' activities overlap), which can possibly be further sub-segmented a number of ways.
- (11) **Voltage** - In its past decisions, the Commission considered two separate power cable markets based on voltage to be delineated as follows: (i) low voltage ("LV") – cables rated up to 1 kV; and medium voltage ("MV") – cables rated

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4 See Commission press release dated 2 April 2014 in Case AT.39610 – *Power Cables*: [http://europa.eu/rapid/press-release\\_IP-14-358\\_en.htm](http://europa.eu/rapid/press-release_IP-14-358_en.htm); Summary of the Commission decision: OJ C 319, 17.09.2014, p. 10-15 ([http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0917\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0917(01)&from=EN))

5 Case COMP/M.165 – *Alcatel / AEG Kabel*, decision of 18 December 1991, paragraph 12; Case COMP/M.3836 – *Goldman Sachs / Pirelli Cavi E Sistemi Energia / Pirelli Cavi E Sistemi Telecom*, decision of 5 July 2005, paragraph 10; Case COMP/M.4050 – *Goldman Sachs / Cinven / Ahlsell*, decision of 6 January 2006, paragraphs 11 and 12; Case COMP/M.6092 – *Prysmian / Draka Holding*, decision of 9 February 2011, paragraphs 10 – 41.

6 Case COMP/M.165 – *Alcatel / AEG Kabel*, decision of 18 December 1991, paragraph 12; Case COMP/M.1271 – *Pirelli / Siemens*, decision of 30 September 1998, paragraphs 7 – 10; Case COMP/M.1882 – *Pirelli / BICC*, paragraph 32; Case COMP/M.3836 – *Goldman Sachs / Pirelli Cavi E Sistemi Energia / Pirelli Cavi E Sistemi Telecom*, decision of 5 July 2005, paragraph 10; Case COMP/M.4050 – *Goldman Sachs / Cinven / Ahlsell*, decision of 6 January 2006, paragraphs 11 and 12; and Case COMP/M.6092 – *Prysmian / Draka Holding*, paragraph 29

7 Case COMP/M.1271 – *Pirelli / Siemens*, decision of 30 September 1998, paragraph 10; Case COMP/M.1882 – *Pirelli / BICC*, decision of 19 July 2000, paragraphs 15 – 28 and 32; COMP/M.3836 – *Goldman Sachs / Pirelli Cavi E Sistemi Energia / Pirelli Cavi E Sistemi Telecom*, decision of 5 July 2005, paragraph 10; Case COMP/M.4050 – *Goldman Sachs / Cinven / Ahlsell*, decision of 6 January 2006, paragraphs 11 and 12; and Case COMP/M.6092 – *Prysmian / Draka Holding*, paragraph 29

from 1 kV to 33/45 kV; and (ii) high voltage ("HV") – cables rated 33/45 kV to 132 kV; and extra high voltage ("EHV") – cables rated 275 kV and 400 kV.<sup>8</sup>

- (12) The Notifying Party does not dispute the Commission's previous assessment. It submits that LV and MV power cables on the one hand, and HV and EHV power cables on the other hand, have different end-uses. LV/MV power cables are usually standardised cables used for the distribution of electricity by national/regional utilities and industry, while HV/EHV cables are normally customised products used for the transmission of electricity by large national grid operators.
- (13) The market investigation has broadly supported the distinction between LV/MV and HV/EHV power cables because of different end uses and different production technology.<sup>9</sup>
- (14) This said, the market investigation has suggested that due to advances in technology and increased demand for high voltage transmission, the threshold for the delineation between the two segments may no longer be appropriate. In particular, some market participants considered 66 kV cables to be MV rather than HV.<sup>10</sup>
- (15) The Notifying Party does not consider it necessary to reach a determination on this point as no competition issues arise whether 66 kV cables are considered as either MV or HV..
- (16) The Commission also notes that there are certain players active with regard to cables up to and including 66 kV but not above, and other players active above 66 kV but not for 66 kV or below.. By way of example, ABBC which considers itself a HV/EHV player is not active with regard to 66 kV power cables and on the other hand, JDR Cables is only active with regard to 66 kV power cables for use as array cables on wind farms and not cables above this voltage.
- (17) The market investigation was ultimately inconclusive on whether 66 kV power cables should be considered MV or HV for the purposes of market definition.<sup>11</sup> From the demand side there is limited substitutability, as the intended end-use of cables of different voltages differs. From a supply-side, market participants argued that while 66 kV submarine cables could be produced by MV suppliers 'moving up' in voltage, as well as HV/EHV suppliers 'moving down' in voltage,

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8 Case COMP/M.1882 – *Pirelli / BICC*, decision of 19 July 2000, paragraphs 15 – 28 and 32.

9 In the market investigation a majority of competitors responded that the manufacturing process and know-how required for the manufacture of power cables falling under MV and HV/EHV are different so that switching production from MV to HV/EHV or HV/EHV to MV would imply significant technical difficulties and/or costs. A number of respondents specified further that the switch from lower voltage (i.e. MV) to higher voltage (i.e. HV/EHV) would be more challenging, while a switch the other way round (i.e. from HV/EHV to MV) would not imply significant difficulties or costs; a manufacturing line for HV/EHV could without significant costs manufacture MV cables, but a production line able to produce MV cables would need to be upgraded, i.e. increased in size, to manufacture higher voltage cables and would also need to undergo qualification; see question 6, Q1 – Questionnaire to competitors..

10 See response to question 3.1 of Q1 – Questionnaire to competitors and Q2 – Questionnaire to customers and non-confidential minutes of calls with Nexans dated 21 November 2016, JDR Cables dated 22 November 2016, Prysmian dated 29 November 2016, Statoil ASA dated 9 December 2016, and Sumitomo dated 24 November 2016.

11 In particular, 10 respondents to the market investigation considered 66 kV cables to be MV and 7 considered them to be HV. See responses to question 4.1 Q1 – Questionnaire to competitors and Q2 – Questionnaire to customers.

the production facilities needed to supply power cables above 66 kV differ significantly from those used for MV power cables. Accordingly, there appears to be limited supply-side substitutability as it would be difficult for a MV cable manufacturer to start supplying cables above the 66 kV voltage mark as in addition to the different know-how required to manufacture such power cables, the manufacturer would also need to have the facilities adapted to handle cables of larger size and weight and in practice the construction of a new production line would be required.<sup>12</sup> This would not be possible in the short term and without incurring significant additional costs.

- (18) **Insulation** – The Notifying Party explains that a variety of technologies are available for the insulation of power cables, but the main technologies are: (i) paper insulated (i.e. laminar paper impregnated with oil under pressure), in particular mass impregnated ("MI"), which is the older technology, where the conductor is wrapped in paper impregnated with dielectric fluid (oil); and (ii) extruded cables/XLPE technology, which is the newer technology, where the conductor is contained within cross-linked polyethylene. With regard to underground applications, XLPE is used almost exclusively. With regard to submarine applications, MI is gradually being replaced with XLPE.
- (19) The Commission has previously considered a segmentation between MI and XLPE.<sup>13</sup> It noted that the two technologies are not substitutable from a supply-side perspective as the equipment used for the production of MI cables cannot be used for XLPE production, and vice versa. However, from the demand-side, it noted that MI technology is to some extent being replaced by XLPE technology (in particular for LV, MV and HV cables) as it is simpler to install, requires less maintenance and is more environmentally friendly as the risk of leakage is reduced.<sup>14</sup> On that basis, it concluded that this segmentation was not warranted for either LV/MV cables or HV/EHV cables.
- (20) The Notifying Party does not dispute the Commission's previous assessment.
- (21) The market investigation has indicated that the Commission's previous findings remain valid. In particular the indications are that there is limited supply side substitutability<sup>15</sup> but from a demand side, customers see the two technologies as substitutable, especially for LV, MV and HV cables.<sup>16</sup> In a case in 2000, the Commission found that some customers were unwilling to switch to XLPE for EHV projects because of certain technical constraints but also because the long-term reliability of XLPE for EHV cables had not yet been proven in the market. The market investigation reveals that XLPE is expected to progressively replace

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12 See non-confidential minutes of call with Prysmian dated 29 November 2016, JDR Cables dated 22 November 2016, and Sumitomo dated 24 November 2016.

13 Case COMP/M.1882 – *Pirelli / BICC*, decision of 19 July 2000, paragraphs 29 – 32.

14 Case COMP/M.1882 – *Pirelli / BICC*, decision of 19 July 2000, paragraph 30.

15 Respondents unanimously agreed that the manufacturing processes and know-how required for HV/EHV submarine power cables using different insulation technologies are different so that switching from the production of cables using one insulation technology to cables using another technology would imply significant technical difficulties and/or costs; see question 11 of Q1 - Questionnaire to competitors.

16 See response to question 9 of Q1 – Questionnaire to customers and questions 10 and 11 of Q2 – Questionnaire to competitors; A majority of respondent to the market investigation consider MI and XLPE substitutable from a demand side for submarine applications, at least to a certain degree. It is noted that for certain applications, e.g. off-shore windfarms, XLPE is the dominant technology, while MI is used more in higher voltage cables, in particular interconnector cables, and often for DC cables.

MI as suppliers progressively qualify XLPE for cables of higher voltage levels<sup>17</sup> and the list of successful XLPE reference projects at higher voltage levels grows.<sup>18</sup>

- (22) **Transmission technology** –Power cables are either alternating current ("AC") or direct current ("DC").
- (23) The Notifying Party considers that it is not necessary to reach a determination as to whether AC and DC HV/EHV power cables are in different product markets as no competition issues arise either way; it does note however that each transmission technology is favoured in different end-use applications and that there are supply-side differences as while the cable may be essentially the same, the accessories that are required to complete the cable are different.
- (24) The Commission has not previously considered this potential segmentation with regard to HV/ EHV cables.<sup>19</sup>
- (25) The market investigation indicates that AC and DC cables could form different product markets. From a demand side, DC cables systems appear to be more costly as additional AC/DC converters are needed at either end of the DC cable given that both the power production (e.g. in a wind farm) and the national transmission systems are AC.<sup>20</sup> Market participants have indicated that above a certain distance (approximately 80 to 120km), DC systems become cost effective as the high initial expenditure outweighs the on-going cost associated with energy losses that occur on AC cables.<sup>21</sup> The market investigation suggests that AC appears to be the preferred choice unless it is technically necessary to use DC.<sup>22</sup>
- (26) From a supply side, there appear to be technical barriers to switching related to the development of DC cable technology (in particular for the associated accessories) [business plans]. The market investigation indicated that there are significant switching costs associated with changing from AC to DC.<sup>23</sup>
- (27) **Installation environment** – Power cables can be installed either on land (so called underground cables) or on the sea bed (so called submarine cables).

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17 XLPE qualified submarine power cables are becoming available at the very highest voltage levels, e.g. 525 kV DC cables; see question 2 of Q1 - Questionnaire to competitors, and non-confidential versions of minutes with Prysmian dated 29 November 2016.

18 Recent HV/EHV cable projects with XLPE technology include the NEMO interconnector cable between the UK and Belgium, and the COBRA interconnector cable between Denmark and the Netherlands; see e.g. non-confidential minutes of calls with Prysmian dated 29 November 2016, Sumitomo dated 24 November 2016, and Energinet.dk of 30 November 2016.

19 The Commission did however distinguish between AC and DC power generation systems and electrical systems for aircraft in Case COMP/M.6510 – *UTC / Goodrich*, decision of 26 July 2012, paragraphs 24-35.

20 A majority of respondents consider that AC and DC HV/EHV submarine power cables function completely differently, are not comparable on price, and cannot be used for the same purpose; see question 6 of Q2- Questionnaire to customers.

21 See questions 7 and 8 of Q2 - Questionnaire to customers, and questions 7 and 8 of Q1 – Questionnaire to competitors.

22 See non-confidential minutes of calls with Energinet.dk dated 30 November 2016, Statoil ASA dated 9 December 2016, and Sumitomo dated 24 November 2016.

23 The great majority of respondents considered that the manufacturing process and know-how required for the manufacture of each of AC and DC HV/EHV power cables is different so that switching between the production of AC to DC cable systems would imply significant technical difficulties and/or costs; see question 9 of Q1 – Questionnaire to competitors.

HV/EHV submarine power cables are used in three main circumstances: (i) interconnector cables are used to connect the transmission grids of two landmasses separated by water, whether that be e.g. connecting an island to the transmission network of the mainland or connecting the transmission grids of two different countries to facilitate international energy trading; (ii) to supply offshore oil and gas platforms with power (so called 'power from shore' cables); and (iii) to bring energy generated by offshore wind farms on land (so called 'export' cables).<sup>24</sup>

- (28) The Notifying Party submits that HV/EHV underground and submarine cables should be considered as separate product markets because the vastly different product characteristics, and intended use means that they are not substitutable.
- (29) The Commission has not previously considered whether such a segmentation would be appropriate.
- (30) The market investigation has indicated that there are a number of factors which suggest that submarine and underground cables could belong to different product markets, such as limited or non-existent interchangeability and substitutability as well as possible differences in the manufacturing processes and the know-how needed to manufacture either type of power cables.
- (31) In any event, the Commission considers that the exact market definition for HV/EHV power cables can be left open given that the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market, even on the narrowest possible market definition.

#### 4.1.2. *Geographic market for HV/EHV power cables*

- (32) The Commission has previously considered the market for the supply of power cables to be at least EEA-wide.<sup>25</sup> First, product standards are widely harmonised across the EEA. Second, customers purchase EEA-wide. Third, due to the deregulation of electricity markets and low transport costs, trade flows between Member States have significantly increased.
- (33) The Notifying Party agrees with the Commission's findings and submits that the relevant geographic market is at least EEA-wide in scope.
- (34) The market investigation has confirmed that there are very limited differences between the conditions of supply in different EEA States<sup>26</sup> and that customers purchase on an EEA-wide basis, if not wider.<sup>27</sup>

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<sup>24</sup> Submarine projects often require an underground cable between the coastline and the onshore substation, the length of which will vary depending on how far the sub-station is from the coast. In the event that the sub-station is far from the coast, some customers will tender this underground segment separately to the sub-marine cable whereas others will tender it together.

<sup>25</sup> Case COMP/M.1882 – *Pirelli / BICC*, decision of 19 July 2000, paragraph 55; and Case COMP/M.6092 – *Prysmian / Draka Holding*, decision of 9 February 2011, paragraph 52.

<sup>26</sup> All respondents to the competitor questionnaire indicated that they are supplying or pursuing the supply of HV/EHV submarine cables both in the EEA and, with one exception, outside the EEA; see questions 1 and 14 of Q1 – Questionnaire to competitors; a majority of respondents to the customer questionnaire considered that there are no differences between EEA countries with regard to the supply of HV/EHV submarine power cables, for example differences in regulation, prices or other relevant factors, see question 11 of Q2 – Questionnaire to customers.



- (35) The Commission considers that the geographic market definition can be left open given that the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible market definition.

#### 4.1.3. *Installation, services and maintenance*

- (36) The Commission has previously considered the market for the installation of submarine power cables as separate from the supply of submarine power cables, also noting that as almost all major submarine cable laying providers are active with regard to providing installation as well as services and maintenance, it would be sufficient to consider an overall market for all three services.<sup>28</sup>
- (37) The Notifying Party indicates that power cables and their accessories can be sold standalone or as part of a 'turnkey' solution comprising the supply of the cable (and accessories) as well as the 'mechanical' installation, e.g. trenching or cable laying. In a turnkey project, cable manufacturer can either: (i) provide the full range of products and services required; (ii) act as the main contractor and use a subcontractor for the service and/or installation works; or (iii) form a consortium with a power cable installer. Additionally, manufacturers may provide repair and maintenance services following the installation of the cables.
- (38) The market investigation has indicated that whether installation and maintenance are included in a tender for a submarine cable project varies depending on the customer.<sup>29</sup> Tendering the installation of a cable separately from the cable may allow the customer to benefit from more competitive pricing,<sup>30</sup> but a cable supplier's in-house installation capability may also be counted as a benefit in the tendering process.<sup>31</sup> Submarine cable maintenance as such however appears to be rare, considering that such cables are usually not easily accessible once installed in the seabed.<sup>32</sup>
- (39) NKT does not have any vessels for submarine cable installation and when participating in turnkey projects, it relies on marine subcontractors for the installation works. ABBC has fully integrated turnkey capabilities and is in a position to offer the complete range of services; in particular ABBC has a long-term charter for a vessel for submarine projects and has recently commissioned a new cable-laying vessel which is expected to be delivered in 2017. ABBC

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27 A majority of customer questionnaire respondents indicated that they generally purchase the cable as part of a turnkey solution; some customers explained that the key advantage of the turnkey solution is the reduced interface risk, but this may come at an additional cost to the customer, i.e. the collection of an increased margin/risk premium, and potentially limit the competition in the highly competitive installation market, see question 12 of Q2 – Questionnaire to customers.

28 Case COMP/M.6995 – *Reggeborgh / Boskalis / VSCM*, decision of 29 October 2013, paragraph 17.

29 See question 19 of Q2 – Questionnaire to customers.

30 It is argued by one customer that given the downturn in the oil and gas industry, there is considerable spare capacity currently on the installation market. Tendering for installation separately allows for a more competitive process; see non-confidential minutes of call with DONG dated 22 November 2016.

31 It is noted by one customer that in-house installation forces the cable manufacturer to take more ownership of the project it has been awarded; independent cable installers may be less knowledgeable about cables and their specific sensitivities; see non-confidential minutes of call with Statoil ASA dated 9 December 2016.

32 One competitor points out that for wind farm inter-array cable projects, maintenance services are not sold together with the supply of the cables and have until recently been given very limited thought, see non-confidential minutes of call with JDR Cables dated 22 November 2016; one customer points out that cable maintenance is always tendered separately from the procurement of the cables both in oil and gas and off shore wind projects. The maintenance of submarine cables is also limited, especially where cables on the seabed are covered (by rocks), See non-confidential minutes of call with Statoil ASA dated 9 December 2016.

does not offer installation services independently of cable supply. Accordingly, the Parties' activities only overlap to a very limited extent in relation to the provision of standalone maintenance and repair services to third parties.

- (40) As regards the geographic market, the Commission has previously considered that it could either be global in scope or potentially limited to the EEA however has ultimately left the market definition open.<sup>33</sup>
- (41) The Notifying Party refers to the Commission's assessment in previous cases and submits that the precise geographic market definition can be left open in this case.
- (42) The Commission considers that the geographic market definition can be left open given that the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible market definition.
- (43) Regardless of whether or not there is a separate market for the provision of standalone maintenance and repair services, the Parties' combined share in this potential market would not exceed [10 - 20]% in the EEA. This potential market is therefore not an affected market and will not be discussed further in this decision.

#### 4.1.4. *Power cable accessories*

- (44) Power cable accessories are used in power cable systems: (i) cable joints link different power cables to each other; and (ii) cable terminations / connectors connect cables to power supply equipment, such as power plants or substations. Different power cable accessories are required depending on the voltage level, transmission technology or installation environment.
- (45) The Notifying Party submits that for HV/EHV, only underground AC power cable accessories are sold on a standalone basis and that that no market exists for either: (i) DC HV/EHV power cable accessories (both underground and submarine); or (ii) AC HV/EHV submarine power cable accessories; as they are never sold on a standalone basis, only ever as part of a complete cable system<sup>34</sup>.
- (46) The Commission has previously considered LV and MV power cable accessories to constitute a separate product market from power cables but did not consider HV/EHV power cable accessories specifically nor any further sub-segmentation, for example by installation environment.<sup>35</sup>
- (47) With regard to geographic product market, the Commission has previously considered power cable related markets to be at least EEA wide;<sup>36</sup> the Notifying Party supports this view on the grounds that there are no geographic barriers or

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<sup>33</sup> Case COMP/M.6995 – *Reggeborgh / Boskalis / VSCM*, decision of 29 October 2013, paragraph 23.

<sup>34</sup> The Notifying Party indicates, however, that in rare instances, and usually as part of a repair job, an AC cable accessory kit for use with an AC submarine power cable can be sold to a third party separately from the cable.

<sup>35</sup> Case COMP/M.3836 – *Goldman Sachs / Pirelli cavi e sistemi energia / Pirelli cave e sistemi telecom*, paragraph 12

<sup>36</sup> Case COMP/M.3836 – *Goldman Sachs / Pirelli cavi e sistemi energia / Pirelli cave e sistemi telecom*, paragraph 17

restrictions for supplying and purchasing AC power cable accessories on a worldwide basis and there are not material transport costs.

- (48) ABBC has: (i) sales of AC power cable accessories on a standalone basis and as part of integrated cable solutions; and (ii) sales of DC power cable accessories as part of integrated cable solutions. NKT has: (i) sales of AC power cable accessories on a standalone basis and as part of integrated cable solutions; and (ii) is currently developing DC cable technology.
- (49) Regardless of the market definition adopted, no affected markets arise either as a result of a horizontal overlap or when considering power cable accessories as a neighbouring market<sup>37</sup> to power cables. Therefore these products are not discussed further in this decision.

## 4.2. Horizontal unilateral and coordinated effects

### 4.2.1. Introduction

- (50) The Parties overlap with regard to the supply of HV/EHV power cables.<sup>38</sup> When considering a potential market for all HV/EHV power cables (i.e. underground and submarine, AC and DC), no affected market arises (see Table 4 below). This is also true when considering a potential market for all AC HV/EHV cables (underground and submarine) (see Table 5 below) and a potential market for all DC HV/EHV power cables (see Table 6 below). With regard to installation environment, both are active with regard to both HV/EHV underground and submarine cables but even on the narrowest possible market, there is no affected market with regard to underground cables.<sup>39</sup>
- (51) For HV/EHV submarine cables, both are active with regard to AC cable technology. As regards DC cable technology, ABBC is active and NKT could be considered as a potential entrant.<sup>40</sup> Both are active with regard to XLPE technology; NKT is not active with regard to MI insulated cables and since [date], ABBC has principally focused on the manufacture of XLPE insulated cables, [business plans].
- (52) The assessment therefore focuses on: (1) the horizontal overlap with regard to AC HV/EHV submarine cables (both XLPE and MI, and XLPE alone), both considering HV/EHV as 33 kV and above and as 67 kV and above; (2) the horizontal overlap with regard to DC HV/EHV submarine cables insofar as NKT is a potential entrant (both XLPE and MI, and XLPE alone); and (3) potential co-ordinated effects arising from the Proposed Transaction. There are no vertically affected markets arising from the Proposed Transaction.

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<sup>37</sup> That is, even when one considers NKT's potential entry, the ABBC's share on this potential market is below 30%.

<sup>38</sup> There is no overlap between the Parties with regard to LV and MV cables as ABBC is not active.

<sup>39</sup> This includes both AC and DC power cables. [business plans]. There are however no markets where ABBC has a market share of more than 30% for underground cables and [business plans].

<sup>40</sup> [business plans]. There are however no markets where ABBC has a market share of more than 30% for submarine cables and [business plans]. For the sake of completeness, this matter will be addressed further below.

- (53) Market share data has been provided by the Notifying Party based on both value and volume.<sup>41</sup> The value data reflects the entire project value that the company performed i.e. it includes both the value of the cable length reflected in the volume data, and the value related to cable installation services. Accordingly, when considering a market for power cables only, the volume data may give a more accurate representation of the Parties' and their competitors' market position. Demand in the cable industry varies significantly from one year to another, depending on when customers carry out large projects and when the product is delivered, the Notifying Party has therefore provided market share data for an average period over a number of years (2011 – 2016 for submarine and 2013 – 2015 for underground) in order to give a more accurate representation of the Parties' and their competitors' market position.

#### 4.2.2. *Horizontal unilateral effects - AC HV/EHV submarine cables*

##### 4.2.2.1. Notifying Party's view

- (54) The Notifying Party submits that the Proposed Transaction will not have any anti-competitive unilateral effects with regard to AC HV/EHV power cables for the following reasons. First, the market shares do not indicate competition, concerns. Second, the Parties are not close competitors as [business secrets] and the bidding data illustrates that the Parties infrequently compete head to head. Third, the merged entity will continue to be constrained by several strong competitors, in particular Prysmian will remain the largest competitor and several other rivals remain. Fourth, the merged entity will continue to be constrained by rivals' entry and expansion as existing rivals have expanded their product offering and increased capacity. Moreover, there has been successful entry from Asian competitors, i.e. LS Cables and Sumitomo, into the EEA market. Fifth, the Parties serve large and sophisticated customers which face no switching costs. Finally, the Proposed Transaction will enable NKT to expand its product offering and better compete with existing strong competitors.

##### 4.2.2.2. Commission's assessment

- (55) For the reasons set out below, the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market with respect to AC HV/EHV submarine cables in the EEA, regardless of any possible segmentation. First, a number of strong competitors will remain in the market and customers face no barriers to switching. Second, there has been significant market entry and expansion in recent years from Asian competitors as well as from power cable suppliers already active in the EEA market. Third, the Parties are not very close competitors.

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<sup>41</sup> (E)HV power cable volume can generally be measured as “core length” and “external length” (km). The “core length” is the length of the insulated conductor (or core) within a cable. The “external length” is the cable distance if one measured the total length of the exterior of the cable. Thus, the core cable length is the external cable length multiplied by the number of cores inside the cable. In the submarine sector, AC cables are triple-core (i.e. each AC submarine cable contains three insulated conductors). Accordingly, the core cable length is three times the external length. By contrast, DC submarine cables are single-core (i.e. each DC submarine cable contains just one insulated conductor). Market share data provided here is core length.

(a) A number of strong players will remain in the market post-transaction

- (56) The Parties and their competitors' market shares are set out in Table 1 below. This shows that when considering the HV/EHV market from 33 kV and above, the Parties will have a combined market share of [20-30]% post-transaction (NKT: [10-20]%; ABBC [10-20]%). Prysmian and Nexans are both an equivalent size to the merged entity with market shares of [20-30]% and [20-30]% respectively.

**Table 1 - AC HV/EHV - EEA - Average 2011 – 2016 - XLPE + MI**

	≥33 kV		≥67 kV	
	Value (%)	Volume (%)	Value (%)	Volume (%)
<b>NKT</b>	[10-20]	[10-20]	[10-20]	[10-20]
<b>ABBC</b>	[10-20]	[10-20]	[10-20]	[20-30]
<b>Combined</b>	<b>[20-30]</b>	<b>[20-30]</b>	<b>[30-40]</b>	<b>[40-50]</b>
<b>Prysmian</b>	[30-40]	[20-30]	[40-50]	[20-30]
<b>Nexans</b>	[10-20]	[20-30]	[10-20]	[10-20]
<b>JDR</b>	[5-10]	[10-20]	[0-5]	[0-5]
<b>General Cable</b>	[5-10]	[5-10]	[0-5]	[0-5]
<b>LS Cables</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Hellenic</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Parker Scanrope</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Sumitomo</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Others</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Total</b>	100	100	100.0	100.0

Source: Parties' internal data – Annex 13 to the Form CO

- (57) As discussed above in paragraphs (11) - (16) above, some respondents to the market investigation consider that only cables above 66 kV should be considered as HV/EHV. When excluding power cables of 66 kV and below, the Parties have a significantly higher combined market share of [40-50]% (NKT: [10-20]%; ABBC: [20-30]%) (see Table 1 above). This is because ABBC is not active with regard to 66 kV cables, the total market size is smaller when these cables are excluded and a number of players (in particular JDR Cables) are not present at this higher voltage. Prysmian ([20-30]%) and Nexans ([10-20]%) however remain significant players on the market with Prysmian remaining the largest player on the market when considering value based market shares (Prysmian: [40-50]%).
- (58) During the period 2011 – 2016 there were no submarine AC HV/EHV projects using MI technology, XLPE technology was used exclusively.<sup>42</sup> These market shares are therefore the same when considering the XLPE only sub-segment.
- (59) Prysmian and Nexans are both significant players in the power cable industry. Prysmian is the market leader offering underground and submarine cables, both AC and DC, XLPE and MI, as well as in-house turnkey capabilities including

<sup>42</sup> Moreover, NKT is not active with regard to MI insulated cables and since [date] ABBC has principally focused on the manufacture of XLPE insulated cables [strategic decisions and business plans], there is therefore no overlap with regard to MI cables

system design, cable manufacture and installation.<sup>43</sup> The Notifying Party points to Prysmian's submarine cable production capacity being the largest on the market allowing it to bid for several projects at a time. Prysmian has also recently announced investments of EUR 40 million in its production facilities to upgrade the production capabilities. This in addition to EUR 90 million investments made in 2012-2014 to increase capacity at its plants in Italy and Finland.<sup>44</sup> Similarly to Prysmian, Nexans is one of the world's largest full range cable manufacturers, able to offer full turnkey solutions, and a full range of AC and DC, XLPE and MI power cables.<sup>45</sup> Nexans has in recent years increased its capacity at its submarine power cable manufacturing plant in Norway to meet growing demand, in particular for export cables.<sup>46</sup>

- (60) In addition to Prysmian and Nexans, there are a number of other existing players on the market that will continue to place a competitive constraint on the merged entity post-transaction (in addition to the non-EEA players that are discussed further below).
- (61) Hellenic Cables entered the market for HV/EHV cables in 2014.<sup>47</sup> For the period 2011 – 2016, it had a market share of [0-5]% for cables  $\geq 33$  kV and [0-5]% for  $\geq 67$  kV. The Parties' bidding data shows that Hellenic Cables has won [...] tenders for HV/EHV submarine cables during the period, for 150 kV and 155 kV power cables, the longest being 18km. Several respondents to the market investigation identified Hellenic Cables as a new entrant to the HV/EHV submarine cable market.<sup>48</sup>
- (62) General Cable has a market share of [5-10]% for AC HV/EHC power cables  $\geq 33$  kV and [0-5]% for  $\geq 67$  kV. The Parties' bidding data shows that General Cable, through subsidiary Norddeutsche Seekabelwerke GmbH (NSW), has won [...] tenders for AC HV/EHV 155 kV export cables during the period, the longest being 26 km.
- (63) JDR Cables is a strong player with regard to array cables for offshore wind farms<sup>49</sup> and has a market share of [10-20]% when considering the HV/EHV market as  $\geq 33$  kV. JDR however does not manufacture cables above 66 kV and therefore does not place a significant competitive constraint for the products where the Parties overlap (i.e. for cables  $>66$  kV where ABBC is active).
- (64) There do not appear to be barriers preventing customers from switching supplier from project to project. HV/EHV submarine cable projects are large and

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43 [http://www.prysmiangroup.com/en/corporate/about/company\\_profile/](http://www.prysmiangroup.com/en/corporate/about/company_profile/); non-confidential minutes of call with Prysmian dated 29 November 2016.

44 See for example Prysmian press release of 11 November 2014: <http://www.prysmiangroup.com/en/corporate/media/news/Strengthening-submarine-power-cables-production-capabilities/>

45 See non-confidential minutes of call with Nexans dated 21 November 2016.

46 <http://www.windpoweroffshore.com/article/1191056/nexans-confident-cable-capacity>

47 See Hellenic Cables response to question 28.1 of Q1 – questionnaire to competitors.

48 See: (i) responses from Energinet.dk and Van Oord Offshore to question 21.1 of Q2 – Questionnaire to customers which consider Hellenic Cables as a new entrant; (ii) response from 50Hertz Transmission GmbH which considers Hellenic Cables as a potential entrant into the market in response to question 23.1 of Q2 - Questionnaire to customers.

49 When considering sales of only array cables, JDR has a market share of [30-40]% compared to: Nexans – [20-30]%, Prysmian [10-20]% and NKT [0-5]%. See also non-confidential minutes of call with JDR Cables on 22 November 2016.

infrequent, with contracts awarded through a tender process, normally under EU procurement rules. Customers generally award a contract following the assessment of all bids according to a set of criteria. Whilst track record and reputation are important factors in whether a company is invited to participate in a tender,<sup>50</sup> there are no technical barriers to customers switching between suppliers from one project to the next. Also, price is the element which is the criteria given the heaviest weighting in the selection the final selection of a supplier.<sup>51</sup>

- (65) Finally, the majority of respondents to the market investigation that expressed an opinion do not expect prices to increase as a result of the Proposed Transaction<sup>52</sup> and a similar majority consider that the intensity of competition in the EEA with regard to AC HV/EHV submarine power cables would not decrease as a result of the Proposed Transaction.<sup>53</sup>
- (66) Given the existence of other strong competitors on the market, the ability of customers to switch between suppliers from one project to the next, and the market investigation indicating that the intensity of competition on the market will remain post-transaction, the Commission considers that a significant competitive constraint will remain on the merged entity post-transaction.

(b) Market entry by non-EEA players

- (67) As discussed in paragraph (9) above, until 2009 there was an anti-competitive agreement in place in the power cable industry. The cartel had two main configurations, one of which included Japanese and Korean producers refraining from competing for projects in the EEA, thus staying out of the European "home territory". Since this time, a number of Asian players, most importantly LS Cables (Korea), Sumitomo (Japan), and most recently ZTT (China), have successfully entered the market. Other Asian players are also seeking entry and are competing for contracts in the EEA. When considering the historic market shares, the role of the Asian players in the market appears to be minimal with single digit market shares (LS Cables: [0-5]% for  $\geq 33$  kV and [0-5]% for  $\geq 67$  kV; Sumitomo: [0-5]% for  $\geq 33$  kV and [0-5]% for  $\geq 67$  kV). The market investigation however indicates that these market shares under-represent the competitive role these players have in the EEA market today. In particular, both LS Cables and Sumitomo are frequently participating in tenders and have both recently won contracts for large complex HV/EHV submarine power cable projects in the EEA.
- (68) The Parties' bidding data indicates that LS Cables has won [...] projects for AC HV/EHV submarine power cables since 2011 (compared to NKT: [...]; ABBC:

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50 See responses to question 19 – Q1 – Questionnaire to competitors and responses to questions 15, 16 and 17 of Q2 – Questionnaire to customers.

51 See responses to question 18 in Q1 – Questionnaire to competitors; responses to question 16 in Q2 – Questionnaire to customers.

52 See responses to question 34 – Q1 – Questionnaire to competitors and question 31 – Q2 – Questionnaire to customers.

53 See responses to question 35 – Q1 – Questionnaire to competitors and question 32 – Q2 – Questionnaire to customers.

[...]).<sup>54</sup> Both ABBC and NKT participated in [quantity] of these tenders, and in [...] NKT participated. The largest of the projects that LS Cables has won was a 220 kV 78.6 km XLPE export cable in Belgium that was tendered for in 2012 and awarded in 2016. Subject to one exception, 220 kV is the highest voltage tendered for an AC export cable during the review period and with regard to length, is at the higher end of cables tendered for. DC HV/EHV submarine power cables are discussed further below but it is of note that LS Cables has also won a DC power cable project in 2013, a 24 km interconnector cable between Sweden and Denmark. [business secrets]. In addition to the actual contracts that LS Cables has won, the Parties' bidding data shows (to the best of the Parties' knowledge) that it has reached the "best and final offer" ("BAFO") stage of a large number ([...]) of tenders. This active participation in tenders and the successful track record of winning contracts clearly shows LS Cables' recent, and successful entry into the EEA market.<sup>55</sup>

- (69) Sumitomo has confirmed that it entered the EEA market in 2009 / 2010. The Parties' bidding data indicates that it has won [...] AC HV/EHV submarine power cable contract since 2011. This was for a 155 kV 13km XLPE export cable for the German TSO. DC HV/EHV submarine power cables are discussed further below but it is of note that Sumitomo has also won large DC power cable projects, most notably the 400 kV 260km NEMO interconnector link between the electricity grids of the United Kingdom and Belgium. [business secrets]. In terms of value of project, this was [business secrets]. When responding to questions regarding entry from non-EEA players, a number of respondents specifically referred to Sumitomo winning this contract as evidence of entry by non-EEA players.<sup>56</sup> Although Sumitomo has not yet won as many AC submarine projects as LS Cables, the data clearly shows that Sumitomo has successfully entered the European market for HV/EHV power cables.
- (70) The market investigation also indicated that a number of Chinese companies are entering, or are intending to enter, the EEA market in particular ZTT.<sup>57</sup> In late 2016 ZTT was awarded a turnkey project for an AC 155 kV, 24 km, XLPE submarine cable by the German/Dutch TSO TenneT.<sup>58</sup>
- (71) The market investigation clearly indicated that track record and reputation are very important with regard to whether a company is invited to participate in a tender,<sup>59</sup> given the durability of the products, the high value and the critical implications of cable failure.<sup>60</sup> Whilst there may have been a time-lag between

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<sup>54</sup> The Parties' bidding data submitted as Annex 12 to the Form CO covers projects in the EEA for interconnector cables, export cables for wind-farms and cables from shore cables to oil and gas platforms. The Parties submit that this is a subset of all submarine cables.

<sup>55</sup> See also news item "*LS Cable & System, first in Korea to enter European submarine cable market*", dated 5 February 2013 at [http://www.lscable.com/en/pr/news\\_view.asp?idx=2892](http://www.lscable.com/en/pr/news_view.asp?idx=2892)

<sup>56</sup> See for example responses to questions 22.1.1 and 22.2 of Q1 – questionnaire to competitors from Nexans, General Cable, Hellenic Cables, Prysmian and JDR Cables.

<sup>57</sup> See for example responses to question 20 of Q2 – Questionnaire to customers; responses to question 22 of Q1 – Questionnaire to competitors.

<sup>58</sup> See response by TenneT to question 20 of Q2 – Questionnaire to customers; see responses by ZTT to questions 23, 25, 28 of Q1 – Questionnaire to competitors; see response by Prysmian to question 22 of Q1 – Questionnaire to competitors; see also <https://www.linkedin.com/company/ztt-cable>.

<sup>59</sup> See responses to question 19 – Q1 – Questionnaire to competitors and question 17 – Q2 – Questionnaire to customers

<sup>60</sup> See non-confidential minutes of call with Statoil ASA dated 9 December 2016, and Nexans dated 21 November 2016.



the end of the cartel and Sumitomo's and LS Cables' successful entry into the European market, the fact that they have now been awarded large contracts should result in a more rapid expansion in the market in light of the increased track record and reputation that winning such contracts entails.<sup>61</sup> This is also the case for ZTT now that it is being awarded contracts in the EEA.

- (72) The results of the market investigation clearly indicate that customers consider these players as viable alternatives and that other cable suppliers consider them to be a significant competitive threat. First, a large number of customers have purchased from a cable supplier from outside the EEA in the last 5 years.<sup>62</sup> Second, the majority of respondents to the market investigation consider that non-EEA players compete on an equal footing with EEA players or are at least starting to win contracts for a range of different projects, including the biggest and most complex.<sup>63</sup> Third, a number of respondents specifically referred to increased competition from Asian players as a reason why the market will remain competitive post-transaction.<sup>64</sup>
- (73) Given the recent success of LS Cables, Sumitomo, and most recently ZTT in the HV/EHV submarine cable market, the Commission considers that despite their low historic market shares, these players will place a significant competitive constraint on the merged entity post-transaction.

(c) The Parties are not very close competitors

- (74) The Parties' analysis of its bidding data shows that of the [...] tenders covered both Parties participated in only [...] of them. From these [...] tenders, both NKT and ABBC were among the suppliers that were invited to submit a BAFO in only [...] tenders, and were the only suppliers to submit a BAFO on only [...] occasion. The Parties submit that this is due mostly due to the Parties differing ability to offer fully integrated turnkey solutions: ABBC has fully integrated turnkey capabilities, while NKT does not.
- (75) They note in particular that [...] of the [...] projects won by ABBC were turnkey projects reflecting ABBC's ability to provide turnkey solutions in-house. In contrast, NKT's participation in such turnkey projects depends on the availability and cooperation of third parties, and as a result [...] of the [...] projects won by NKT were turnkey projects and [...] were won by consortia involving NKT. In contrast, [...] of the [...] projects won by NKT were cable supply projects, while [...] of the total [...] projects won by ABBC were cable supply projects.

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61 See non-confidential minutes of call with Nexans dated 21 November 2016.

62 Half of the respondents indicate that they have purchased from a supplier outside the EEA, and one respondent indicating that it has not tendered for any HV/EHV solution in the last 5 years; see responses to question 12 of Q2 – Questionnaire to customers.

63 See responses to question 22 – Q1 – Questionnaire to competitors and question 20 – Q2 – Questionnaire to customers; See also non-confidential minutes of calls with Prysmian dated 29 November 2016 Nexans dated 21 November 2016.

64 See for example responses to questions 31 and 32 – Q2 – Questionnaire to customers from Energinet.dk and Van Oord Offshore; see non-confidential minutes of call with DONG dated 22 November 2016.

- (76) The market investigation reveals that overall, customers consider ABBC and NKT to have somewhat different competitive strengths with regard to AC HV/EHV submarine cables.<sup>65</sup>
- (77) Given the different strengths and capabilities of the Parties (in particular ABBC's full turnkey capabilities) as confirmed by the analysis of the bidding data and by customer and competitor perceptions in the market investigation, the Commission considers that the Parties are not the closest of competitors on the market for AC HV/EHV submarine cables.

#### 4.2.3. *Horizontal unilateral effects - DC HV/EHV submarine cables*

##### 4.2.3.1. Notifying Party's view

- (78) The Notifying Party submits that the Proposed Transaction will not have any anti-competitive unilateral effects with regard to DC HV/EHV power cables for the following reasons. First, NKT is not a competitive constraint in for DC HV/EHV power cables as it is currently not present on that market [business secret]. In fact, the very rationale for the Proposed Transaction is to enable NKT to develop an offering also in respect of DC cables. The Notifying Party submits that [business secret]. Accordingly, it submits that the test set out by the court in *E.ON*<sup>66</sup> that there must be “*real concrete possibilities*” for a new competitor to enter the market and compete with established undertakings, is not met.
- (79) Second, it argues that the numerous rival manufacturers are active on the market today for DC HV/EHV power cables would maintain sufficient competitive pressure after the Proposed Transaction [business secret].

##### 4.2.3.2. Commission's assessment

- (80) For the reasons set out below, the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market with respect to DC HV/EHV submarine cables in the EEA, regardless of any possible segmentation. First, whilst NKT's plans to enter the market [business secret]. Second, a number of strong competitors will remain in the market. Third, there has been significant market entry and expansion in recent years from Asian competitors as well as from power cable suppliers already active in the EEA market.

###### (a) NKT's efforts to enter the market

- (81) [business secret].
- (82) [business secret].
- (83) [business secret].
- (84) [business secret].
- (85) [business secret].

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<sup>65</sup> See responses to questions 27 and 28 of Q2 – Questionnaire to customers and responses to question 30 of Q1 – Questionnaire to competitors.

<sup>66</sup> Case T-360/09 *E.ON v. Commission* EU:T:2012:332, paragraphs 86-87.

(86) The market investigation has shown that neither customers nor competitors generally consider NKT as a potential entrant on the DC HV/EHV market. To the extent that potential entrants are identified by customers or competitors, Hellenic Cables, ZTT and other Asian suppliers are mentioned, with just two respondents noting that they understood NKT is possibly planning entry.<sup>67</sup> The Notifying Party further points out that several other power cable suppliers have recently completed or pursued DC development programmes, including silicon based solutions, such as General Cable, Stüdkabel, Furukawa (formerly Viscas), and ZTT.

(87) Given these factors, it can be considered that NKT's planned entry is not already exerting a significant constraining influence or a that there would be a significant likelihood that NKT would grow into an effective competitive force<sup>68</sup> in a timely manner, [business secret].

(b) A number of strong players remain in the market post-transaction

(88) The Parties and their competitors' market shares are set out below in Table 2

**Table 2 - DC HV/EHV - EEA - average 2011 – 2016 - XLPE + MI**

	≥33 kV		≥67 kV	
	Value (%)	Volume (%)	Value (%)	Volume (%)
<b>NKT</b>	0.0	0.0	0.0	0.0
<b>ABBC</b>	[10-20]	[20-30]	[10-20]	[20-30]
<b>Combined</b>	<b>[10-20]</b>	<b>[20-30]</b>	<b>[10-20]</b>	<b>[20-30]</b>
<b>Prysmian</b>	[50-60]	[40-50]	[50-60]	[40-50]
<b>Nexans</b>	[20-30]	[30-40]	[20-30]	[30-40]
<b>JDR</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>General Cable</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>LS Cables</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Hellenic</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Parker Scanrope</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Sumitomo</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Others</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Total</b>	100.0	100.0	100.0	100.0

Source: Parties' internal data – Annex 13 to the Form CO

67 See responses to question 26 of Q1 – Questionnaire to competitors; responses to question 24 of Q2 – Questionnaire to customers.

68 See paragraph 60 of the Horizontal Merger Guidelines.

**Table 3 - DC HV/EHV - EEA - average 2011 – 2016 - XLPE alone**

	≥33 kV		≥67 kV	
	Value (%)	Volume (%)	Value (%)	Volume (%)
<b>NKT</b>	0.0	0.0	0.0	0.0
<b>ABBC</b>	[20-30]	[20-30]	[20-30]	[20-30]
<b>Combined</b>	<b>[20-30]</b>	<b>[20-30]</b>	<b>[20-30]</b>	<b>[20-30]</b>
<b>Prysmian</b>	[60-70]	[40-50]	[60-70]	[40-50]
<b>Nexans</b>	[10-20]	[10-20]	[10-20]	[10-20]
<b>JDR</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>General Cable</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>LS Cables</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Hellenic</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Parker Scanrope</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Sumitomo</b>	[5-10]	[5-10]	[5-10]	[5-10]
<b>Others</b>	[0-5]	[0-5]	[0-5]	[0-5]
<b>Total</b>	100	100	100	100

Source: Parties' internal data – Annex 13 to the Form CO

- (89) Prysmian is the number one player on market irrespective of whether both insulation technologies are considered (XLPE and MI) or XLPE is considered alone, with a market share [...] of the Parties combined. It has a wide offering of DC export cables (XLPE, 250 kV-320 kV), interconnector cables (MI/XLPE/Paper Polypropylene Laminate MI, 200 kV-600 kV) and power from shore cables (XLPE, 80 kV-100 kV). Prysmian operates two manufacturing plants in Europe capable of manufacturing DC HV/EHV submarine cables.<sup>69</sup> Prysmian has recently sought to bring DC cables of the very highest voltages to the market, with a 525 kV XLPE DC submarine cable in 2015, upgraded to 600 kV in 2016, as well as a 600 kV fully recyclable HPTE extruded cable in 2016.<sup>70</sup>
- (90) Nexans is the second largest player when the XLPE and MI are considered together, and third when XLPE is considered alone. It has a wide offering of DC export cables (XLPE, up to 320 kV), interconnector cables (MI/XLPE, up to 525 kV) and power from shore cables (XLPE, up to 220 kV).<sup>71</sup>
- (91) There are also a number of other players that have not yet had any sales but have developed DC products and are participating in tenders, in particular General Cables and Hellenic Cables.
- (92) General Cable, through its German subsidiary NSW, is present in the DC segment for underground and submarine HV/EHV cables, including a 250 kV XLPE cable system.<sup>72</sup>

<sup>69</sup> See response by Prysmian to questions 1 and 2 of Q1 – Questionnaire to competitors.

<sup>70</sup> See non-confidential minutes of call with Prysmian dated 29 November 2016.

<sup>71</sup> See response by Nexans to questions 1 and 2 of Q1 – Questionnaire to competitors.

<sup>72</sup> See NSW brochure "NSW Submarine Power" at [http://www.nsw.de/Portals/0/Broschüren/NSW\\_Power-Broschüre\\_05-2014\\_Screen.pdf](http://www.nsw.de/Portals/0/Broschüren/NSW_Power-Broschüre_05-2014_Screen.pdf)

- (93) Hellenic Cables has also developed DC technologies,<sup>73</sup> and identified as a potential entrant in the market investigation on the DC HV/EHV submarine power cable market<sup>74</sup>.
- (94) The market investigation has furthermore shown that neither customers nor competitors consider, as a general rule, that the Proposed Transaction would raise prices for DC HV/EHV cables<sup>75</sup> or negatively affect the intensity of competition on the market.<sup>76</sup>
- (95) Given these other players that are already active in the market and the potential entry from a number of other players, the Commission considers that there are a sufficient number of other competitors which could maintain sufficient competitive pressure in the DC HV/EHV submarine power cable market post-transaction.

(c) Market entry by non-EEA players

- (96) As noted above in paragraphs (67) - (73), following the cartel activity identified by the Commission in AT.39610, there has been successful entry by a number of Japanese, Korean, and most recently Chinese players in the market, notably LS Cables, Sumitomo and ZTT. The entry of these players has not been limited to AC HV/EHV submarine power cables but also for DC HV/EHV submarine power cables.
- (97) As shown in Table 2, Sumitomo is the fourth largest player on the market, with a market share of [0-5]% and of [5-10]% when considering XLPE cables alone (both for  $\geq 33$  kV and  $\geq 67$  kV). Sumitomo offers both XLPE and MI cable systems. It has type-tested and pre-qualified XLPE cables up to 400 kV and type tested MI cables up to 500 kV. Sumitomo was awarded in 2015 the contract for the 140 km NEMO interconnector cable between the UK and Belgium<sup>77</sup>, i.e. a large and high value project (see paragraph (69) above) and the highest voltage submarine DC project using XLPE technology to date.<sup>78</sup> In 2014, Sumitomo was also awarded by Prysmian a subcontract for 115 km 500 kV DC HV/EHV interconnector cable between Italy and Montenegro.<sup>79</sup>
- (98) LS Cables has also won a contract for a DC interconnector cable between Sweden and Denmark (285 kV, 24 km) bidding [business secret].
- (99) The Chinese supplier ZTT is also pursuing entry in the EEA for DC HV/EHV projects, but has yet to secure any contracts.<sup>80</sup>

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73 See Hellenic Cable overview of its submarine HV/EHV cables at: <http://www.cablel.com/731/en/high-and-extra-high-voltage-acdc/>

74 See response by Hellenic Cables to question 1 of Q1 – Questionnaire to competitors; responses to question 26 of Q1 – Questionnaire to competitors and responses to question 24 of Q2 – Questionnaire to customers.

75 See responses to question 36 of Q1 – Questionnaire to competitors and question 33 of Q2 – Questionnaire to customers.

76 See responses to question 37 of Q1 – Questionnaire to competitors and question 34 of Q2 – Questionnaire to customers.

77 See response by Sumitomo to questions 1 and 2 of Q1 – Questionnaire to competitors.

78 See non-confidential minutes of call with Prysmian dated 29 November 2016.

79 See Sumitomo press release dated 17 March 2014 at: [http://global-sei.com/news/press/14/prs022\\_s.html](http://global-sei.com/news/press/14/prs022_s.html)

80 See response by ZTT to questions 1 and 26 of Q1 – Questionnaire to competitors.

- (100) Given this success of entry from Asian players, the Commission considers that there are various other competitors which could maintain sufficient competitive pressure in the DC HV/EHV submarine market post-transaction.

#### 4.2.4. *Horizontal co-ordinated effects*

- (101) A merger in a concentrated market may significantly impede effective competition due to horizontal coordinated effects if, through the creation or strengthening of a collective dominant position, it increases the likelihood that firms are able to coordinate their behaviour in this way and raise prices, even without entering into an agreement or resorting to a concerted practice within the meaning of Article 101 TFEU.<sup>81</sup> A merger may also make coordination easier, more stable or more effective for firms that were already coordinating before the merger, either by making the coordination more robust or by permitting firms to coordinate on even higher prices.<sup>82</sup>
- (102) As indicated above in paragraph (9), the Commission found in 2014 (Case AT.39610) that manufacturers of high voltage power cables, including the Parties, had participated in a cartel from 1999 to 2009 to allocate markets and customers.
- (103) The Notifying Party submits that the Transaction will not increase the likelihood that market participants would be able to co-ordinate their behaviour (or make any existing co-ordination easier). First, it submits that it is very difficult to reach or monitor a common understanding given limited market transparency resulting from project based nature of the market and the complex tender process. Second, it submits that competitors would have the ability and incentive to destabilise any such tacit agreement, given the projected lumpy growth for HV/EHV cables and the absence of barriers to geographic expansion. Third, it submits that customers would have the ability and incentive to destabilise any such agreement by awarding bids to players outside any posited oligopoly. Fourth, it submits that the Commission's findings in Case AT.39610 support the conclusion that the Proposed Transaction does not give rise to potential coordinated effects, because the explicit co-ordination in Case AT.39610 could not be sustained tacitly and because of market developments.
- (104) Based on the results of the market investigation, the Commission does not consider that the change brought about by the Proposed Transaction is likely to make coordination more likely or more stable in the industry.
- (105) First, the Proposed Transaction does not significantly increase symmetry in the market.<sup>83</sup> When considering the market for all HV/EHV power cables (submarine and underground, AC and DC i.e. all cables covered by the decision in AT.39610), the Proposed Transaction only slightly increases the degree of symmetry in the market as the merged entity is larger post-transaction and will become closer in size to Nexans. Prysmian, however, remains the market leader by a considerable margin meaning that the shares remain relatively

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81 Horizontal Merger Guidelines, paragraph 39.

82 Horizontal Merger Guidelines, paragraph 39.

83 The Commission notes in paragraph 48 of its Horizontal Merger Guidelines that firms may find it easier to reach a common understanding on the terms of coordination if they are relatively symmetric.

unsymmetrical amongst the top players (see Table 4). This is also the case when considering all AC HV/EHV power cables (see Table 5) and all DC HV/EHV power cables (see Table 6).

**Table 4 - Market Shares - HV/EHV power cables – EEA – Average 2013 - 2015**

	Value (%)	Volume (%)
NKT	[5-10]	[10-20]
ABBC	[10-20]	[5-10]
<b>Combined</b>	<b>[10-20]</b>	<b>[10-20]</b>
Prysmian	[40-50]	[30-40]
Nexans	[10-20]	[10-20]
Others	[10-20]	[60-70]
Total	100	100

*Source: Parties' internal data – Annex 13 to the Form CO*

**Table 5 - Market Shares – AC HV/EHV power cables – EEA – Average 2013 - 2015**

	Value (%)	Volume (%)
NKT	[10-20]	[10-20]
ABBC	[5-10]	[5-10]
<b>Combined</b>	<b>[10-20]</b>	<b>[10-20]</b>
Prysmian	[40-50]	[30-40]
Nexans	[10-20]	[10-20]
Others	[20-30]	[30-40]
Total	100	100

*Source: Parties' internal data – Annex 13 to the Form CO*

**Table 6 - Market Shares – DC HV/EHV power cables – EEA – Average 2013 - 2015**

	Value (%)	Volume (%)
NKT	0	0
ABBC	[10-20]	[20-30]
<b>Combined</b>	<b>[10-20]</b>	<b>[20-30]</b>
Prysmian	[40-50]	[30-40]
Nexans	[20-30]	[30-40]
Others	[5-10]	[5-10]
Total	100	100

*Source: Parties' internal data – Annex 13 to the Form CO*

- (106) Second, the Asian players who had under the previous cartel agreement colluded to stay out of the European market<sup>84</sup> have now effectively entered the European market.<sup>85</sup> This is a significant change compared to the market conditions that prevailed during the infringement period in Case AT.39610.<sup>86</sup> Whilst the

84 The Decision stated that its addressees allocated projects according to territories and customers (through both the 'A/R cartel configuration' ("ARCC") and the 'European cartel configuration' ("ECC")). The Commission found that, under the ARCC, Japanese and Korean producers refrained from competing for projects in the EEA, while the ECC involved the allocation of territories and customers by the European producers for projects within the EEA.

85 See paragraph 57 of the Horizontal Merger Guidelines.

86 See paragraph 43 of the Horizontal Merger Guidelines.

historical market share of these players is limited, as detailed above with regard to submarine cables in paragraphs (67) - (73) and (96) - (98), players such as Sumitomo and LS Cables that were fined for their involvement in the cartel are now participating in tenders and winning contracts for even the large and most complex projects. Such entry by Asian players can also be seen with regard to underground power cables.<sup>87</sup> A number of customers responding to the market investigation comment specifically that they have seen increased competition in the market following the end date of the cartel in 2009.<sup>88</sup>

- (107) Third, the Commission's investigation has confirmed that there a number of features of the HV/EHV market which could make it more difficult to reach a coordinated outcome. In particular, there is volatile demand,<sup>89</sup> complex project based sales and heterogeneous products.<sup>90</sup> Whilst it does not appear that these conditions have changed appreciably since the time of the infringement, the previous cartel agreement was underpinned by periodical meetings and contacts by e-mail, telephone or fax;<sup>91</sup> without such monitoring and enforcement mechanisms it would be more difficult to reach or sustain a collusive outcome given the characteristics of the market. The Proposed Transaction does not diminish these market characteristics which make coordination difficult.
- (108) Fourth, the Commission's market investigation has confirmed that there is limited transparency in the market. Contracts are awarded usually through a tender process, often under EU procurement rules, or through confidential bilateral negotiations.<sup>92</sup> Via either method, the transactions are negotiated confidentially between the supplier and purchaser. All market participants responding to the market test have confirmed that during tenders, competing bidders do not have visibility regarding the other bidders and the terms of their bids.<sup>93</sup> Given this limited transparency, it could be difficult for any co-ordinated outcome to be monitored effectively and therefore sustained.<sup>94</sup> The Proposed Transaction will not reduce this opacity in the market.
- (109) Fifth, the market investigation has not indicated that either of the Parties is viewed as a maverick player, the removal of which as a competitive player

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87 See for example non-confidential minutes of call with Energinet.dk dated 30 November 2016; CRU Wire and Cable News dated 10 February 2015: <http://wireandcablenews.crugroup.com/wireandcablenews/news/free/2015/02/3234322/>; LS Cables announcement of 20 April 2011: [http://www.lscns.com/en/pr/news\\_view.asp?id=2700](http://www.lscns.com/en/pr/news_view.asp?id=2700); EINA Magazine No 20 of Nov. 2013: [http://eina.ws/no20/EINA\\_No20p49-50.pdf](http://eina.ws/no20/EINA_No20p49-50.pdf); Transmission & Distribution World Magazine, 14 August 2009: <http://tdworld.com/projects-progress/tennet-concludes-master-agreement-korean-cable-company>

88 See responses to question 26 of Q2 – Questionnaire to customers.

89 See paragraph 53 of the Horizontal Merger Guidelines.

90 See paragraph 45 of the Horizontal Merger Guidelines.

91 Summary of Commission Decision of 2 April 2014 relating to a proceeding under Article 101 of the TFEU and Article 53 of the EEA Agreement (Case AT.39610 — *Power Cables*), paragraphs 7 – 9.

92 See for example non-confidential minutes of calls with Nexans dated 21 November 2016, Prysmian dated 29 November 2016, Statoil ASA dated 9 December 2016, Energinet.dk dated 30 November 2016, and Svenska kraftnät dated 25 November 2016.

93 See responses to question 16 of Q1 – Questionnaire to competitors; responses to question 14 of Q2 – questionnaire to customers.

94 See paragraph 50 of the Horizontal Merger Guidelines.



would increase the likelihood or significance of coordinated effects in other ways.<sup>95</sup>

## **5. CONCLUSION**

- (110) For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation and Article 57 of the EEA Agreement.

*For the Commission*

*(Signed)*

*Margrethe VESTAGER*  
*Member of the Commission*

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<sup>95</sup> See paragraph 42 of the Horizontal Merger Guidelines.