



EUROPEAN COMMISSION
DG Competition

***Case M.9582 - SIEMENS
GAMESA RENEWABLE
ENERGY / SENVION
(EUROPEAN ONSHORE
WIND TURBINE
SERVICE) / RIA
BLADES***

Only the English text is available and authentic.

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

Article 6(1)(b) NON-OPPOSITION
Date: 20/12/2019

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EUROPEAN COMMISSION

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PUBLIC VERSION

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 Where possible the information omitted has been replaced by ranges of figures or a general description.

To the notifying party

Subject: **Case M.9582 – SIEMENS GAMESA RENEWABLE ENERGY /
SENVION (EUROPEAN ONSHORE WIND TURBINE SERVICE) /
RIA BLADES**
**Commission decision pursuant to Article 6(1)(b) of Council Regulation
No 139/2004¹ and Article 57 of the Agreement on the European Economic
Area²**

Dear Sir or Madam,

- (1) On 31 October 2019, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation. This notification concerns the following undertakings:
- Siemens Gamesa Renewable Energy, S.A. (“SGRE” or the “Notifying Party”, Spain), controlled by Siemens AG (“Siemens”, Germany), and
 - Senvion GmbH’s (“Senvion”, Germany) European onshore servicing business for wind farms including all related assets; all of Senvion’s IP as well as Senvion’s wind turbine blades manufacturing facilities in Vagos (Portugal) and

¹ 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.

² OJ L 1, 3.1.1994, p. 3 (the “EEA Agreement”).

Oliveira de Frades (Portugal), owned and operated by Ria Blades S.A., a subsidiary of Senvion, (together “the Senvion Target Business”).

- (2) SGRE acquires within the meaning of Article 3(1)(b) of the Merger Regulation sole control of the Senvion Target Business (the “proposed Transaction” or “Transaction”).³ SGRE and Senvion together are hereinafter referred to as the “Parties” or the “Parties to the proposed Transaction.” In order to facilitate the transfer of the Target Business, Senvion implemented a carve-out separating the Target Business from the remaining business of Senvion Group. As a result, and with the exception of Ria Blades, the Target Business was separated to and operated by Senvion Deutschland GmbH (“Senvion Deutschland”). Thus, in legal terms, the Transaction involves the acquisition of Ria Blades and Senvion Deutschland by SGRE.

1. THE PARTIES

- (3) SGRE is headquartered in Zamudio (Spain), listed on the Madrid, Barcelona, Valencia and Bilbao Stock Exchanges and member of the Ibex 35 index. SGRE is an engineering company in the renewable energy industry that manufactures wind turbines and offers onshore and offshore wind turbine services, such as installation and maintenance of wind turbines (both for its own fleet and wind turbines manufactured by other turbine manufacturers). It was created in April 2017 by the merger of Gamesa with the Wind Power Business of Siemens.⁴ SGRE’s controlling shareholder is Siemens.
- (4) Senvion is a wind turbine manufacturer headquartered in Germany. It develops, manufactures and sells onshore and offshore wind turbines and offers related services, such as the construction of a wind turbine’s foundation and maintenance for its wind turbine fleet.
- (5) Senvion is facing financial difficulties and Senvion and Senvion Deutschland filed for insolvency with the local court – insolvency court – of Hamburg, Germany on 9 April 2019. On the same day, the insolvency court of Hamburg ordered preliminary self-administration and the appointment of a preliminary custodian with regard to the assets of each of Senvion and Senvion Deutschland. On 1 July 2019, insolvency proceedings were opened by the competent insolvency court and self-administration was ordered for Senvion and Senvion Deutschland. On 11 September 2019, insolvency plans were adopted for Senvion and Senvion Deutschland, providing, inter alia, for the carve out of the European onshore wind turbine service business from Senvion and a transfer of the carved-out business to Senvion Deutschland.
- (6) At the State of Play meeting within the meaning of paragraph 33a) of DG Competition’s Best Practices,⁵ the Commission informed the Parties that it could not be excluded that the proposed transaction, as originally notified, might raise serious doubts as to its compatibility with the internal market in the market for operation and maintenance services for offshore wind turbines in the EEA. The Notifying Party

³ Publication in the Official Journal of the European Union No C 382, 11.11.2019, p. 28.

⁴ This transaction was authorised by the Commission on 13 March 2017, Case COMP/M.8134 – Siemens/Gamesa.

⁵ DG COMPETITION Best Practices on the conduct of EC merger control proceedings <https://ec.europa.eu/competition/mergers/legislation/proceedings.pdf>

subsequently submitted, and the Commission market tested, commitments on 29 November 2019 designed to eliminate the potential serious doubts identified by the Commission in accordance with Article 6(2) of the Merger Regulation. After further investigation, and for the reasons stated in Section 5.3.1.2, the Commission considers that no serious doubts arise on the market for the operation and maintenance services for offshore wind turbines in the EEA. The commitments submitted by the Notifying Party are therefore not necessary and the Transaction can be cleared unconditionally.

2. THE OPERATION

- (7) The proposed Transaction is accomplished by way of a hive-down and asset deals, followed by the purchase of shares. Specifically, as indicated in paragraph (2) above, the assets relevant to the onshore servicing business were transferred from Senvion to Senvion Deutschland, the new entity created for the proposed Transaction. Following this carve-out, the Parties entered into binding transaction agreements on 21 October 2019 by which SGRE would acquire the shares of Senvion Deutschland and Ria Blades S.A. The consummation of the Transaction is subject to merger clearance by the Commission.
- (8) The Senvion Target Business comprises the following assets:
- i.) A large part of Senvion's European onshore wind farm servicing business in the EEA. Servicing refers to the maintenance works related to wind farms with the aim of keeping the wind farms operational. The Senvion Target Business includes approximately 81% of Senvion's onshore wind turbine service contracts in the EEA, i.e. SGRE is not acquiring all of Senvion's EEA onshore servicing business. The remaining 19% of EEA onshore service contracts, the EEA offshore servicing contracts and all servicing contracts outside the EEA are outside of the scope of the proposed Transaction.
 - ii.) All of Senvion's IP. The IP acquired relates to the onshore OMS business, to the offshore OMS business, but also to other businesses of Senvion, most notably to the technology related to the wind turbines that Senvion manufactured prior to insolvency.
 - iii.) Limited volumes of inventory including spare parts and some tools and equipment related to Senvion's offshore services business.
 - iv.) Ria Blades S.A, which comprises Senvion's wind turbine blades manufacturing facilities in Vagos (Portugal) and Oliveira de Frades (Portugal), currently operated by Ria Blades S.A. The Transaction involves the acquisition of these two manufacturing facilities only. The rest of Senvion's blade manufacturing business and all the rest of Senvion's manufacturing business (most notably the manufacturing of wind turbines) are outside the scope of the Transaction.

3. THE CONCENTRATION

- (9) As a result of the proposed Transaction SGRE will acquire sole control within the meaning of Article 3(1)(b) the Merger Regulation over the Senvion Target Business.

4. EU DIMENSION

- (10) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 2 500 million⁶ (SGRE: EUR [...] million; Target Business: EUR [...] million)⁷ and the aggregate EU-wide turnover of each of them is more than EUR 100 million (SGRE: EUR [...] million; Target Business: EUR [...] million). In each of Germany, France and the UK their combined aggregate turnover is more than EUR 100 million, and each of their aggregate turnover is more than EUR 25 million (Germany – SGRE: EUR [...] million, Target Business: EUR [...]million; France – SGRE: EUR [...] million, Target Business: EUR [...] million; the UK – SGRE: EUR [...] million, Target Business: EUR [...] million), but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension.

5. RELEVANT MARKETS AND COMPETITIVE ASSESSMENT

- (11) The proposed Transaction can plausibly affect four activities.
- (12) First, both Parties are active in onshore wind turbine servicing (horizontal relationship). The proposed Transaction will primarily affect this activity.
- (13) Second, as SGRE acquires all of Senvion's IP, including IP related to offshore wind turbine servicing, as well as inventory including spare parts, some tools and equipment, the proposed Transaction can potentially have an effect on offshore wind turbine servicing, where both Parties are active (horizontal relationship).
- (14) Third, as SGRE acquires all of Senvion's IP, including IP related to wind turbine manufacturing, the proposed Transaction can potentially have an effect on (onshore and offshore) wind turbine manufacturing , where both Parties are active (horizontal relationship).
- (15) Fourth, Siemens manufacturers and sells wind turbine gearboxes for wind turbines under its Winergy brand. Gearboxes are an input used in (onshore and offshore) wind turbine servicing, notably if gearbox spare parts or the entire gearbox needs to be replaced. In addition gearboxes are also used in (onshore and offshore) wind turbine manufacturing (vertical relationships).
- (16) Of these activities, the Transaction gives rise to affected markets in onshore wind turbine services (horizontally affected market) and in the production and sale of gearboxes (vertically affected market). Although not an affected market, the Commission also examined the effect of the Transaction on the offshore servicing market as some market participants expressed concerns with regard to the effect of

⁶ Turnover calculated in accordance with Article 5 of the Merger Regulation and the Commission Consolidated Jurisdictional Notice (OJ C 95, 16.4.2008, p. 1).

⁷ All turnover figures are taken from Form CO, Section 4.

the Transaction in this domain. The Commission also assessed whether the acquisition of Senvion's IP is likely to have any competition impact on the markets for the manufacturing and supply of onshore and offshore wind turbines.

- (17) Prior to analysing the relevant markets and the competitive effect of the Transaction, the Commission will, in the next section of this decision, provide a brief overview of the way in which the wind servicing industry works.

5.1. Introduction

- (18) For a proper introduction of the wind turbine service industry, it is necessary to first describe the wider context, i.e. the wind turbine industry.

5.1.1. The wind turbine industry

- (19) Wind is used to produce electricity using the kinetic energy created by air in motion. Wind first hits a turbine's blades, causing them to rotate and turn the turbine connected to them. This changes the kinetic energy to rotational energy, by moving a shaft which is connected to a generator, and thereby producing electrical energy through electromagnetism.
- (20) Wind power is one of the fastest-growing renewable energy technologies. Global installed wind-generation capacity onshore and offshore has increased by a factor of almost 75 in the past two decades, jumping from 7.5 gigawatts (GW) in 1997 to some 564 GW by 2018, according to the latest data by the International Renewable Energy Agency.⁸ Worldwide production of wind electricity doubled between 2009 and 2013, and in 2016 wind energy accounted for 16% of the electricity generated by renewables.⁹ One reason for the strong growth is that the cost of electricity generated by wind energy has been falling.¹⁰
- (21) Total installed capacity of onshore and offshore wind turbines also increased in the EU, from around 80 GW in 2010 to more than 160 GW in 2018.¹¹ In the same period total installed capacity of onshore wind turbines increased from around 80 GW to 157 GW.¹²
- (22) Annual installation of new capacities in the EU also increased between 2008 and 2017 from 8.53 GW to 17.1 GW.¹³ However, from 2017 to 2018, for the first time since 2008, annual installed new capacity decreased by 32%, from 17.2 GW to 11.7 GW.¹⁴ Broadly the same trend applies to annual onshore installations of new capacities, which increased from 8.5 GW to 13.9 GW in 2007, although some years registered a slight decrease. Between 2017 and 2018, annual onshore installations of new capacity decreased by more than 35% from 13.9 GW to 9 GW. 2018 marked the lowest level of annual onshore installations of new capacity since 2008. Offshore

⁸ <https://www.irena.org/wind>

⁹ <https://www.irena.org/wind>

¹⁰ <https://www.irena.org/wind>

¹¹ <https://www.irena.org/wind>

¹² <https://www.irena.org/wind>

¹³ <https://windeurope.org/wp-content/uploads/files/about-wind/statistics/WindEurope-Annual-Statistics-2018.pdf>

¹⁴ <https://windeurope.org/wp-content/uploads/files/about-wind/statistics/WindEurope-Annual-Statistics-2018.pdf>

annual installations had a slightly different path, increasing from a very low level of 0.3 GW in 2008 to 3.2 GW in 2017. From the 2017 peak they also decreased but only slightly to 2.7 GW. Given that the decrease in annual offshore installations of new capacity was much less sharp than in onshore installations and that offshore annual installations are still lower than onshore installations, offshore wind turbines seem to have better growth potential in the near term.

- (23) The amount of power that can be harvested from wind depends on the size of the turbine and the length of its blades. Wind turbine capacity has increased over time. In 1985, typical turbines had a rated capacity of 0.05 megawatts (MW) and a rotor diameter of 15 meters. Today's new wind power projects have turbine capacities of 2 to 6 MW onshore and up to 10 MW offshore. Commercially available wind turbines have reached rotor diameters of up to 170 meters onshore and more than 190 meters offshore respectively.¹⁵
- (24) Wind turbine Original Equipment Manufacturers ("OEMs") generally provide customers with a final product consisting of the assembled tower, nacelle (including the generator) and the blades. As part of so called "turn-key" offerings, OEMs occasionally also organise and oversee the contracting for the structural foundations of the turbine (i.e. below the tower) and the cables to connect the wind turbine to the electricity network.¹⁶ A single wind turbine OEM will usually supply all the wind turbines for use on a particular wind farm, or at least for a major tranche of a wind farm, reflecting the economies of scale achieved in the construction of wind turbines.¹⁷
- (25) Customers include utility companies, independent power producers, financial investors and (in the case of onshore turbines) communities (municipalities) or small landowners like farmers. In some cases wind turbines are not sold to these end customers but to a project developer that selects the wind turbine model, builds the wind farm and then sells the wind farm on to the end customers.¹⁸ Wind turbine sales usually happen through tenders.¹⁹

5.1.2. Servicing of onshore wind turbines

- (26) In the industry the servicing of wind turbines is referred to as operation, maintenance and services ("OMS") of wind farms. This decision uses the terms "OMS", "OMS servicing" or simply "servicing" interchangeably.

5.1.2.1. Function of OMS services

- (27) OMS supports the ongoing operation of the turbines. Turbine OMS activities start when the wind farm construction works are completed and aim to ensure the ongoing operational integrity of the wind turbines and associated balance of plant, including planned maintenance and unplanned service in response to faults, during the lifetime of the wind turbine (typically around 20-25 years).²⁰

¹⁵ <https://www.irena.org/wind>

¹⁶ Form CO, paragraph 72.

¹⁷ Form CO, paragraph 74.

¹⁸ Form CO, paragraph 73.

¹⁹ Form CO, paragraph 75.

²⁰ Form CO, paragraph 77.

- (28) OMS plays an important role in maximising the financial returns from the investment in the wind farm. These financial returns depend not only on the cost of wind turbines but also on the cost of servicing and, most importantly from this perspective, on the availability of wind turbines. Availability is defined as the percentage of time the wind turbine is ready to produce power if the wind speed is within the operational range of the turbine.²¹ In other words, if the turbine is not serviced properly or fails otherwise and is not repaired as fast as possible, the turbine's availability decreases, which in turn decreases the revenues generated from electricity sales.²² Wind turbine owners typically aim to achieve availability of around 98%.²³ Consequently OMS contracts often feature an availability guarantee, which obliges the OMS provider to maintain a stipulated level of availability (in % of time). If the OMS provider fails to comply with the availability target, it has to indemnify the turbine owner.

5.1.2.2. OMS modules

- (29) While there is no industry-wide accepted definition of OMS, industry reports typically distinguish between the following categories, or modules, of wind turbine OMS activities:²⁴
- i.) Scheduled maintenance: Scheduled maintenance includes general preventative check-up and maintenance of the wind turbines carried out on a regular schedule basis.
 - ii.) Minor correctives: Minor correctives encompass repairs or replacements in relation to minor issues or parts of the turbine.
 - iii.) Technical support: Technical support relates to the general availability of technical expertise in order to provide support in case of issues arising in relation to the wind turbine.
 - iv.) Spares and distribution: Spares and distribution encompasses the supply of spare parts for the wind turbines.
 - v.) Major correctives: Major correctives encompass repairs or replacements in relation to more significant parts or issues.
 - vi.) Component upgrades: Component upgrades include upgrades both in relation to hardware and software installed in the wind turbine.
- (30) The Commission's market investigation revealed that there are additional activities within the broad category of OMS:
- i.) Digital services: In the context of OMS, digital services refer to value added service such as turbine data analysis, tools to track turbine availability and identify underperforming turbines, diagnostic support, predictive maintenance analytics, configuration, condition monitoring, weather and

²¹ Form CO, paragraph 79.

²² See, for example Vestas's response to Q1 Questionnaire to competitors, question 47.1

²³ Form CO, paragraph 79.

²⁴ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, p. 7.

power forecasting, cyber security, digital management of spare part inventories, online platforms for spare parts etc.²⁵

- ii.) High voltage operations: High voltage operations refer to maintenance works related to switches, transformers i.e. the high voltage electricity transmission systems on wind farms.²⁶
 - iii.) Compliance: Compliance involves the facilitation of compliance with applicable regulation, such as performing test procedures to ensure grid safety or health & safety measures, facilitation of statutory inspections.²⁷
- (31) Other services mentioned in the market investigation included repowering and life extension. Repowering refers to the installation of a new wind turbine on a wind farm to replace an older wind turbine at the end of its lifecycle. Life extension refers to extending the useful lifetime of the wind turbine at the end of its lifecycle.²⁸ However, these operations seem to fall outside the scope of the maintenance works during the useful lifetime of a wind turbine and are more akin to the installation of new capacity. Consequently, the Commission does not consider them as activities falling within the scope of OMS.

5.1.2.3. Customers and suppliers

- (32) Customers of OMS are the owners of wind turbines and are referred to as Asset Owners. As described in paragraph (25), they include utility companies, independent power producers, financial investors and (in the case of onshore turbines) communities (municipalities) or small landowners like farmers.
- (33) OMS suppliers include OEMs, Independent Service Providers (“ISPs”) and Affiliated Service providers (“ASPs”).
- (34) OEMs are the manufacturers of the turbines serviced. OEMs active in the EEA are SGRE, Vestas, Enercon, Nordex, GE and, up to now, Senvion.
- (35) ISPs are service providers specialised in OMS without a wind turbine manufacturing business (i.e. they are “independent” from the OEM of the turbine).²⁹ There are more than 30 ISPs active in the EEA.³⁰
- (36) ASPs can be of two kinds: (i) an OEM performing OMS servicing on the turbine of another OEM³¹ and (ii) and Asset Owner that developed OMS capabilities in-house and, after having done so, offers OMS to third parties, i.e. other Asset Owners.³²

²⁵ Form Co, paragraph 25 and Notifying Party’s response to RFI 1, paragraph 21.3.

²⁶ Q2 Questionnaire to customers, question 20, Q1 Questionnaire to competitors, question 21.1.1.

²⁷ Q2 Questionnaire to customers, question 20, Q1 Questionnaire to competitors, question 21.1.1.

²⁸ GE’s response to Q1 Questionnaire to competitors, question 21.1.1. Minutes of phone calls with GE on 15 November 2019.

²⁹ Form CO, paragraph 78.

³⁰ Form CO, paragraph 263.

³¹ In this decision the term OEM designates exclusively a turbine manufacturer that provides OMS on its own turbines and excludes the activity of the same OEM that involves providing OMS on the turbine of another OEM. OEMs are rather referred to as ASPs when they provide OMS on turbines manufactured by other OEMs. . When the context calls for a distinction between ASPs that are OEMs and ASPs that are Asset Owners, the terms “OEM ASP” and “Asset Owner ASP” are employed.

³² Form CO, paragraph 96.

Asset Owner ASPs are typically big utilities, such as EDF, that manage a large fleet of turbines. Their scale and large fleet allowed them to develop OMS capabilities and offer them on the market. ASPs are “affiliated” because these OMS providers are typically affiliated with a large organisation such as an OEM or a utility. The major OEM ASPs active in the EEA are SGRE, Vestas GE, and recently Nordex. The limited number of Asset Owner ASPs include E.ON., EDF and EnBW.³³

- (37) Some Asset Owners, typically again utilities, self-service their turbines without, however, offering OMS to third parties (i.e. without becoming an ASP). As Asset Owners who perform OMS in-house are typically utilities, the share of self-service in total OMS depends on the composition of Asset Owners in a particular geography. For example, in Germany the share of self-service was a mere 2% of all onshore OMS in 2017 due to the high prevalence of private and community Asset Owners.³⁴ By contrast, in Spain and the United Kingdom the share of self-service was 28% and 21% respectively.³⁵ By 2027 this share is forecast to grow modestly in Germany (from 2% to 4%), grow more significantly in the United Kingdom (from 21% to 30%) and to decline in Spain (from 28% to 5%).³⁶

5.1.2.4. Scope and frequency of OMS contracts and procurement methods

- (38) The scope of awarded OMS contracts can vary and can range from preventive maintenance (regular checks) to a complete full service package that includes all possible OMS functions.³⁷ Various combinations of different OMS services are possible, depending on customer preferences.³⁸ A significant part of the variance in preferences can be explained by the type of customer.³⁹ Financial investors, which do not have the expertise to take OMS in-house and prefer predictability of costs, tend to opt for full-scope contracts. Utilities that developed some service capabilities are more likely to opt for a modular approach and request only certain services. As they often manage a large fleet, they can also “mix and match” to optimise costs, for example by requesting certain OMS modules from ISPs and others from OEMs. Cost sensitive small Asset Owners (small land owners and communities), although lacking in-house capabilities, may opt for a less than full scope contract in exchange for lower cost service. Other than preferences across and within customer groups, the scope also depends on whether or not the OMS contract is signed at the same time and together with the turbine sale. This is discussed in Section 5.1.2.5 below.
- (39) The number of OMS contracts awarded in a year in the EEA is approximately 500 - 700 per year.⁴⁰
- (40) Customers procure OMS services via tender processes or through a less formalised process by requesting a request for proposal from one or a handful of potential OMS providers.⁴¹

³³ Form CO, paragraph 267.

³⁴ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, p.59-60.

³⁵ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, pp.66,73.

³⁶ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, pp.59-60, 66 and 73.

³⁷ Minutes of phone calls with Enercon and Nordex on 8 November 2019 and 15 November respectively.

³⁸ Form CO, paragraph 94.

³⁹ Form CO, paragraph 84.

⁴⁰ Form CO, paragraph 173.

5.1.2.5. Standalone and bundled OMS

- (41) OMS services can be sold and provided on a standalone basis or together with the sale of the turbine, i.e. as part of a bundle. In the case of standalone OMS contracts, ISPs and ASPs can compete for the OMS and the different suppliers compete only in OMS. (As such standalone OMS is addressable by ISPs and ASPs, it is also referred to as addressable OMS or addressable segment). In the case of bundles, the competition for OMS is an integral part of the competition for supplying wind turbines and it is not addressable by ISPs and ASPs as they cannot supply turbines.⁴² This OMS is provided by the OEM on a captive basis and as a corollary to the sale of the turbine.
- (42) The two market conventions or practices that can result in the OMS being bundled and hence non-addressable are long-term service packages (LTPs) and warranty. These will be discussed in Sections (A) and (B) respectively. In addition, the relative share of standalone and bundled OMS is influenced by additional factors such as price developments and contract durations over time. These will be discussed in Section (C). Section (D) provides a summary.

(A) LTPs

- (43) OMS services are first offered at the point of the sale of the wind turbine and together with the sale. At this point an LTP is usually signed between the customer and the OEM.⁴³ LTPs are full scope service contracts under which the OEM performs all necessary OMS modules for a fixed annual fee.⁴⁴ It also includes an availability guarantee.
- (44) The reason for these arrangements is that customers typically estimate all the costs and revenues from a wind farm project, including the cost of the turbine, the cost of OMS, the guaranteed availability, wind conditions, electricity tariff plan, etc. and will choose the OEM that provides the lowest lifetime costs, which is influenced both by the cost of the turbine and the cost of the OMS.⁴⁵ In this context a full-scope service contract with a fixed annual fee and an availability guarantee offers long-term predictability of costs and transfers the operational risk from the Asset Owner to the OMS provider, in this case the OEM.⁴⁶ If the wind farm project is realised through external financing, the bank or other financial institution providing the necessary capital typically requires the investor to enter into an LTP.⁴⁷
- (45) In principle, the signing of the LTP need not mean that the OMS is part of a bundle. In theory, the customer is free to choose one OEM for the wind turbine and another OMS provider for the LTP. While the Notifying Party mentions such an example⁴⁸ it

⁴¹ Notifying Party's response to RFI 1, paragraph 8.1.

⁴² An OEM ASP can supply turbines in general but when it acts as an ASP it appears on the market as a standalone OMS provider trying to provide OMS on another OEM's turbine after that OEM won the turbine tender (and the bundled OMS).

⁴³ Q1 Questionnaire to competitors, questions 12 and 12.1.

⁴⁴ Q1 Questionnaire to competitors, questions 12 and 12.1.

⁴⁵ Minutes of a phone call with Vestas on 12 November 2019.

⁴⁶ See GE's response to Q1 Questionnaire to competitors, questions 12 and 12.1.

⁴⁷ GE's response to Q1 Questionnaire to competitors, questions 12 and 12.1, Enercon's response to Q1 Questionnaire to competitors, question 7, Vestas's response to Q1 Questionnaire to competitors, question 7.

⁴⁸ Form CO, paragraph 111.

recognises that this does not occur frequently.⁴⁹ Further, LTPs are almost exclusively signed at the point of the sale of the wind turbine and very rarely outside this context.⁵⁰ Thus *de facto* OMS provided under an LTP is bundled with the sale of the wind turbines and not addressable on a standalone basis.

- (46) The Notifying Party submitted that the duration of an LTP is typically between 10 to 20 years.⁵¹ Enercon and Vestas explained that the typical duration is 20 years⁵² and 15-20 years⁵³ respectively. Exceptionally, the contract term can be as long as 25 or even 30 years.⁵⁴ Several OEMs noted a trend that the duration of LTPs is increasing,⁵⁵ which may imply that these exceptional durations will become more common in the future.
- (47) However, while it is common to sign an LTP at the point of a sale, for two reasons this does not mean that standalone OMS is a marginal phenomenon or that it is excluded for 15-30 years for a given turbine.
- (48) First, a small share of customers does not opt for an LTP or opts for an LTP with a relatively short term.⁵⁶ For example, approximately 10 % of SGRE and Senvion contracts signed at the time of the turbine sale is not an LTP but rather a contract with a more limited scope and/or a shorter duration.⁵⁷
- (49) Second, LTPs contain exit clauses, referred to as “termination for convenience” clauses. These clauses allow customers to renegotiate the price of OMS, re-tender OMS servicing and switch supplier. The periodicity of the exit clauses varies but by far the most frequently mentioned interval in the market investigation was 5 years.⁵⁸ The Notifying Party was also of the view that LTPs can be terminated for convenience with a periodicity of 5 years.⁵⁹ By way of exception, 2 or 3 years were also mentioned and Enercon explained that in its own contracts customers can terminate for convenience at any point in time after the first five years.⁶⁰ If the customer triggers the exit clause, then competition for standalone OMS opens up, where ISPs and ASPs can compete with the OEM of the turbine.
- (50) While the opportunity to exit the LTP at certain periods and tender out OMS exists, this does not necessarily mean that all customers do so. Indeed, the commercial logic that an LTP provides long-term predictability of costs and relieves the Asset Owner of the operational risks can easily prompt customers to stay with the OEM for a long period of time and not tender out OMS separately. The entity that provides the project finance can also require that customers not opt out of the LTP.

⁴⁹ Form CO, paragraph 111.

⁵⁰ Q1 Questionnaire to competitors, question 12.1.

⁵¹ Form CO, paragraph 108.

⁵² Enercon’s response to Q1 Questionnaire to competitors, question 7.

⁵³ Vestas’s response to Q1 Questionnaire to competitors, question 7.

⁵⁴ Q1 Questionnaire to competitors, question 9.

⁵⁵ Minutes of phone calls with Enercon, Vestas and GE on 8 November 2019, 12 November 2019 and 15 November 2019 respectively.

⁵⁶ GE’s response to Q1 Questionnaire to competitors, question 7, Form CO paragraph 108.

⁵⁷ Form CO, paragraph 109.

⁵⁸ Q1 Questionnaire to competitors, questions 7, 8.1, 10, and 12.1.

⁵⁹ Form CO, paragraph 238.

⁶⁰ Enercon’s response to Q1 Questionnaire to competitors, question 7.

- (51) There is no precise quantitative information on what proportion of customers trigger the exit clauses and when. The Notifying Party estimates that 30 % of LTPs are renegotiated or terminated when this becomes possible.⁶¹
- (52) In terms of qualitative information, as discussed before, the Notifying Party submitted that the tendency to re-tender OMS and possibly switch supplier differs by customer type. Namely,
- i.) Financial investors typically do not have the required know-how and resources to undertake the OMS activities in-house but, at the same time, attach great importance to ensuring high turbine availability. They thus tend not to opt out of the LTP.
 - ii.) Utilities are more likely to bring OMS in-house or to retender OMS.
 - iii.) Communities and small land owners also tend to opt out of the LTP and rely on third-party service providers to service their fleet.⁶²
- (53) This view is corroborated by the market investigation as several respondents made similar distinctions.⁶³
- (54) The Commission obtained additional qualitative information on what share of customers exercise the exit clauses and when, during its market investigation.
- i.) EDF observed that a 5 year period is becoming the standard period for renegotiating OMS contracts.⁶⁴ RWE, an ASP, submitted that customers tend to retender after 5 years.⁶⁵ Ponticelli, an ISP, was of the same view.⁶⁶ This suggests that a share of customers indeed exits after the first five years at the first exit clause.
 - ii.) Even customers who do not opt out of the LTP after the first five years may nevertheless opt out at a later stage, before the end of the LTP. In that regard, Enercon submitted that during the financing period customers that used financing are unlikely to opt out of the LTP because of project finance requirements. However, once the financing period ends, customers tend to look for OMS alternatives. For a majority of Enercon customers, this happens after 10 to 15 years of operation. EDF also mentioned that in certain Member States customers typically stay with the OEM for 15 years.⁶⁷ This indicates that a certain share of customers opt out of the LTP at 10-15 years.
- (55) Vestas argued that customers tend not to use the exit clauses.⁶⁸ In light of the rest of the evidence, however, this does not appear to be correct.

⁶¹ Form CO, paragraph 109.

⁶² Form CO, paragraph 84.

⁶³ EnBW's and Ingeteam's responses to Q1 Questionnaire to competitors, question 7, GE's response to Q1 Questionnaire to competitors, question 8.

⁶⁴ EDF's response to Q1 Questionnaire to competitors, question 10.

⁶⁵ RWE's response to Q1 Questionnaire to competitors, question 7.

⁶⁶ Response to Ponticelli Frères to Q1 Questionnaire to competitors, question 10.

⁶⁷ EDF's response to Q1 Questionnaire to competitors, question 7.

⁶⁸ Vestas' response to Q1 Questionnaire to competitors, question 11.

- (56) Overall, although there are no precise numbers and there is a lot of variance, based on the qualitative responses SGRE's estimate that roughly [30-40]% of customers with LTPs opt to retender at the first exit clause appears reasonable. Additional customers appear to do so after the financing period is over, which is roughly after 10-15 years of operation. Naturally, once the LTP reached its term and the turbine still has useful lifetime, all customers will become addressable.
- (57) Once the customer opts out of the LTP, the subsequent OMS contracts tend to be of shorter duration, namely 3-5 years.⁶⁹ If contracts are longer, they also have exit clauses every 5 years.⁷⁰ Contracts tend to be longer at the end of the lifetime of the turbine.⁷¹

(B) Warranty

- (58) Another way that the sale of the wind turbine affects the addressability of OMS opportunities is the warranty. This is because the customer can lose the warranty if any firm other than the OEM provides the servicing.⁷² This makes it rare that during the initial warranty period an ISP or ASP is the actual OMS provider instead of the OEM that installed the turbine. The effect of the warranty is smaller than the effect of the LTP as typical warranty periods are 2-5 years.⁷³ As 90 % of customers opt for an LTP that can be exited for the first time after 5 years only, these customers remain non-addressable by standalone OMS providers (including other OEMs as ASPs) regardless of the warranty. However, the warranty does affect the addressability of those 10 % of customers that do not opt for an LTP in that it makes them non-addressable for the warranty period.

(C) Factors affecting the share of standalone and bundled OMS

- (59) The first factor that affects the addressability of OMS is prices. The prices of initial full-service OMS contracts have dropped by 65% since their peak in 2011.⁷⁴ While it is unclear whether this is the result of simply a demand shock (due to the decrease in demand in annual wind installations, OEMs have to provide better conditions all-around, including in OMS) or increased competition, it does make it more likely that even financial investors who prefer long-term cost predictability will, at some point, opt out of the LTP and renegotiate or re-tender OMS on a standalone basis. Even Vestas, which argued most strongly that customers do not opt out of LTPs, admitted that a competitive offer can potentially cause a customer to opt out of an LTP.⁷⁵
- (60) The second factor having an influence on the size of the standalone OMS segment is the change in the duration of LTPs over time. Concretely, while currently the duration of LTPs is typically 15-20 years and increasing,⁷⁶ this has not always been the case. Indeed, previously LTPs had shorter duration of 10-15 years.⁷⁷ This implies

⁶⁹ Form CO, paragraph 115.

⁷⁰ Q1 Questionnaire to competitors, question 10.

⁷¹ Form CO, paragraph 115.

⁷² Q1 Questionnaire to competitors, question 14.1.

⁷³ Q1 Questionnaire to competitors, question 6.

⁷⁴ 1Q 2019 Global Wind Market Outlook, Bloomberg NEF, p. 35

⁷⁵ Minutes of a phone call with Vestas on 12 November 2019.

⁷⁶ See paragraph (49) above.

⁷⁷ Minutes of a phone call with Enercon on 8 November 2019, Enercon's response to Q1 Questionnaire to competitors, question 7.

that turbines installed 6-12 years ago where the owner has not opted out of the LTP will be addressable by standalone OMS suppliers in the next 4 years as the LTPs will reach their term. Even though the current trend of growing LTP durations will generally imply somewhat less scope for standalone OMS, the impact of this change will be relevant only very long-term (i.e. beyond 20 years), which is outside the time horizon of the merger assessment.

- (61) The fact that in the next four years the previously shorter LTPs reach their term implies that the standalone onshore OMS segment is likely to grow. Indeed, in the period 2017-2027 overall OMS is set to grow by 2.9% in Germany, 3.3% in Spain, 2.2% in the United Kingdom and 7% in France. As annual installations have slowed down considerably since 2017⁷⁸ and shorter LTPs were common previously, the standalone OMS segment is likely to grow faster in the same period than bundled OMS segment.

(D) Summary

- (62) In summary, OMS can be either sold together with the turbine as a bundle or on a standalone basis. Standalone OMS is addressable by ISPs and ASPs, whereas bundled OMS is captive to the OEM. Captive OMS results from two market conventions, LTPs signed at the point of the turbine sale and the warranty. As a result, roughly the following customers constitute the addressable segment.
- i.) Approximately [10-20]% of customers do not sign an LTP contract (paragraph (48)). These customers become addressable after the expiry of the warranty, which varies between 2-5 years.
 - ii.) Approximately [20-30]% of customers choose to use the first possibility to exit the LTP typically 5 years after the turbine installation and renegotiate or tender out OMS on a standalone basis (paragraphs (51)-(56)).
 - iii.) After the end of the financing period, typically 10-12 years after the turbine installation, additional customers utilise the exit clause and renegotiate or tender out OMS on a standalone basis (paragraph (54)).
 - iv.) Once LTPs have reached their term and the turbine still has a useful life, all customers become addressable.
- (63) Several factors are liable to change the relative shares of standalone and bundled OMS. First, falling OMS prices caused additional customers to opt out of LTPs. Second, due to slowing down new installations and previously shorter term LTPs, the standalone OMS segment is set to grow up to 2027.

5.1.2.6. IP and SCADA system

- (64) Wind turbines are generally controlled by supervisory control and data acquisition (SCADA) systems. The turbine controller and SCADA system are typically regarded as the “nerve centre” of the wind turbine or wind farm, connecting the individual turbines, the substation and meteorological stations to a central computer. This computer and the associated communication system allow the operator of the wind farm to supervise the behaviour of all the wind turbines and also the wind farm as a

⁷⁸ See paragraph (22).

whole. It will keep a record of all the activity and allows the operator to determine what corrective action, if any, needs to be taken. It also records energy output, availability and error signals, which will act as a basis for any warranty calculations and claims.⁷⁹

- (65) Each OEM has its own proprietary SCADA system consisting of a central computer and software running on that computer. This system is protected by IP rights owned by the OEM that installed the turbine.⁸⁰
- (66) Several aspects of OMS servicing requires access to the SCADA system and the turbine controller. For example, component exchanges (as in minor correctives but especially major correctives) require reloading the software and resetting the SCADA, which is not possible without proper access. Remote monitoring also may not be possible without access to suitable sublevels of the SCADA software.⁸¹
- (67) Apart from SCADA system and the turbine controller, technical drawings of the turbine and its various spare parts are also protected by IP. This influences OMS in a sense that for supplying certain spare parts, access to OEM IP is necessary.⁸²
- (68) How access to this IP (including access to SCADA and turbine controller) influences competition will be discussed in the relevant sections on market definition and competitive assessment.

5.1.3. Servicing of offshore wind turbines

- (69) The description of onshore OMS also applies to offshore OMS, with a few but important differences.
- (70) First, as the turbines have to be approached through the sea, offshore servicing involves more complex logistics, such as the use of special vessels that are able to support a crane and helicopters.⁸³ Harsher weather conditions often make servicing more difficult or impossible.⁸⁴ For the same reason offshore OMS is more expensive.⁸⁵ These factors will be described in more detail in relation to market definition (Section 5.2.1.2).
- (71) Second, offshore Asset Owners are mostly large utilities.⁸⁶ As a consequence, and in line with the discussion in Section 5.1.2.5.A, which showed that utilities tend to prefer self-servicing, self-servicing is widespread in offshore servicing.⁸⁷
- (72) The fact that customers are mainly self-servicing utilities also implies that LTPs are much less prevalent in offshore OMS than in onshore OMS. Given their strategy of

⁷⁹ Form CO, paragraph 384.

⁸⁰ Form CO, paragraph 383.

⁸¹ Response of [Customer] to Q2 Questionnaire to customers, question 21.

⁸² Responses of EDF, EnBW and ENGIE to Q1 Questionnaire to competitors, question 22.

⁸³ Q1 Questionnaire to competitors, question 16, Q2 Questionnaire to customers, question 16.

⁸⁴ Responses of [Customers], Q2 Questionnaire to customers, question 16, responses of EnBW, Enercon, Engie, Ingeteam, Ponticelli Frères, RWE Q1 Questionnaire to competitors, question 16.

⁸⁵ Ingeteam's response to Q1 Questionnaire to competitors, question 16.

⁸⁶ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 23.

⁸⁷ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 18.

self-servicing as soon as the warranty expires, these customers often choose not to sign an LTP. On the other hand, the warranty period is typically longer than in onshore OMS.⁸⁸ Taken together this implies that the addressable standalone segment is more influenced by the warranty than by the LTP and can be roughly equated with post-warranty OMS. On the basis of capacity serviced (in GW), self-performing has a share of 62% of the post-warranty, addressable segment.⁸⁹

5.2. Market definition

5.2.1. Product market definition

5.2.1.1. Standalone OMS vs captive OMS

(A) The Notifying Party's view

- (73) The Notifying Party considers that the markets for the supply of wind turbines include the aftermarket for the servicing by the turbine OEM during the initial warranty period. This market can be distinguished from what could be referred to as the “freely addressable” market for the stand-alone provision of OMS for wind turbines, at the time of expiry of the initial turbine warranty when the Asset Owner seeks to procure OMS, usually via a competitive tender process.

(B) Commission precedents

- (74) In *General Electric Company/LM Wind Power Holding*,⁹⁰ the Commission confirmed that “*wind turbine OEMs typically provide operation and maintenance services for a turbine while it is under warranty, including blade servicing which can be provided directly by the wind turbine OEM or subcontracted. A turbine warranty generally ranges from two to five years, depending on the onshore or offshore market. Once a turbine is off warranty, the customer may then (i) choose to retain the OEM as the service provider, (ii) perform servicing in-house, or (iii) contract with an ISP such as Availon, Deutsche Windtechnik Service GmbH and Global Energy Service.*”⁹¹
- (75) The onshore and offshore servicing markets are also comparable to the market for the servicing of heavy duty gas turbines (HDGT), which the Commission assessed in *General Electric/Alstom*.⁹² In that case the Commission found that the market for the supply of HDGTs includes the associated aftermarket for the initial servicing and the HDGT control system, as, at the time of contracting a new HDGT unit, customers usually also purchase the associated services for maintaining the machine operational from the same OEM.

⁸⁸ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 23.

⁸⁹ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 18.

⁹⁰ Case COMP/M.8283 – General Electric Company/LM Wind Power Holding.

⁹¹ Case COMP/M.8283 – General Electric Company/LM Wind Power Holding, paragraphs 70-71.

⁹² Case M.7278 – General Electric/Alstom, recitals 87 – 97.

(C) The Commission's assessment

- (76) The Commission agrees with the principle that OMS services sold together with the wind turbine are not freely addressable by a standalone OMS provider. However, captive OMS includes not only OMS provided under the warranty period but also OMS services provided under contracts, mostly LTPs, sold at the time of the turbine sale and together with the turbine, up until the point that the customer opts out of the LTP by using an exit clause.
- (77) As regards onshore OMS, as explained in Section 5.1.2.5(A), 90% of customers sign an LTP at the time of the turbine sales. As the OEM offers the LTP together with the turbine, there is no separate competition for the OMS and the parameters of the OMS contract (including its price, the availability guarantee, the references of the OMS provider etc.) are only one parameter of the competition for the overall package that includes the wind turbine. This means that a customer will not choose even a significantly more competitively priced OMS package if the overall electricity generation cost of the whole package is lower. Furthermore, ISPs and ASPs cannot contest this OMS separately, which is provided captively by the OEM. Thus services provided under LTPs should be considered part of the wind turbine market. This applies, however, only until the customer opts out of the LTP by using an exit clause. When customers sign an LTP, the warranty does not influence the contestability of the OMS because typically the customer can exit the contract for the first time 5 years after installation, whereas the duration of the warranty is 5 years at most but shorter in many cases.
- (78) For the 10 % of onshore customers who do not sign an LTP at the time of the turbine sale, it is the warranty that reserves the OMS for the OEM that sold the turbine. As discussed in Section 5.1.2.5, in this scenario if the customer allows an OMS supplier other than the OEM that made the turbine, they risk losing the warranty.⁹³ As it is unlikely that they would undertake this risk, in practice the OMS is reserved to the OEM of the turbine during warranty. In this regard, the OMS under warranty is not subject to separate competition and the parameters of competition and the set of competitors are completely different relative to standalone OMS. Thus OMS under warranty should also be considered as part of the captive OMS market and excluded from the standalone OMS market.
- (79) As regards offshore OMS, as set out in Section 5.1.3, the proportion of LTP is much lower than in onshore and the warranty is longer. Thus it is likely that the warranty is a bigger factor in reserving the OMS to OEM than the LTP. Otherwise the same principles apply and OMS provided under the warranty period as well as, to the extent relevant, OMS provided under LTPs are also part of the (offshore) wind turbine market and separate from standalone OMS.
- (80) This approach is in line with the precedents cited above.
- (81) The Commission therefore considers that OMS provided under warranty and under LTPs until the first use of an exit clause by the customer, whichever period is longer are to be considered as captive OMS. Captive OMS forms part of the wind turbine market. Other OMS, referred to as standalone OMS, is a market separate from captive OMS.

⁹³ See specifically paragraph (58).

5.2.1.2. Onshore and offshore OMS

(A) The Notifying Party's view

- (82) The Notifying Party submits that there are significant similarities between the types of operation and maintenance services that are performed on onshore and offshore wind turbines. Typically, the modules of the servicing are the same, such as preventative maintenance, minor correctives, major correctives and remote monitoring.⁹⁴
- (83) The Notifying Party notes, however, that there are certain differences between the way in which onshore and offshore turbines are serviced which may warrant a product market segmentation. More specifically, due to the harsher environmental conditions (salt, moist air) in which offshore turbines operate and the difficult access to offshore installations, the logistics and tools required to perform servicing of offshore turbines are significantly more burdensome, resulting in higher maintenance and downtime costs for customers.⁹⁵
- (84) Overall, the Notifying Party considers that the question can be left open as the Transaction does not give rise to competition concerns whether onshore and offshore OMS servicing is considered as part of the same or separate markets.⁹⁶

(B) Commission precedents

- (85) The Commission has not previously assessed onshore and offshore OMS, only the difference between the manufacture and sale of onshore and offshore wind turbines.
- (86) In Siemens/Gamesa, the Commission concluded that separate markets exist for onshore and offshore wind turbines as *“the different conditions of the offshore environment affect the regulatory framework, planning and construction of offshore projects”* resulting in *“differences in design, performance and costs of the turbines to be installed.”*⁹⁷ The Commission had previously considered in GE Energy/Converteam⁹⁸ that there were differences between onshore and offshore turbines mainly in relation to power output, installation, operation and maintenance costs resulting from the harsher environmental conditions and difficulties to access turbines in offshore wind installations.

(C) The Commission's assessment

- (87) An overwhelming majority of customers and competitors confirmed the differences pointed out by the Notifying Party between servicing onshore and offshore wind turbines. Respondents highlighted additional differences as well.
- (88) First, it was confirmed that OMS for onshore and OMS for offshore requires significantly different tools and logistics.⁹⁹ In terms of logistics, unlike onshore

⁹⁴ Form CO, paragraph 174.

⁹⁵ Form CO, paragraph 175.

⁹⁶ Form CO, paragraph 176.

⁹⁷ Case COMP/M.8134 – *Siemens/Gamesa*, paragraph 10.

⁹⁸ Case COMP/M.6222 – *GE Energy/ Converteam*, paragraph 78.

⁹⁹ Q1 Questionnaire to competitors, question 16, Q2 Questionnaire to customers, question 16.

OMS, offshore OMS requires special vessels and helicopters.¹⁰⁰ Special vessels include jack-up vessels, i.e. vessels fitted with movable legs that can be jacked down onto the sea floor such that the hull can be elevated above water level and be used as a stable platform for lifting. It was also submitted that the logistical planning has to take into account harsher weather conditions and different health and safety regulations.¹⁰¹ Furthermore, bringing cranes for large component servicing involves much more costly and planned logistical operations in offshore OMS than in onshore OMS.¹⁰² In terms of tools, the responses were more mixed. Some respondents considered that the big difference lies in logistics but the tools are the same,¹⁰³ while others considered that offshore OMS also requires different tools, such as special handling and lifting tools or special tools to implement predictive maintenance.¹⁰⁴ Overall, due to logistics and to a lesser extent the tools, offshore servicing is much more challenging and difficult than onshore servicing.

- (89) Second, respondents confirmed that offshore OMS is significantly more expensive and involves significantly higher downtime costs for customers.¹⁰⁵ Reasons include: larger size of offshore turbines (increasing, relative to onshore OMS, the man-hours necessary for maintenance and the revenue loss in the case of downtime); difficulty of access both because of naval route and weather conditions leading to certain time windows for maintenance; longer distance to maintenance centre; longer downtime; and harsh weather conditions, which increase the amount of servicing needed (salt and moisty air leading to corrosion). Engie observed that due to longer downtime and difficulty of access it makes sense to maximise predictive and preventive maintenance in the case of offshore wind farms.¹⁰⁶
- (90) Third, respondents to the market investigation indicated that, contrary to onshore servicing, offshore OMS requires special maritime technicians¹⁰⁷ and that the hourly rate of these technicians is higher than the rates of onshore technicians.¹⁰⁸ In other words, the two types of servicing require a workforce with different skills. It also matters in this regard that, as mentioned before, health and safety regulations are different and thus offshore technicians need more extensive health and safety training.¹⁰⁹
- (91) Fourth, offshore OMS includes additional modules relative to onshore servicing such as foundation maintenance.¹¹⁰
- (92) Fifth, environmental regulations are also different.¹¹¹

¹⁰⁰ Responses of [Customers], Q2 Questionnaire to customers, question 16, responses of EnBW, Enercon, Engie, Ingeteam, Ponticelli Frères, RWE Q1 Questionnaire to competitors, question 16.

¹⁰¹ Ingeteam's response to Q1 Questionnaire to competitors, question 16.

¹⁰² Ingeteam's response to Q1 Questionnaire to competitors, question 16.

¹⁰³ Responses of Vestas and Ynfiniti to Q1 Questionnaire to competitors, question 16.

¹⁰⁴ Responses of Engie, RWE and EnBW to Q1 Questionnaire to competitors, question 16.

¹⁰⁵ Q1 Questionnaire to competitors, question 17, Q2 Questionnaire to customers, question 17.

¹⁰⁶ [Customer] response to Q2 Questionnaire to customers, question 17.

¹⁰⁷ EnBW's response to Q1 Questionnaire to competitors, question 16.

¹⁰⁸ [Customer] response to Q2 Questionnaire to customers, question 17.

¹⁰⁹ Response of [Customer] to Q2 Questionnaire to customers, question 18 and response of Ynfiniti Global Energy Services to Q1 Questionnaire to competitors, question 18.

¹¹⁰ EDF's response to Q1 Questionnaire to competitors, question 18.

- (93) The Commission considers that these extensive differences rule out demand-side substitutability.
- (94) From a supply-side perspective, an OMS provider active exclusively in onshore servicing is unlikely to be able to switch to offshore servicing with minimal costs, no sunk costs and within a short timeframe. Indeed, hiring and training the required staff, acquiring or hiring the assets for logistics and servicing, organising the complex logistics is likely not possible within a short timeframe and involve non-negligible costs. Accordingly, a large majority of OMS providers confirmed that switching from onshore servicing to offshore servicing would imply considerable technical difficulties and/or costs.¹¹² For example, EDF submitted that such a switch implies acquiring specific and experienced resources, analysing of markets and defining the strategy, developing the pricing tools as well as negotiating the lease contracts for special vessels or acquiring these assets.¹¹³ In EDF's view this would imply significant investments. EnBW advised that the necessary investments amount to several millions of euros.¹¹⁴ Ingeteam submitted that the investment cost is EUR 1 million and the time required is 1-2 years.¹¹⁵ RWE also emphasised the difficulties involved, mainly with regard to staffing and logistics: *"Whilst spare parts and control systems are the same (or very similar), training and logistics requirements as well as working patterns and environment are very different. This leads to different staffing requirements, be it in terms of education/experience level, size of teams and willingness of staff to work in challenging environments. Setting up and running marine logistics (Crew Transfer Vessel, Service Operation Vessel, Jack up Vessel, Helicopter) is costly and complex, especially considering the know-how around effective and efficient work flows of staff interplaying with the vessel operation itself."*¹¹⁶ RWE's time and cost estimate was 3 years and costs in excess of 1 million euros.
- (95) Supply-side substitution from offshore to onshore is more plausible as onshore OMS is less challenging than offshore OMS. OMS suppliers' views were split in this regard even though nearly all of them acknowledged that switching is easier in direction offshore to onshore than vice-versa.¹¹⁷ A number of respondents considered that switching would not imply significant difficulties and costs.¹¹⁸ RWE submitted that the process would take a few months¹¹⁹ However, a slight majority was of the view that the differences are large enough so that switching would imply significant difficulties.¹²⁰ EDF noted that OMS providers would need to adapt their processes to be in a position to be competitive on onshore OMS. In particular, they need to scale down their processes, change their cost structure, and rebalance their skills between preventive maintenance versus corrective maintenance.¹²¹ Ponticelli Frères also noted that an offshore firm would not be price competitive onshore,¹²² which

¹¹¹ EDF's response to Q1 Questionnaire to competitors, question 18.

¹¹² Q1 Questionnaire to competitors, question 19.

¹¹³ EDF's response to Q1 Questionnaire to competitors, question 19.

¹¹⁴ EnBW's response to Q1 Questionnaire to competitors, question 19.

¹¹⁵ Ingeteam's response to Q1 Questionnaire to competitors, question 19.

¹¹⁶ RWE's response to Q1 Questionnaire to competitors, question 19.

¹¹⁷ Q1 Questionnaire to competitors, question 20.

¹¹⁸ Q1 Questionnaire to competitors, question 20.

¹¹⁹ RWE's response to Q1 Questionnaire to competitors, question 20.

¹²⁰ Q1 Questionnaire to competitors, question 20.

¹²¹ EDF's response to Q1 Questionnaire to competitors, question 20.

¹²² Response of Ponticelli Frères to Q1 Questionnaire to competitors, question 20.

implies some restructuring or hiring new staff before onshore activities can commence. These responses suggest that switching would not be possible with the speed and ease required for supply-side substitution. The Commission also notes that views on the lack of supply-side substitution are more consistent with the responses on the more difficult nature of offshore servicing. Indeed, given that offshore servicing requires special workforce, logistics, etc., an offshore firm has a different structure and higher costs than an onshore firm. It thus has to do some restructuring before it launches its activities onshore and it is unlikely to be able to react to small price increases in onshore OMS.

- (96) The Commission therefore considers that onshore OMS and offshore OMS belong to separate markets.

5.2.1.3. Further segmentation based on OMS modules

(A) The Notifying Party's view

- (97) In the Notifying Party's view, it is not required to segment onshore and offshore OMS further according to the type of service provided. OMS for onshore and offshore wind turbines include a broad range of functions which, during the lifetime of the wind turbine, support and ensure the ongoing operation of the turbine, the plant balance and the associated transmission assets. The exact type and range of services provided will depend very much on the needs of the individual customer. All major service providers, including OEMs, ISPs and ASPs, typically have the capabilities to offer a full range of services.¹²³

(B) Commission precedents

- (98) The Commission did not previously consider whether the markets for the supply of offshore and onshore services should be segmented according to the type of services rendered. However, the Commission previously considered the further segmentation of the service market or aftermarket of other equipment. For example, in *General Electric/Alstom*, the Commission considered whether or not all services relating to gas turbines constitute one single market.¹²⁴ In that case a majority of customers considered that all services constitutes one single market because steam turbine technologies are typically mature and a number of steam turbine services providers can provide the whole range of services for all types of steam turbines. However, the Commission ultimately left the market definition open.
- (99) In *John Wood Group / Siemens*, the Commission considered that gas turbine services rendered by OEMs and ISPs are comparable in terms of quality even though ISPs can offer sometimes more competitive prices and that there is interchangeability between services provided by OEMs and ISPs. The Commission therefore concluded that services rendered by OEMs and ISPs are part of the same market.¹²⁵

(C) The Commission's assessment

- (100) It is clear that, from a demand perspective, the exact scope of services required by the customer can be very different depending on the customer's preferences. As

¹²³ Form CO, paragraph 180.

¹²⁴ Case M.7278 – General Electric/Alstom, recital 1767.

¹²⁵ Case COMP/M.7083 – John Wood Group / Siemens, paragraph 23.

discussed in paragraphs (52)-(53), financial investors typically require full service packages, while utilities are more likely to take servicing in-house and have only minimal support from OEMs. Cost-sensitive communities and small land owners are more likely to use ISPs and tend to require a less than full-scope solution. The Commission notes that these are just broad observations and demand for specific modules can vary even within customer groups. The exact scope of services demanded can also depend on idiosyncratic factors such as the problems typical with a certain turbine type. Thus there is no demand-side substitutability across OMS services demanded and the market definition turns on supply-side considerations.

- (101) In this regard, a slight majority of both customers and competitors agreed with the statement that there are certain subcategories of services that certain OMS providers are not capable of doing as opposed to the statement that all OMS providers are capable of performing all subcategories even if in some, or all, of the modules some OMS providers are stronger than others.¹²⁶ This would suggest that in certain modules competition is restricted to certain suppliers and excludes others. It would follow that those modules form a separate market with a more concentrated market structure. However, a detailed review of the explanations does not support this conclusion for two reasons: first, the qualitative responses of certain respondents sometimes contradict the statement supported, and, second, the main issue appears to be access to IP, which rather gives an advantage to OEMs but does not categorically exclude other competitors from certain modules. These points are explained in more detail below.

(C.i) Balance of views factoring in qualitative responses

- (102) Two competitors who agreed with the statement that there are certain subcategories of services that certain OMS providers are not capable of doing were actually of the view that, save for certain exceptions, in most cases all providers can do all services.¹²⁷ Such an explanation rather supports supply-side substitution across different modules. Likewise, the responses of four customers¹²⁸ who agreed with the statement that there are certain subcategories of services that certain OMS providers are not capable of doing rather actually supports the lack of distinction per modules. In a general fashion, these customers submitted that ISPs and ASPs can perform all the OMS modules even if they encounter certain difficulties, especially around access to SCADA and to the turbine controller. Taking these qualitative responses into account, there is actually a slight majority in favour of the statement that all OMS providers are capable of performing all subcategories even if in some, or all, of the modules some OMS providers are stronger than others.

(C.ii) IP exclusivity and its mitigating factors

- (103) Regardless of which statement respondents supported, the majority of the explanations were consistent in holding that all OMS service providers have the capability to provide all OMS services although they face some difficulties in tasks involving IP access, which includes access to the SCADA computer, the turbine controller, drawings and turbine documentation.¹²⁹ For example, Banks Renewables

¹²⁶ Q1 Questionnaire to competitors, question 22, Q2 Questionnaire to customers, question 21.

¹²⁷ Q1 Questionnaire to competitors, question 22.

¹²⁸ Q2 Questionnaire to customers, question 21.

¹²⁹ Q1 Questionnaire to competitors, question 22, Q2 Questionnaire to customers, question 21.

submitted that “*Competition is available in all areas but is most difficult in the area of SCADA and control systems where intellectual property has been protected*”¹³⁰ RWE, an ASP OMS supplier, was of the view that “*ISPs and ASPs can do most of the services that OEMs can. However, ISPs and ASPs encounter restrictions on wind turbine controller and SCADA system to which the OEMs have IP rights.*”¹³¹ Altogether 50% of competitors and 68 % of customers mentioned the lack of access to IP rights in its various forms (access to SCADA, controller, spare part documentation etc.) as a hurdle in their qualitative reply.

- (104) There are several ways in which the IP facilitates the performance of certain modules. For example, with SCADA access the turbine can be stopped from a distance, whereas without access it can only be stopped manually on site.¹³² By its nature, remote monitoring and remote operation of the turbine is software based and thus requires some kind of access.¹³³ SCADA access facilitates major correctives and component upgrades as after a major component exchange the SCADA software needs to be reloaded and the SCADA computer reset.¹³⁴ Supplying and installing spare parts is easier with access to drawings and other documentation.¹³⁵
- (105) The key question in relation to market definition is whether the IP merely gives an advantage in supplying certain modules or it de facto excludes ISPs and ASPs from certain modules such that they are not constraints on OEMs. Based on the market investigation, it appears that control over the IP gives OEMs advantages but that it does not reserve any modules as the exclusive domain of OEMs. This because certain practices mitigate the IP advantage and because the bulk of the work by value does not require IP access. This is explained below in more detail.
- (106) Accordingly, there are three factors that mitigate the IP exclusivity.
- (107) First, a new SCADA system can be retrofitted on the turbine.¹³⁶ This is a clean solution but relatively costly.¹³⁷ It does not appear prevalent so far, although the Commission notes that there are a number of companies active in the OMS sphere who specifically focus on offering retrofitting services such as DEIF and Mita-Teknik. Thus to a certain extent this possibility mitigates the IP advantage.
- (108) Second, some ISPs use workaround methods.¹³⁸ These could be risky as they interfere with the existing system or costly, or both,¹³⁹ but, again, to a certain extent it is a practice in the market and enables ISPs to provide a broader range of services.
- (109) Third, ISPs and non-OEM ASPs can get access to the IP against licence fees. While the OEM may not have an incentive to provide such access, it is clear from the market investigation that granting such access is part of market practice. For

¹³⁰ Response of [Customer] to Q2 Questionnaire to customers, question 21.

¹³¹ RWE’s reponse to Q1 Questionnaire to competitors, question 22.

¹³² Minutes of a phone call with Enercon on 8 November 2019.

¹³³ [Customer] response to Q2 Questionnaire to customers, question 21.

¹³⁴ [Customer] response to Q2 Questionnaire to customers, question 21; Response of [Customer] to Q2 Questionnaire to customers, question 21.

¹³⁵ Responses of EDF, EnBW and ENGIE to Q1 Questionnaire to competitors, question 22.

¹³⁶ Form CO, paragraph 386.

¹³⁷ Q1 Questionnaire to competitors, question 57.

¹³⁸ Form CO, paragraph 387.

¹³⁹ Q1 Questionnaire to competitors, question 57.

example, several ISPs submitted that they can have SCADA access rights but they have to pay for such access to the OEM and renew subscription to the access codes every three months.¹⁴⁰ Likewise Cubico Sustainable Developments noted that Asset Owners can replace the OEM with an ISP through an agreement or by paying for the IP information needed.¹⁴¹ Other Asset Owners submitted similar responses.¹⁴² Reasons why OEMs grant such access could include the desire not to alienate the customer who can also be an important customer in wind turbines.

- (110) While having to pay for access may be considered a competitive disadvantage, ISPs have lower overhead and did not have to bear the development costs of the IP. In any event, considerations relating to cost advantages and disadvantages are not relevant to market definition, where the principal question is whether suppliers exercise a competitive constraint despite some disadvantages. In other words, although at the cost of payment, ISPs and non-OEM ASPs do not appear to be excluded from supplying certain OMS modules and thus distinguishing separate markets for certain modules does not appear to be justified.
- (111) To illustrate that the mitigating factors are effective, Deutsche Windtechnik (“DWT”), a prominent ISP, has a remote monitoring service that offers 24/7 monitoring, proactive fault analysis and service hotline. The service covers Vestas, Enercon, Nordex, Senvion turbines.¹⁴³ As remote monitoring is by definition software based, this service would be one of the prime candidates for a module that only OEMs could perform due their IP exclusivity. Yet this example shows that this is not the case.
- (112) In addition to the mitigating factors, it also appears that the bulk of the OMS work by value can be provided independently of the OEM, i.e. the IP holder. In particular, the market investigation indicated that ISPs can do 80% of the OMS work by value independently from the OEM. While the rest of the services are also important to run a windfarm and involve more complex engineering, ISPs can also execute these tasks if they obtain a licence against a licence fee.

(C.iii) Conclusion

- (113) On the basis of the above the Commission considers that it is not appropriate to define separate markets based on OMS modules. This does not mean, of course, that different suppliers do not have advantages or disadvantages in certain modules or in certain types of OMS services. For example, OEMs seems to have an advantage in major correctives, remote monitoring, and, more generally, in being able to provide a more comprehensive service.¹⁴⁴ They also have an advantage in newer turbine types as in respect of these turbines the knowledge is less widespread and they are more protected by IP than older turbines.¹⁴⁵ By contrast, ISPs are smaller, more agile, have lower costs and thus they are more competitive in scheduled maintenance and minor

¹⁴⁰ Q1 Questionnaire to competitors, question 55.

¹⁴¹ Response of [Customer] to Q2 Questionnaire to customers, question 21.

¹⁴² Q2 Questionnaire to customers, question 21.

¹⁴³ <https://www.deutsche-windtechnik.com/remote-data-monitoring>

¹⁴⁴ Q2 Questionnaire to customers, question 21.

¹⁴⁵ Q2 Questionnaire to customers, question 21.

correctives.¹⁴⁶ However, these considerations imply that the market is differentiated rather than that there are separate markets.

5.2.1.4. Gearboxes

(A) The Notifying Party's view

- (114) The Notifying Party submits that gearboxes do not differ depending on whether they are used in onshore or offshore wind turbines, and no distinction needs to be made in this respect. In particular, there are no specific additional requirements for offshore gearboxes (e.g. anti-corrosion protections) because the gearbox is protected within the turbine nacelle. Furthermore, there is little distinction in terms of design between gearboxes for use in differently geared wind turbines. Gearboxes are compatible with most turbine design variations (for example, different rotor speeds and blade lengths) and accordingly to accommodate most turbine specifications (for example, in relation to wind speed).¹⁴⁷

(B) Commission precedents

- (115) In *Siemens/Gamesa*, the Commission's market investigation found that customers do not consider gearboxes for onshore and offshore turbines substitutable but that suppliers can easily adapt gearboxes in order to fit the specific features of the wind turbine depending on where it is going to be deployed.¹⁴⁸ However, it ultimately left the market definition open.
- (116) In *ZF/Hansen*, the Commission considered that further segmentation of the wind turbine gearboxes into onshore and offshore wind turbine gearboxes is not appropriate due to supply-side substitutability.¹⁴⁹

(C) The Commission's assessment

- (117) A large majority of competitors considered that gearboxes for onshore wind turbines are different from gearboxes for offshore wind turbines (e.g., in design, functions, specific turbine requirements, etc.).¹⁵⁰ For example, offshore gearboxes are normally sea water proofed and have specific treatment for marine environment.¹⁵¹ They are also bigger sized and heavier than onshore gearboxes and designed for a longer lifetime.¹⁵² Competitors did not consider that customers view offshore and onshore turbine gearboxes interchangeable¹⁵³ and this was directly confirmed by customers themselves.¹⁵⁴ Thus, in line with the precedents, there is no demand-side substitution between gearboxes for onshore and offshore wind turbines.
- (118) Those competitors that have knowledge of onshore and offshore gearboxes and their manufacturing process agreed with the statement that switching production from

¹⁴⁶ Q2 Questionnaire to customers, question 21.

¹⁴⁷ Form CO, paragraph 198.

¹⁴⁸ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 63- 64.

¹⁴⁹ Case COMP/M.6361 – ZF/Hansen, paragraph 11.

¹⁵⁰ Q1 Questionnaire to competitors, question 24.

¹⁵¹ Responses of EDF and Ingeteam to Q1 Questionnaire to competitors, question 24.

¹⁵² EDF's response to Q1 Questionnaire to competitors, question 24.

¹⁵³ Q1 Questionnaire to competitors, question 25.

¹⁵⁴ Q2 Questionnaire to customers, question 24.

onshore to offshore turbine gearboxes does not involve significant difficulties or costs.¹⁵⁵ In addition, documents submitted by the Notifying Party indicate that the manufacturing process for wind gearboxes is relatively standardised worldwide and is the same irrespective whether or not the gearbox will be used in an onshore or an offshore turbine.¹⁵⁶ The only difference appears to be that offshore gearboxes are generally larger than onshore gearboxes. However, suppliers have the capability to handle different sizes in their manufacturing process and produce both types of turbines.¹⁵⁷ Therefore, in line with the precedents and the view of the Notifying Party gearboxes for onshore and offshore wind turbines appear to be substitutable from a supply perspective.

- (119) Results were similar with respect to gearboxes for turbines with different gearings. Competitors did not consider that customers view turbine gearboxes for turbines with different gearings interchangeable¹⁵⁸ and this was directly confirmed by customers themselves.¹⁵⁹ For example Ingeteam explained that a specific wind turbine could not use a different gearbox or different gearings than the ones specified by the OEM.¹⁶⁰ Vestas advised that gearboxes with a different gearing or ratio will not be able to carry the load that they are designed for or they will lose efficiency unless the degree of difference in the gearing is small.¹⁶¹ However, all competitors that expressed a view confirmed that switching production from gearboxes with a certain gearing to gearboxes with another gearing or vice-versa would not imply significant technical difficulties or costs.¹⁶² Thus supply-side substitution applies across gearboxes for turbines with different gearings.
- (120) Accordingly, the Commission considers that there is a single market for gearboxes for wind turbines without the need to further segment it based on the type of turbines (onshore or offshore) or on turbine gearings.

5.2.1.5. Markets for the manufacturing and supply of onshore and offshore wind turbines

(A) The Notifying Party's view

- (121) As the proposed Transaction will not give rise to overlaps on the market for the manufacturing and supply of onshore and offshore wind turbines, the Notifying Party did not discuss market definitions in this regard.

(B) Commission precedents

- (122) In Siemens/Gamesa, the Commission considered that the market for the manufacturing and supply of onshore and offshore wind turbines constitute separate markets.¹⁶³ This finding was based on several factors. First, the market investigation showed that onshore and offshore turbine projects are very different because offshore projects are much more complex; involve much larger development,

¹⁵⁵ Q1 Questionnaire to competitors, question 26.

¹⁵⁶ Notifying Party's response to Commission's request for information of 12 December 2019, Annex 1.

¹⁵⁷ Notifying Party's response to Commission's request for information of 12 December 2019, Annex 1.

¹⁵⁸ Q1 Questionnaire to competitors, question 27.

¹⁵⁹ Q2 Questionnaire to customers, question 25.

¹⁶⁰ Ingeteam's response to Q1 Questionnaire to competitors, question 28.

¹⁶¹ Vestas's response to Q1 Questionnaire to competitors, question 27.

¹⁶² Q1 Questionnaire to competitors, question 28.

¹⁶³ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 8-28.

construction and certification costs; have larger project sizes; involve greater complexity; and take much more time to complete than onshore projects.¹⁶⁴ Second, offshore turbines are larger, costlier and more complex to design and manufacture than onshore turbines as they have to withstand harsher environmental conditions, and higher wind speeds. Their certification also takes longer.¹⁶⁵ Third, while there are some overlaps, both suppliers and customers are different in the onshore and the offshore segments.¹⁶⁶

- (123) The Commission considered but rejected the distinction based on power output, having regard to the fact that, in the case of new installations where competition takes place, newer turbines with higher output do compete with older turbines with lower output. In such contexts turbines with a larger power output are more productive but costlier and untested relative to turbines with a lower output.¹⁶⁷
- (124) The Commission also rejected distinctions by technology (direct drive or geared) as customers are agnostic to the type of technology and suppliers have both types in their portfolio. In other words, turbines of different technologies are substitutable from both a demand and supply perspective.¹⁶⁸
- (125) Finally, the Commission also considered a distinction according to wind speed. In this regard, the Commission observed that while there is no demand-side substitution, suppliers have turbines for all different wind speeds in their portfolio and turbines can be upgraded to different wind speeds. Thus the Commission rejected this distinction based on supply-side considerations.¹⁶⁹

(C) Commission's assessment

- (126) The factors underlying the distinction between onshore and offshore wind turbines are unlikely to have changed since the Siemens/Gamesa decision. Indeed, both customers and competitors confirmed that these factors still apply,¹⁷⁰ which indicates that there is no need to revise this distinction. The market investigation also did not produce any indication that a distinction based on power output, technology or wind speed would be justified contrary to the relevant precedent.
- (127) Accordingly, the Commission considers that there are separate markets for the manufacturing and supply of onshore and offshore wind turbines and that further distinctions are not applicable.

¹⁶⁴ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 11-16.

¹⁶⁵ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 17-23.

¹⁶⁶ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 24-27.

¹⁶⁷ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 30-37.

¹⁶⁸ Case COMP/M.8134 – Siemens/Gamesa, paragraph 39.

¹⁶⁹ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 40-41.

¹⁷⁰ Q1 Questionnaire to competitors, questions 16-17, Q2 Questionnaire to customers, questions 16-17.

5.2.2. Geographic market definition

5.2.2.1. Onshore OMS

(A) The Notifying Party's view

- (128) The Notifying Party considers that the markets for the provision of onshore and offshore wind turbine services is EEA-wide. Service providers, in particular for onshore wind turbines, need to have a service hub in proximity to the wind farms in order to be able to respond quickly when there is a servicing need. Service stations are therefore often located on the premises of the Asset Owner or within a range of approximately 80 km or 1 hour driving distance from the wind farm.¹⁷¹
- (129) However, despite the requirement for service providers to operate from a service station in proximity to the wind farm, the Notifying Party considers that competition for wind turbine servicing takes place at least at an EEA-wide level. All OEMs and other service providers (ISPs and ASPs) active in the EEA bid for servicing contracts for wind farms across the EEA, regardless of whether they already have a service station in proximity to the wind farm – in particular when the tender concerns a long-term servicing contract. After winning a tender, the service provider can build up a new service station in proximity to the wind farm or make use of the existing facilities and operations which may be owned by the Asset Owner or the previous service provider. For example, in 2018 DWT bid for projects in the UK that were located over 150 miles away from the DWT base in central Scotland. DWT subsequently won the two contracts in relation to two sites that had previously been serviced by SGRE. In addition, in France the ISPs Enertrag and DWT are eager to expand their footprint and are bidding for service-contracts for wind farms far away from their existing service hubs.¹⁷²

(B) Commission precedents

- (130) In *General Electric Company/LM Wind Power Holding*, the Commission considered that the market for servicing onshore and offshore wind turbines is likely no broader than EEA-wide.¹⁷³
- (131) There were no other precedents directly involving wind turbine OMS. However, there were other cases where the Commission considered the geographic scope of the servicing other equipment. For example, in *General Electric/Alstom*, the Commission assessed the geographic scope of the market of heavy duty gas turbines and found that technical specifications and technical requirements do not differ based on geographic location and ancillary issues such as local security requirements are not decisive.¹⁷⁴ At the same time, it also found that proximity is a relevant factor as service providers and parts need to be in proximity to guarantee short response times and high availability.¹⁷⁵ However, despite proximity being important, when organising tenders for their EEA-based plants customers invite suppliers irrespective

¹⁷¹ Form CO, paragraph 184.

¹⁷² Form CO, paragraph 184.

¹⁷³ Case COMP/M.8283 – General Electric Company/LM Wind Power Holding, paragraph 73.

¹⁷⁴ Case M.7278 – General Electric/Alstom (Thermal Power – Renewable Power & Grid Business), recital 1660.

¹⁷⁵ Case M.7278 – General Electric/Alstom (Thermal Power – Renewable Power & Grid Business), recital 1661.

of the location of their manufacturing facilities.¹⁷⁶ Consequently, the Commission considered the market for servicing of HDGT to be at least EEA-wide, ultimately leaving the market definition open.¹⁷⁷ The Commission came to the same conclusion in relation to the geographic scope of the markets for servicing of generators¹⁷⁸ and steam turbines.¹⁷⁹ In *Siemens/John Wood Group/Rolls-Royce Combined ADGT Business/RWG*,¹⁸⁰ and *John Wood Group/Siemens/JV*,¹⁸¹ the Commission found the market for servicing for gas turbines to be at least EEA-wide in scope.

(C) The Commission's assessment

- (132) The Commission will first assess the question whether the market is EEA-wide or narrower, that is to say, national or sub-national.
- (133) Most customers¹⁸² and competitors¹⁸³ confirmed that there are no significant differences in onshore OMS services in different countries across the EEA. Enel explained that the same requirements apply in any country across the EEA.¹⁸⁴ Iberdrola submitted that *"we see the servicing of turbines as a global activity and view the activities as consistent across all countries"*¹⁸⁵ EDF considered that *"Technologies are similar from one country to another, due to the limited number of manufacturers."*¹⁸⁶ The only exception mentioned by respondents is that health and safety regulation can differ across countries,¹⁸⁷ e.g. they appear to be more stringent in the United Kingdom than in other countries. However, this did not influence the overall view of respondents and appears to be non-material. As Vestas explained, *"There may be some differences in national legislation, e.g. relating to safety (to the extent that it is not harmonized legislation). However, this is not a material issue."*¹⁸⁸ Thus the Commission considers that from a demand perspective there are no material differences between OMS services provided in different Member States, especially because technical specifications or regulatory requirements do not differ substantially within the EEA.
- (134) From a supply perspective, consistent with the view of the Notifying Party, the large majority of competitors¹⁸⁹ and customers¹⁹⁰ confirmed that local presence in the

¹⁷⁶ Case M.7278 – General Electric/Alstom (Thermal Power – Renewable Power & Grid Business), recital 1662.

¹⁷⁷ Case M.7278 – General Electric/Alstom (Thermal Power – Renewable Power & Grid Business), recital 1664.

¹⁷⁸ Case M.7278 – General Electric/Alstom (Thermal Power – Renewable Power & Grid Business), recitals 1743-1747.

¹⁷⁹ Case M.7278 – General Electric/Alstom (Thermal Power – Renewable Power & Grid Business), recitals 1771-1773.

¹⁸⁰ Case COMP/M.7284 – Siemens/John Wood Group/Rolls-Royce Combined ADGT Business/RWG, paragraphs 57-59.

¹⁸¹ Case COMP/M.7083 – John Wood Group/Siemens/JV.

¹⁸² Q2 Questionnaire to customers, question 26.

¹⁸³ Q1 Questionnaire to competitors, question 29.

¹⁸⁴ [Customer] response to Q2 Questionnaire to customers, question 26.

¹⁸⁵ [Customer] response to Q2 Questionnaire to customers, question 26.

¹⁸⁶ EDF's response to Q1 Questionnaire to competitors, question 29.

¹⁸⁷ See the responses of EnBW, Vestas to Q1 Questionnaire to competitors, question 29 and the responses of Banks Renewables, Community Windpower, Fred. Olsen & Co

¹⁸⁸ Vestas' response to Q1 Questionnaire to competitors, question 29.1.

¹⁸⁹ Q1 Questionnaire to competitors, question 31.

¹⁹⁰ Q2 Questionnaire to customers, question 27.

vicinity of the wind farm to be serviced is important due to response time and availability requirements in OMS contracts. Consistent with this, servicing staff is mainly local.¹⁹¹

- (135) However, the requirement to have a local presence does not appear to prevent suppliers not present in a certain Member State from applying competitive pressure on those that are present without incurring significant difficulties and costs.
- (136) First, the time and cost estimates of building out local presence range from a few months to a year, and from EUR 300 000 to a million respectively,¹⁹² the lower end of which appears to be supply-side substitution rather than entry in the context of a bidding market with large size contracts.
- (137) Second, more importantly, a large majority of competitors confirmed that they can make a credible bid in a tender for standalone OMS services even in a Member State they are not yet present by committing to build out the necessary local presence after the contract award.¹⁹³
- (138) Third, there are several factors that facilitate building out local presence either before or after a contract win:
- i.) Although the servicing staff is mainly local, OMS suppliers do move servicing crews across borders if there is a labour shortage in a certain Member States.¹⁹⁴ This is possible, despite some cross-border frictions arising from national licensing requirements for technicians.¹⁹⁵ Likewise, although it is preferable that the workforce speaks the local language, this does not appear to be an absolute necessity as it is often sufficient that the team supervisor speaks the local language and in many cases English suffices.¹⁹⁶
 - ii.) It appears to be market practice that the winner of the OMS contract takes over the employees of the previous OMS supplier. According to a majority of competitors, this practice is common.¹⁹⁷
- (139) It follows that despite the general need for local presence, suppliers constrain each other even absent a prior local presence. In other words, the market can be considered EEA-wide from a supply-side perspective.
- (140) The Commission also notes, that, by way of exception, a local presence is not necessary in all cases. For example, Vestas explained that if it services a small wind farm in an area where it does not have other service activities, it does not maintain a local team but tries to solve issues from a distance. If local intervention is necessary, it will send a crew that will take longer to arrive than what would be the case if a proximity team was present. As a consequence Vestas might have to indemnify the customer under the availability guarantee of the OMS contract. However, in such a

¹⁹¹ Q1 Questionnaire to competitors, question 33.1.2

¹⁹² Q1 Questionnaire to competitors, question 34.

¹⁹³ Q1 Questionnaire to competitors, question 35.

¹⁹⁴ Q1 Questionnaire to competitors, question 33.1.2

¹⁹⁵ Q1 Questionnaire to competitors, question 33.1

¹⁹⁶ Q1 Questionnaire to competitors, question 32, Q2 Questionnaire to customers, question 28.

¹⁹⁷ Q1 Questionnaire to competitors, question 35.

case Vestas already factored in the indemnity payments and considered that not having a proximity team is more cost-efficient despite such payments.¹⁹⁸ Thus in certain cases an OMS supplier can be competitive and supply the service without local presence. Indeed, Blackrock noted that it also has OMS providers who perform effectively without maintaining a local team.¹⁹⁹ Likewise, Vattenfall considered that *“For smaller wind farms in price areas with low electricity price it could be more beneficial to have a remote team travelling to the wind farm when needed. But for bigger wind farms there will probably be things to do more regularly and therefore a more local team would be more beneficial.”*²⁰⁰ The fact that in certain cases local presence is not necessary reinforces the finding that the market is rather EEA-wide.

- (141) Although theoretically the market could also be larger than EEA-wide this is unlikely as demand-side differences (e.g. regulation) are likely to be much more pronounced than within the EEA and non-EEA suppliers are unlikely to constrain EEA suppliers with little effort and cost. The market investigation has not produced any evidence pointing to a market that is larger than EEA-wide.
- (142) On the basis of the above, the Commission considers that the market for onshore OMS is EEA-wide.

5.2.2.2. Offshore OMS

(A) Notifying Party’s view

- (143) The Notifying Party did not discuss offshore OMS in the Form CO.

(B) Commission precedents

- (144) The precedents discussed in Section 5.2.2.1 in relation to onshore OMS apply in the case of offshore OMS as well. As discussed in relation to onshore OMS, the Commission previously found that the markets for onshore and offshore OMS is not wider than the EEA (See Section 5.2.2.1.B). In addition, with respect to the servicing of other equipment, it found that the market for servicing heavy duty gas turbines is likely to be EEA-wide but left the market definition open. The same conclusions were reached with respect to the servicing of generators and steam turbines. The market for servicing (non-heavy duty) gas turbines was considered to be EEA-wide.

(C) The Commission’s assessment

- (145) The results of the market investigation mirror those obtained in relation to onshore OMS. As the underlying turbine market is EEA-wide and all turbines are based on the same principles, the services required are very similar across the EEA. The market investigation did not indicate that regulatory requirements would cause substantial differences.²⁰¹ Thus, just like in the case of onshore OMS, the important question is whether local presence is necessary, and, if so, whether this prevents EEA-wide competition.

¹⁹⁸ Minutes of a phone call with Vestas on 12 November 2019.

¹⁹⁹ [Customer] response to Q2 Questionnaire to customers, question 27.

²⁰⁰ [Customer] response to Q2 Questionnaire to customers, question 27.

²⁰¹ Q3 Questionnaire to competitors and customers, question 13.

- (146) In this regard, respondents to the market investigation were unanimous in their opinion that local presence is important and necessary due to availability and response time commitments in offshore OMS contracts.²⁰² As DWT explained *“Local presence is crucial for offshore services. It allows for fast reaction times and thus high turbine availability, key figure for asset owners and utilities. High availability means high production and high revenues. Team presence in the vicinity of the wind farm improves the probability of meeting availability goals drastically.”*²⁰³
- (147) However, most respondents also considered that offshore OMS providers can submit a credible bid in a Member State where they do not have presence by committing to build out local presence after the contract win.²⁰⁴ As Vattenfall noted *“An experienced OMS provider would be able to tender successfully based on analysis of local requirements and legislation of the future market to enter into, in combination with experiences gathered in their core markets.”*²⁰⁵ Thus it appears that an OMS provider without a local presence in a Member State can still constrain suppliers with a presence in that Member State. In other words the business requirement to have local presence does not prevent EEA-wide competition.
- (148) Just like in the case of onshore OMS, there are factors that facilitate building out local presence either before or after a contract award. These include the fact that knowledge of local language is not imperative, that crews are moved across borders and that the employees of the previous provider can be taken over.²⁰⁶
- (149) Consequently, the Commission considers that the market is EEA-wide, rather than national. Although theoretically the market could also be larger than EEA-wide this is unlikely as demand-side differences (e.g. regulation) are likely to be much more pronounced than within the EEA and non-EEA suppliers are unlikely to constrain EEA suppliers with little effort and cost. Indeed, there were no respondents who considered that the market would be worldwide and no evidence was submitted in this regard.²⁰⁷
- (150) Consequently, the Commission considers that the market for offshore OMS is EEA-wide.

5.2.2.3. Gearboxes

(A) Notifying Party’s view

- (151) The Notifying Party considers that the geographic market for gearboxes should be viewed as global in scope. While the frequency of the electricity grid is different in the EEA and North America and Asia (50 Hertz in the EEA, 60 Hertz in North America and Asia), the changes required in order to adapt the gearbox manufacturing process to one electrical grid frequency or the other are minor. The Notifying Party submits that the same production equipment can be, and is, used to manufacture gearboxes for all geographic areas. As regards transport costs, the

²⁰² Q3 Questionnaire to competitors and customers, question 10.

²⁰³ Q3 Questionnaire to competitors and customers, question 11.

²⁰⁴ Q3 Questionnaire to competitors and customers, question 12.

²⁰⁵ Q3 Questionnaire to competitors and customers, question 12.

²⁰⁶ Q3 Questionnaire to competitors and customers, question 12.

²⁰⁷ Q3 Questionnaire to competitors and customers, question 13

Notifying Party observes that transport costs are sizeable (can be as high as 10 % of the manufacturing cost) and result in a lack of trade between the EEA, North America and Asia. Nonetheless it considers that it can be more cost efficient to transport manufactured gearboxes between geographic regions. For example, Siemens has recently decided to serve demand in North America from its manufacturing and assembly facilities in China and Germany and has closed its parts manufacturing facility in the United States.²⁰⁸

- (152) In any event, the Notifying Party submits that the exact market definition can be left open as the Proposed Transaction does not give rise to any horizontal overlaps or any vertical competition issues in relation to gearboxes.²⁰⁹

(B) Commission precedents

- (153) In *ZF/Hansen*, the Commission found that although the grid frequency is different in the EEA (50 Hertz) and in North America and Asia (60 Hertz), argued that the production process of wind turbine gearboxes can be easily adjusted to take into account the design differences and thus wind turbine gearboxes for all geographic areas can be manufactured using the same production equipment. However, the market investigation revealed that transportation cost and a timely delivery of wind turbine gearboxes are important factors for customers and as a consequence gearboxes are generally sourced from within a particular geographic region.²¹⁰ As the transaction did not raise competition concerns under any of the market definitions, the Commission left the market definition open.²¹¹
- (154) In *Siemens/Gamesa*, the market investigation revealed that customers of gearboxes for wind turbines regularly procure them from outside the EEA, which would imply that neither the different grid frequency, nor transportation costs would limit competition to the EEA. However, the Commission ultimately left the definition open.²¹²

(C) The Commission's assessment

- (155) The market investigation confirmed that the different grid frequency prevents the use of the same gearbox in different world regions.²¹³ However, a majority of customers and competitors considered that, other than this factor, gearboxes do not differ significantly in terms of technical specifications, customer preferences and regulatory requirements across Europe, North America and Asia, such that a gearbox used in one region can also be used in another region.²¹⁴ With regard to the manufacturing process, a large majority of customers²¹⁵ and competitors²¹⁶ who expressed a view submitted that the production process of gearboxes can easily be adjusted to take into account the different grid frequencies. Thus, in line with the

²⁰⁸ Form CO, paragraph 201.

²⁰⁹ Form CO, paragraph 201.

²¹⁰ Case COMP/M.6361 – ZF/Hansen, paragraph 16.

²¹¹ Case COMP/M.6361 – ZF/Hansen, paragraph 17.

²¹² Case COMP/M.8134 – Siemens/Gamesa, paragraph 66.

²¹³ Q1 Questionnaire to competitors, question 38, Q2 Questionnaire to customers, question 33.

²¹⁴ Q1 Questionnaire to competitors, question 38, Q2 Questionnaire to customers, question 33.

²¹⁵ Q2 Questionnaire to customers, question 34.

²¹⁶ Q1 Questionnaire to competitors, question 39.

precedents, the differences in grid frequencies does not justify restricting the relevant market to the EEA.

- (156) As regards transport costs, a majority of competitors that expressed an opinion considered that transport costs can be significant.²¹⁷ It was submitted in this regard that gearboxes can weigh between 15 and 40 tons and as such logistics are an important factor in the price.²¹⁸ It was also highlighted that regulations on minimum local manufacturing content and long transport time also impacts negatively the sourcing of gearboxes from other regions.²¹⁹ Competitor responses to the question whether despite these factors suppliers from one region can constrain suppliers in other regions were unclear.²²⁰
- (157) Customers that gave a clear response were close to equally split on the question whether transport costs are significant such that a gearbox sourced from another region cannot be competitively priced. The opinion that transport costs do not preclude competitive pricing had only one more supporter than the opinion that they do.²²¹ Those who considered that transport costs do not preclude competitive pricing submitted that transport costs are not prohibitive;²²² that crane costs incurred when fitting the gearbox are more important;²²³ that transport costs can be compensated with lower manufacturing costs;²²⁴ that cost of maritime shipping is low;²²⁵ and that it does happen in the market that gearboxes to EEA turbines are sourced from Asia.²²⁶ Those who considered that transport costs preclude competitive pricing submitted that transport costs are significant²²⁷ and that sourcing from other regions is exceptional.²²⁸
- (158) Certain customers also mentioned that lead time is important, which would be another factor, in addition to transport costs, that limits intra-regional sourcing.²²⁹
- (159) As to the question whether gearboxes used in the EEA can actually be competitively sourced from other regions, a majority of customers considered that this is not the case.²³⁰
- (160) In summary, competitors viewed transport costs as significant, while customers' opinion were split in this regard. Lead time and requirements on local manufacturing content may also render suppliers from different regions uncompetitive. As regards the question whether these factors limit competition between suppliers based in different regions or competitive sourcing from other regions, competitors' responses were unclear, while customers considered that, indeed, these factors limit

²¹⁷ Q1 Questionnaire to competitors, question 40.

²¹⁸ See responses of EnBW and Ingeteam to Q1 Questionnaire to competitors, question 40.

²¹⁹ RWE's response to Q1 Questionnaire to competitors, question 40.

²²⁰ Q1 Questionnaire to competitors, question 40.

²²¹ Q2 Questionnaire to customers, question 35.

²²² [Customer] response to Q2 Questionnaire to customers, question 35.

²²³ Response of [Customer] to Q2 Questionnaire to customers, question 35.

²²⁴ Response of [Customer] to Q2 Questionnaire to customers, question 35.

²²⁵ Response of [Customer] to Q2 Questionnaire to customers, question 35.

²²⁶ [Customer] response to Q2 Questionnaire to customers, question 35.

²²⁷ Responses of [Customers] to Q2 Questionnaire to customers, question 35.

²²⁸ [Customer] response to Q2 Questionnaire to customers, question 35.

²²⁹ See the responses of [Customers] to Q2 Questionnaire to customers, question 35.

²³⁰ Q2 Questionnaire to customers, question 36.

competitive sourcing. Taken as a whole, the evidence points rather to an EEA-wide than a worldwide market but it is not fully conclusive in this regard. To confirm an EEA-wide market conclusively, a more detailed analysis of transport costs and trade flows would be necessary. In particular, it would be necessary to ascertain whether or not gearbox imports to the EU from other regions are marginal. However, for the present case such analysis does not appear necessary as the Transaction will not give rise to serious doubts as to its compatibility with the internal market irrespective of whether an EEA-wide or a worldwide geographic market definition is retained.²³¹

- (161) For completeness, the Commission notes that both competitors and customers confirmed, however, that within the EEA suppliers from different Member States do constrain each other.²³² This is all the more the case as there are only a handful of gearbox manufacturers and thus there is not one in each Member State. Thus the market is not narrower than EEA-wide.

5.2.2.4. The manufacturing and supply of offshore wind turbines

(A) The Notifying Party's view

- (162) As the proposed Transaction will not give rise to overlaps on the market for the manufacturing and supply of onshore and offshore wind turbines, the Notifying Party did not discuss market definitions relating to the manufacture and supply of wind turbines.

(B) Commission precedents

- (163) In *Siemens/Gamesa*, the Commission considered that the market for the manufacturing and supply of offshore wind turbines is EEA-wide.²³³
- (164) On the one hand, suppliers are able to and do, in fact, participate in tenders across the EEA regardless of the location of their manufacturing facilities within the EEA. Thus the market is not smaller than EEA-wide.²³⁴
- (165) On the other hand, logistics to transport a turbine are highly complex and costly. Thus, while components can be sourced on a worldwide basis, assembly is always carried out in the EEA in order to avoid logistical challenges and minimize transport costs. Consequently, transportation costs for turbine OEMs that do not have a base in the EEA translate into increased prices for EEA customers and prevent these suppliers from effectively competing with suppliers located in the EEA. Thus the Commission concluded that the market cannot be wider than the EEA.²³⁵

(C) The Commission's assessment

- (166) The factors underlying the geographic market definition in *Siemens/Gamesa* are unlikely to have changed. Further, the market investigation indicates that the supply and purchase of offshore wind turbines takes place on an EEA-wide, rather than a

²³¹ This is discussed in Section 5.3.2.

²³² Q1 Questionnaire to competitors, question 41, Q2 Questionnaire to customers, question 37.

²³³ Case COMP/M.8134 – *Siemens/Gamesa*, paragraphs 8-28.

²³⁴ Case COMP/M.8134 – *Siemens/Gamesa*, paragraphs 46-47.

²³⁵ Case COMP/M.8134 – *Siemens/Gamesa*, paragraphs 45 and 48-53.

national basis.²³⁶ Thus the market is at least EEA-wide, which is consistent with the assessment that, as discussed in Section 5.2.2.2, the offshore OMS market is EEA-wide. Indeed, if the service market, where proximity is more important, is EEA-wide, the manufacturing of offshore turbines is unlikely to be national, all the more so as offshore projects are large and thus the cost of participating in a tender relative to the contract value is small.

- (167) The market investigation has not produced any indication that, contrary to the Siemens/Gamesa precedent, the market for offshore wind turbine manufacturing has become wider than EEA (i.e. global). Indeed, given that, as discussed in Section 5.1.3, logistics and transport is already complex and costly for offshore OMS, the same applies to the transport of the offshore wind turbines as well, which could be 260 meters high from base to blade tip and the blade itself can be as long as 107 meters. Thus the Commission considers that, in line with the Siemens/Gamesa precedent, the market is not wider than EEA.

5.2.2.5. The manufacturing and supply of onshore wind turbines

(A) The Notifying Party's view

- (168) As the proposed Transaction will not give rise to overlaps on the market for the manufacturing and supply of onshore and offshore wind turbines, the Notifying Party did not discuss market definitions relating to the manufacture and supply of wind turbines.

(B) Commission precedents

- (169) In Siemens/Gamesa the Commission noted that the same arguments apply to the onshore wind turbine market as to the offshore wind turbine market and thus it concluded that the market is EEA-wide. It only noted that due to the complexities of road transport relative to sea transport, the market is even less likely to be wider than EEA than in the case of offshore turbines.²³⁷

(C) The Commission's assessment

- (170) The Commission considers that the market is EEA-wide rather than national for the same reasons as in the case of offshore wind turbines. First, the factors underlying are unlikely to have changed since the Siemens/Gamesa decision. Second, the market investigation indicates that the supply and purchase of offshore wind turbines takes place on an EEA-wide, rather than a national basis.²³⁸ Third, this is consistent with the geographic definition of the onshore OMS market, which is also EEA-wide. Indeed, as services in general are less tradable across borders than goods it would be highly implausible that the manufacturing market is national while the service market of the same wind turbines is EEA-wide.
- (171) While the market is at least EEA-wide, the market investigation has not produced any indication that the market for offshore wind turbine manufacturing has become wider than EEA (i.e. global).

²³⁶ Q3 Questionnaire to competitors and customers, questions 10-13.

²³⁷ Case COMP/M.8134 – Siemens/Gamesa, paragraphs 54-58.

²³⁸ Q1 Questionnaire to competitors, questions 80-82, Q2 Questionnaire to customers, questions 73-75.

- (172) Thus the Commission considers that, in line with the Siemens Gamesa precedent, the market is EEA-wide.

5.3. Competitive assessment

5.3.1. Assessment of horizontal relationships

5.3.1.1. Standalone onshore OMS services in the EEA

(A) Notifying Party's view

- (173) The Notifying Party considers that the proposed Transaction will not give rise to any competition concerns due to horizontal unilateral effects, for the following principle reasons:

- i.) The wind turbine services market is a dynamic market which is expected to show growing demand for stand-alone wind turbine services.²³⁹
- ii.) The Parties' combined market share is low and well below the threshold that would typically give rise to competition concerns.²⁴⁰
- iii.) Senvion only exerted a limited competitive constraint on SGRE as it only provided onshore wind turbine services for its own onshore wind turbine fleet.²⁴¹
- iv.) Post-transaction, the merged entity will continue to face strong competition from competing OEMs, ISPs and ASPs.²⁴²
- v.) SGRE will be subject to significant competitive constraints exercised by Asset Owners increasingly moving wind turbine services in-house.²⁴³
- vi.) The Target is subject to insolvency proceedings and would most likely exit the market in the short-term in the absence of the Proposed Transaction.²⁴⁴

(B) Commission's assessment

(B.i) Senvion's insolvency and the counterfactual

- (174) Senvion is experiencing severe financial difficulties. Senvion has reported annual net losses since its initial public offering in 2016. The financial performance deteriorated steadily, resulting in significant losses in the years 2017 and 2018. Senvion's balance sheet moved from a net cash position at the end of 2016, to EUR 64 million net debt at the end of 2017 and EUR 250 million net debt at the end of Q3 2018. On 19 February 2019, Senvion adjusted its 2018 financial guidance downwards and on 23 February 2019 Senvion announced the postponement of its results for financial year 2018 in the context of securing financing for the company. A transformation

²³⁹ Form CO paragraphs 252-253.

²⁴⁰ Form CO paragraphs 234-251 and 254.

²⁴¹ Form CO paragraphs 255-256.

²⁴² Form CO paragraphs 257-263.

²⁴³ Form CO paragraphs 264-266.

²⁴⁴ Form CO paragraphs 227-230.

programme was implemented as a matter of urgency, designed to stabilise the company, eliminate inefficiencies and improve execution.²⁴⁵

- (175) The transformation programme failed and refinancing discussions with lenders did not come to a positive conclusion. Consequently, on 9 April 2019 Servion and Servion Deutschland filed for insolvency with the local insolvency court of Hamburg, Germany.²⁴⁶ On the same day, the insolvency court of Hamburg ordered preliminary self-administration (*vorläufige Eigenverwaltung*) and the appointment of a preliminary custodian (*vorläufiger Sachwalter*).²⁴⁷ On 1 July 2019 the insolvency court opened insolvency proceedings and ordered self-administration for Servion.²⁴⁸
- (176) According to the Horizontal Merger Guidelines,²⁴⁹ in assessing the competitive effects of a merger, the Commission compares the competitive conditions that would result from the notified merger with the conditions that would have prevailed without the merger.²⁵⁰ As Servion is insolvent, it cannot be assumed that absent the proposed Transaction (“counterfactual”) it would stay on the market and compete, as is the case in most mergers involving solvent acquisition targets. Thus, in this case the counterfactual needs special consideration. In this Section, the Commission will establish the broad outlines of the counterfactual against which the effects of the proposed Transaction need to be assessed, and will discuss the consequences of this counterfactual for the assessment of the Transaction.

(B.i.a) Servion and Servion’s onshore servicing business is likely to exit the market

- (177) The first question is whether absent the Transaction Servion or Servion’s onshore servicing business would remain on the market as a going concern. To assess this, it is appropriate to review the insolvency proceedings that took place to date.
- (178) Following the entering into temporary self-administration, starting from May 2019, discussions between Servion and potential buyers started on selling the business to satisfy creditors. The primary goal of the sales process was to find a strategic investor for the whole of Servion.²⁵¹ Although Servion’s financial advisors Rothchild & Co (“Rothchild”) [Information regarding alternative bidders for the

²⁴⁵ Form CO, paragraph 227.

²⁴⁶ Form CO, paragraph 228.

²⁴⁷ Form CO, paragraph 228.

²⁴⁸ Insolvency Proceedings Servion GmbH, Case-Nr.: 67g IN 114/19, Insolvency Proceedings Servion Deutschland GmbH, Case-Nr.: 67g IN 114/19.

²⁴⁹ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, Official Journal of the European Union 2004/C/31, 5 February 2004.

²⁵⁰ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, Official Journal of the European Union 2004/C/31, 5 February 2004.

²⁵¹ Notifying Party’s response to the Commission’s RFI 1, question 2; internal document titled “Project Scirocco Status Update 27 August 2019”, page 6, submitted as Annex 2 to the Notifying Party’s response to the Commission’s RFI 1, question 2.

target business].²⁵² [Information regarding alternative bidders for the target business.].²⁵³ [Information regarding alternative bidders for the target business.].²⁵⁴

- (179) Following the failure of the sales process to sell the whole of Senvion, at the end of July 2019, the process to sell various parts of the Senvion business started. In this process, apart from SGRE, [Information regarding alternative bidders for the target business].²⁵⁵ Of these firms SGRE and [Information regarding alternative bidders for the target business] submitted indicative offers.²⁵⁶
- (180) It is also relevant in this context that potential buyers (who partially overlap with the potential buyers interested in the onshore servicing business) also expressed interest in acquiring other parts of Senvion as follows:²⁵⁷
- i.) In addition to SGRE, [Information regarding alternative bidders for the target business]. All [Information regarding alternative bidders for the target business] submitted indicative offers.²⁵⁸
 - ii.) In addition to SGRE's potential interest, [Information regarding alternative bidders for the target business] SGRE did not submit an offer for and did not acquire the offshore business.²⁵⁹
 - iii.) Other than SGRE, [Information regarding alternative bidders for the target business].²⁶⁰ SGRE also made a proposal for all of the IP.²⁶¹ In addition, [Information regarding alternative bidders for the target business].

²⁵² Internal document titled "Project Scirocco Status Update 19 June 2019", page 1, submitted as Annex 1 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵³ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 2, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵⁴ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 2, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵⁵ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", pages 5-7, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵⁶ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", pages 5-7, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵⁷ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", pages 2-7, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵⁸ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 3, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁵⁹ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 3, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁶⁰ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 3, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

²⁶¹ Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 4, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

- (181) After management meetings, Q&A sessions, expert sessions, site visits and structuring discussions, [Information regarding alternative bidders for the target business] strategic investors finally entered into discussions for certain parts of Senvion Group, including a full due diligence process.²⁶² However, of these [Information regarding alternative bidders for the target business] SGRE was prepared to acquire the onshore servicing business. [Information regarding alternative bidders for the target business].²⁶³ Out of these offers SGRE's was the most favourable to creditors and thus the Parties proceeded with the Proposed Transaction. Proceeding with SGRE meant that the other offers were turned down.
- (182) During the sale process Senvion was still operating under self-administration but it was quickly running out of funds that could ensure its operation. Senvion's Insolvency Plan, which was submitted to the Hamburg insolvency court and approved by the respective creditors' assembly, stated that if the spin-off to SGRE is not completed, the financing of the ongoing business operations of the company will be secured only until the end of September 2019 at the latest.²⁶⁴ The plan also stated that beyond the end of September, financing was no longer secured, so that as a result of the insufficient assets to be reported, the company will cease operations immediately and liquidation would follow.²⁶⁵ Eventually, the funds ran out by end of November 2019, and SGRE agreed to fund the business until the end of 2019.
- (183) On the basis of this review, the Commission considers that, absent the Transaction, Senvion as a whole and its onshore servicing business would exit the market and would not continue as a going concern for the following reasons.
- (184) First, SGRE made the most serious proposal for the onshore business, and potentially the only viable one. [Information regarding alternative bidders for the target business].²⁶⁶
- (185) Second, given the funding situation evidenced by the Insolvency Plan, at this point in time it is likely that there would be no time for an additional sale process, unless the buyer is prepared to fund the business. Based on [Information regarding alternative bidders for the target business],²⁶⁷ [Information regarding alternative bidders for the target business]. Thus, absent the Transaction, it is very likely that liquidation would follow. Operations would be ceased and a liquidator would be appointed who would manage the sale of individual assets and the distribution of the proceeds to creditors.

(B.i.b) Senvion's assets would not leave the market in their entirety

- (186) While absent the Transaction the onshore service business would exit the market as a going concern, it is very unlikely that all of its individual assets would also exit.

²⁶² Notifying Party's response to the Commission's RFI 1, question 2.

²⁶³ Notifying Party's response to the Commission's RFI 1, question 2.

²⁶⁴ Senvion's Insolvency Plan quoted in Form CO paragraph 230.

²⁶⁵ Senvion's Insolvency Plan quoted in Form CO paragraph 230.

²⁶⁶ Notifying Party's response to the Commission's RFI 1, question 2.

²⁶⁷ [Information regarding alternative bidders for the target business] based on Notifying Party's response to the Commission's RFI 1, question 2; internal document titled "Project Scirocco Status Update 27 August 2019", page 10, submitted as Annex 2 to the Notifying Party's response to the Commission's RFI 1, question 2.

- (187) First, Asset Owners of Senvion turbines would need a servicing solution and would thus turn to competitors for providing OMS. Competitors would also offer their services on their own initiative to former Senvion clients. It is reasonable to assume that competitors will win some opportunities and some Asset Owners will decide to provide OMS themselves. In doing so, competitors and Asset Owners are likely to take over former Senvion employees, an important asset in OMS, as this is standard practice in the industry (see Section 5.2.2.1.C) and it is unlikely that they would start hiring elsewhere when they can just take over Senvion employees close to the site to be serviced. Thus, a large proportion of Senvion service employees would remain on the market.
- (188) Second, all or part of the IP is likely to be acquired by a market participant in the liquidation process. This finding is based on the following:
- i.) Based on the review of the buying process above it is clear [Information regarding alternative bidders for the target business.]. As discussed in Section 5.2.1.3.C, the IP is an advantage in OMS servicing and thus it is plausible that OMS suppliers would request a licence. The licensing could take place on an exclusive or a non-exclusive basis.
 - ii.) On the basis of its investigation the Commission understands that a market participant would buy part of the IP if the Transaction did not go through. This is an indication that the IP may also be acquired by a competitor.
 - iii.) More generally, as discussed in Section 5.2.1.3.C the IP is valuable in OMS servicing and the sale process showed that a [Information regarding alternative bidders for the target business.]. As the Notifying Party explained, [Information regarding alternative bidders for the target business].²⁶⁸ However, compared to taking over the full business (especially stepping into existing contracts), the acquisition of IP requires less due diligence efforts and time investment. Further, once liquidation starts the timing constraints resulting from limited funding would not apply.
- (189) In all these cases the acquisition of the IP is all the more likely as the liquidation would follow a sale process that would be considered as having failed. Following an unsuccessful sale process, the prices of individual assets would likely be lower than in that sale process. This is especially the case as prices in liquidation are usually heavily discounted relative to their fair value.
- (190) Third, certain other assets would also likely be taken over. For example, it is very plausible that a competitor who would win over a former Senvion customer would take over not only the employees but also tools used by the former Senvion team. Other Senvion service tools and the buildings of Senvion's service hubs could also be plausibly acquired in the liquidation process.
- (191) The assets could be acquired not only by competitors but also by customers. Namely, self-servicing customers could also acquire employees, tools and related assets. Some customers, especially those with large wind farms, such as utilities could also acquire the IP as this could help them in servicing their assets. However,

²⁶⁸ Notifying Party's response to the Commission's RFI 1, question 2, paragraphs 5-6.

in the case of IP it is more likely that it would be acquired by a competitor than by a customer. This is because a competitor could make a better use of the asset as it could use it for servicing multiple customers.

(B.i.c) Competition in the absence of the Transaction

(192) As already indicated, in the absence of the Transaction, owners of Senvion turbines would need servicing, and they would likely to turn to Senvion's competitors or competitors would offer their services to these customers at their own initiative. In both cases, competition would ensue and Senvion's competitors, including SGRE, would capture these opportunities. In other words, Senvion's market share would be divided up between various competitors. The following principles apply in this regard:

- i.) As the IP provides an advantage, all else being equal, the acquirer of the IP would likely obtain a higher market share than without acquiring the IP.
- ii.) All else being equal, the closer a competitor to Senvion is, the higher market share it will acquire in the counterfactual.
- iii.) Those competitors who expressed an interest in the sale process can be assumed to compete for Senvion clients even if they may not have been close competitors of Senvion. This is because interest in the sales process indicates interest in expanding the business.

(193) It is against such counterfactual that the effect of the Transaction has to be assessed. At this stage it is sufficient to establish the main characteristics of the counterfactual. Additional analysis of the counterfactual will be carried out in relation to the assessment of impact of the Transaction in Sections 5.3.1.1.(B.ii) (market shares) and 5.3.1.1.(B.iii).

(B.i.d) Consequences for the assessment of the Transaction's impact

(194) In summary, the main characteristics of the counterfactual are the following:

- i.) Senvion as a going concern would exit the market.
- ii.) Senvion's onshore servicing assets would not leave the market in their entirety. In particular, a share of its employees, tools and certain other assets such as the buildings housing the service hubs would likely be acquired by competitors and by self-servicing Asset Owners. The IP would also likely be acquired by a competitor.
- iii.) Competition would ensue for former Senvion clients and competitors would divide up Senvion's market share. Close competitors, the acquirer of the IP and those expressing an interest in the sale process, would, all else being equal, acquire a larger share than other competitors.

(195) The following consequences ensue with regard to the assessment of the Transaction:

(196) First, the Transaction does not reduce the number of competitors on the onshore OMS market. As Senvion would exit the market anyway, the number of competitors does not change. As such the Transaction does not eliminate the competitive

pressure between Senvion and SGRE. Nor does it eliminate competition between any other competitors.

- (197) Second, this does not mean that the Transaction per se cannot have any negative impact on competition. Indeed, the effect of the Transaction is that it redistributes the market shares between competitors. Instead of all competitors competing and potentially increasing their market shares, the Transaction assigns most of the market share of Senvion to SGRE. This could potentially lead to serious doubts if the market structure changed in an anticompetitive way (e.g. if SGRE was dominant and its market position would be strengthened)
- (198) Third, if it were otherwise problematic, the merger is unlikely to meet the criteria of the failing firm defence as a large part of Senvion’s assets would remain in the market.²⁶⁹
- (199) Fourth, closeness has the opposite effect as in merger cases involving solvent targets. As discussed above, if Senvion and SGRE were close competitors, then a large number of customers would switch to SGRE in the counterfactual, reducing thereby the impact of the Transaction.

(B.ii) Market shares

(B.ii.a) Market shares submitted by the Notifying Party

- (200) The Notifying Party submitted three different sets of market share data based on three different methodologies.
- (201) The first set of market shares is presented in Table 1 below. The Commission completed the shares by adding the column “others”.

Table 1: Average market shares for the supply of stand-alone onshore wind turbine services for 2016-2018 in the EEA²⁷⁰

	SGRE	Senvion	Combined	Enercon	GE	Nordex	Vestas	Others
2018	[10-20]%	[5-10]%	[20-30]%	[20-30]%	[0-5]%	[5-10]%	[20-30]%	[20-30]%
2017	[10-20]%	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[5-10]%	[20-30]%	[20-30]%
2016	[10-20]%	[5-10]%	[20-30]%	[20-30]%	[0-5]%	[5-10]%	[20-30]%	[20-30]%
Average	[10-20]%	[5-10]%	[20-30]%	[20-30]%	[0-5]%	[5-10]%	[20-30]%	[20-30]%

- (202) In order to estimate the market size and the market shares of OEMs, the Notifying Party applied the following assumptions.²⁷¹

²⁶⁹ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, paragraph 90, Official Journal of the European Union 2004/C/31, 5 February 2004.

²⁷⁰ Form CO, Table 11.

²⁷¹ Form CO, paragraph 236.

- i.) The Notifying Party assumes that all newly installed wind turbines are serviced by their OEM for a duration of five years and form part of the market for wind turbines. This assumption is supposed to reflect the practice that turbines are sold with warranty and together with an LTP and that as a result in the first five years it is usually the OEM that services the turbines.
 - ii.) When the warranty/initial service contract ends after an average duration of five years, the initial OEM, other OEMs, ISPs and ASPs can compete to enter into a new OMS contract with the customer/Asset Owner. The Notifying Party has assumed that this subsequent OMS contract also has an average duration of five years as the Notifying Party considers that this is the most common contract duration.
 - iii.) The same logic applies to subsequent OMS contracts.
 - iv.) Wind turbines have an average lifetime of approx. 20 years.
- (203) The data on onshore wind turbines installed base is derived from the Global Windpower Project Installation Database, which provides project-specific data on newly installed wind turbines globally (including, amongst others, the winning OEM and the year when the turbines were connected to the grid) but does not capture stand-alone wind turbine services projects.
- (204) On this basis, the Notifying Party estimated the market size for the stand-alone provision of onshore services on the following basis for each of the last three years (2018, 2017 and 2016):
- i.) The total market for stand-alone services in year t is assumed to be the sum of the total installed base that became operational in the years $t-5$, $t-10$ and $t-15$. For example, to calculate the 2016 market size, the sum is calculated of all onshore wind turbines (in MW) installed in 2011, in 2006 and in 2001. In any given year, the market size is therefore determined by the wind turbines that have been installed five, ten and 15 years before. This methodology reflects the abovementioned assumption that independent onshore wind turbine contracts are on average renewed every 5 years.
 - ii.) New onshore wind turbine installations in that year were excluded, on the basis that the services for those new turbines are provided under the warranty or LTP sold as part of the installation contract, such that they are not available on the stand-alone market.
 - iii.) A turbine installed in, for instance, year $t-7$ is assumed to have been tendered for stand-alone services for the first time in year $t-2$ and will be re-tendered in the years $t+3$ and $t+8$. As such it will not be included in the market calculation for year t , but it will be part of the calculations for the years $t-2$, $t+3$ and $t+8$.
- (205) The total market size was given in MW of capacity serviced, i.e. in volume.
- (206) Starting from this estimated market size, the parties assessed each OEM's market share by

- i.) Obtaining, from public sources, the size of each OEM's fleet/installed base in MW; and
 - ii.) Estimating the share of every OEM's fleet / installed base for which that OEM performs the services. The relevant data to identify each OEM's respective share was collected from publicly available resources. The shares of each OEM are as follows: SGRE: 80%, Senvion: 80%, Vestas: 82%, Nordex: 74%, Enercon: 90%, GE: 50%.
- (207) Just like in the case of market size, the shares of OEMs are calculated in MW of capacity serviced, i.e. also in volume.
- (208) The Notifying Party recognises that this methodology is based on a number of assumptions. However, it considers that any inaccuracies would most likely overestimate the Parties' market shares and underestimate competitors' market shares. First, when estimating the share of each OEM, the described methodology does not take into account OMS provided by an OEM on another OEM's turbine. Second, the rate at which SGRE services its own turbines varies significantly by country. However, as detailed country by country data is not available, to be conservative and not to underestimate SGRE's market share, the Notifying Party applied a single rate of 80%, whereas for SGRE this rate is lower in some Member States.
- (209) By way of an alternative data set, the Notifying Party submitted a second set of market shares, which is presented in Table 2 below.

Table 2: Market shares of the Parties based on fleet serviced out of the total installed base volume in 2019 in the EEA²⁷²

MW				% market share		
Installed Base – EEA Total	SGRE serviced fleet 2019	Senvion serviced fleet 2019	Combined serviced fleet	SGRE market share %	Senvion market share %	Combined market share %
164,608	[...]	[...]	[...]	[10-20]%	[5-10]%	[10-20]%

- (210) The market share estimates provided in Table 2 present the total MW of onshore wind turbines serviced by each Party in 2019 out of the total onshore wind turbine installed base. These market shares were not provided for competitors and do not distinguish between standalone and captive OMS.

²⁷² Form CO, Table 9.

- (211) Third, in response to comments by the Commission, the Notifying Party also submitted value based shares. These are presented in Table 3 below.

Table 3 : Market shares of the Parties based on fleet serviced out of the total installed base by value in 2019 in the EEA

EEA Total Market size in Million EUR	SGRE onshore servicing sales in Million EUR	SGRE market share	Senvion onshore servicing sales in Million EUR	Senvion market share %	Combined market share %
4185	[...]	[5-10]%	[...]	[0-5]%	[10-20]%

- (212) These market shares reflect the relation between the Parties' onshore wind turbine services revenue and estimated total onshore wind turbine servicing revenue. The Parties' revenue is calculated on the latest available turnover data. The total market size was calculated based on the revenue per MW estimated by an industry consultancy for 2017²⁷³ and the total installed base.

(B.ii.b) Commission's assessment of market shares

- (213) As is the case with many bidding markets, given that in the standalone OMS market contracts are long-term and competition takes place at the time of the contract award, the most relevant metric to measure market share is order intake, i.e. the total value of orders received in a given year by a supplier, even if the order will be fulfilled in the following five years. The market share of a supplier in certain year is given by dividing the total orders awarded in a given year by the order intake of that supplier. In the OMS market this would imply that a supplier's share in 2018 is given by the total value of all contracts won by that supplier in 2018 divided by the total value of all contracts awarded in 2018. If demand is characterised by large and infrequent orders, yearly order intakes can be averaged out.
- (214) Order intake market shares are preferable to shares based on the share of actual supply as such shares could reflect competition that took place several years before the supply. For example, if the 2018 market share of a supplier is calculated by the service revenue earned in 2018 relative to the total service revenue in the market in 2018, then such a share may very well reflect revenues earned as a result of a tender in 2013. Thus it is less informative on competitive conditions in 2018.
- (215) In addition, as the market is differentiated, value based market shares are preferable to volume based market shares, in line with paragraph 55 of the Commission's Notice on Market Definition.²⁷⁴ This is because in differentiated markets each unit of good or service sold is different and it may very well be that a competitor providing high value added, high margin products in lower quantity is stronger than another competitor providing higher volume but lower quality and low margin products. The

²⁷³ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trends 2019, provided as Annex 11.1, page 4. As the revenue information in the Wood Mackenzie Report is provided in USD, the annual average exchange rate for 2017 as provided by the ECB of 1,13 has been applied.

²⁷⁴ Commission notice on the definition of relevant market for the purposes of Community competition law, Official Journal of the European Communities 97/C 372 /03.

overall value of the service provided (that is volume times price) captures such differences and hence reflects better the strength of each supplier.

- (216) Specifically, with regard to the standalone onshore OMS market it is also preferable that the market shares exclude any services provided under warranty and LTPs as these would overestimate OEMs' market shares relative to ISPs and ASPs.
- (217) However, data for such ideal market shares is not always readily available, which is especially true for the standalone onshore OMS market.
- (218) Indeed, there appears to be no available data which would allow for a calculation of market shares on an "order intake" basis. In particular, there is no comprehensive database available which would allow the calculation of the sum of the value of the service contracts tendered out in a certain year. The Parties do not maintain "project lists" and there is no comprehensive third-party data source. An important factor is that not all Asset Owners organise formal, let alone public, tenders for servicing contracts. Many customers decide contract with a third-party service provider (OEM, ISP, ASP) without organising a formal tender process, e.g. by requesting a proposal from one or a handful of potential service providers. Thus OMS suppliers are often not aware of all opportunities. In light of this variety of purchasing techniques, there is limited transparency on the total amount of servicing projects on the market in a given year.²⁷⁵
- (219) It appears especially difficult to compute value based shares for the following reasons:²⁷⁶
- i.) Onshore turbine OMS providers do not provide value-based sales information to industry consultancies and research groups or other third parties as this would allow competitors to derive information on the value of individual projects. Accordingly, third parties do not provide value-based market shares.
 - ii.) The value of wind turbine service contracts is not generally reported by Asset Owners or OMS suppliers.
 - iii.) Competitors often do not release any information on their service activities to the press, and where press releases are available they do not disclose the value of projects.
 - iv.) Even for a contract for which a supplier bids, customers will not generally provide reliable details as to the value of competitor bids.
 - v.) Especially in onshore OMS, there are many tenders that an OMS supplier is not aware of, and a further number of tenders that an OMS supplier is aware of but does not participate in. In all of these cases it is difficult to estimate a project value.
- (220) Due to this general lack of availability of good quality data, the Commission tried to reconstruct the market by requesting value based order intake data from market participants. However, the response rate was below the level that would allow a full

²⁷⁵ Form CO, paragraph 244.

²⁷⁶ Form CO, paragraph 248.

reconstruction and the quality of data was often poor and incomplete. Despite detailed guidance on how to fill in the template, respondents reported the data using different interpretations such that often the data reported by two different respondents were not comparable.

(221) Under these circumstances it is reasonable to use proxies to the extent they are methodologically sound. The first set of market shares submitted by the Notifying Party appears to be such a metric as it tries to proxy the standalone order intake shares. In particular:

- i.) The overall market in, for example, 2018 corresponds to the installed base in 2013, 2008 and 2003 (in volume i.e. in MW of capacity served) as these are the turbines in respect of which OMS is tendered out assuming that in the first five years is OMS provided under warranty or LTP and that after that OMS is tendered out on average in every five years. The Commission notes that the overall sizes calculated this way are sensitive to the 5-year assumption. However, as discussed in paragraphs (49) and (57), the market investigation confirmed that indeed most often the LTP can be exited the first time after five years and that once the customer opted out the most common OMS contract term is five years (or if the contract is longer there is an exit clause every five years). That is to say the 5-year assumption appears to be a good modelling choice.
- ii.) The same applies to the shares of individual OEMs. E.g. the share of, say Vestas in 2018, was calculated by obtaining the Vestas installed base in 2013, 2008 and 2003 (in volume i.e. in MW of capacity served) and then correcting it by the figure representing the share of Vestas in servicing its own turbines. Thus the share of Vestas proxies the total volume of contracts Vestas captured in 2018 out of all the contracts that came up for tendering that year. The approach thus mimics order intakes.
- iii.) It is true that the figure that represents for each OEM the share of its fleet for which the same OEM performs the services is not specific to a given year but an overall stock figure. That is to say, the [80-90] % share that was used in the case of Vestas to correct the volumes it captured in 2018 is not specific to 2018 but rather an overall, present-day stock figure. Thus the methodology implicitly assumes that the present day stock-figure applies in each year, which may not be warranted. However, this does not appear to cause a major distortion as third party sources indicate that the share changes slowly over the years.²⁷⁷

(222) The market share methodology can be considered conservative in two aspects:

- i.) First, the methodology assumes that after the first 5 years all customers become part of the standalone market, whereas the discussion in Section 5.1.2.5 (A) made it clear that a significant portion does not opt out of the LTP. Thus the methodology implicitly assumes that not opting out of the LTP when it becomes possible is a competitive choice. However, one could also consider that these customers remained non-addressable and part of the

²⁷⁷ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trends 2019, provided as Annex 11.1.

captive market as they have not organized a tender or invited competitors to provide OMS on their turbines.. Under this view, given that there was no indication in the market investigation that some OEMs' customers tend to stay longer with LTP than others, there is no effect on OEMs' relative shares. However, in this case the methodology would overestimate both the market size and OEMs' share relative to ISPs and ASPs, i.e. it would underestimate ISPs' and ASPs' share. (ISPs' and ASPs' share is the difference between [90-100]% and the total presented in Table 1.).

- ii.) Second, the market shares exclude self-supply by Asset Owners, whereas self-servicing is clearly a constraint on the Parties. From the Parties' perspective, opting for self-servicing amounts to losing business to a competitor. Indeed, an overwhelming majority of customers that expressed an opinion (mostly those that do in fact self-service) considered that the possibility of self-servicing has a disciplining effect in terms of price and quality on OMS providers, including OEMs.²⁷⁸
- (223) Thus the methodology rather overestimates the Parties' shares and underestimates competitors' shares than vice versa.
- (224) The methodology does have some drawbacks but these are unlikely to greatly distort the competitive picture.
- (225) First, while the 5-year assumption is correct on average, other periods also exist, which can cause some variations from year to year. However, given the lack of precise data, some simplifying assumptions are unavoidable. Further, several iterations of market shares using the same methodology (for years 2014 and 2015 as well as 5 year average instead of the 3-year average) produced very similar shares.²⁷⁹
- (226) Second, the methodology is volume based and not value based, which, as discussed, is less preferable in differentiated markets. In this regard, however, the comparison between the Parties' volume and value based market shares in Table 2 and Table 3 shows that the difference between the two is minor ([10-20]% vs. [5-10]% for SGRE and [0-5]% vs. [5-10]% for Senvion), which suggests that the volume shares do not distort the competitive picture. The market shares in Table 2 and Table 3 were computed on the basis of a different and less sound methodology but they are useful to demonstrate that in general there is not a significant difference between volume and value based shares.
- (227) Third, OEMs' share excludes OEMs' multi-brand activities. For example, Vestas' share was calculated by how much volume Vestas captured out of its own turbines that came up for tendering. However, Vestas is known in the market for having the most extensive multi-brand activities as an ASP, i.e. Vestas services a significant amount of non-Vestas turbines too.²⁸⁰ At the same time, given that the total market size also includes turbines that are serviced by OEMs as ASPs, the residual non-OEM share includes these multi-brand activities and thus overestimates this share. In other words, the shares of all OEMs should be the sum of its activities as OEM and OEM ASP but this is not the case. As a result, the share of all OEMs that engage in

²⁷⁸ Q2 questionnaire to customers, question 52.

²⁷⁹ Form CO, Annex 13.

²⁸⁰ Form CO, paragraph 117.

multi-brand servicing (all except Enercon and Senvion) should be higher and the residual non-OEM share should be lower so that it only corresponds to ISPs and Asset Owner ASPs. In other words, taking multi-brand activity into account SGRE's share should be higher and competitors' shares should be rearranged. In particular, Vestas's share should be higher and the residual share of ISPs and Asset Owner ASPs should be lower. However, as multi-brand activity of OEM ASPs is relatively new and not so widespread,²⁸¹ the effect of this is not large. Furthermore, the Notifying Party deliberately overestimated the share of SGRE's turbines serviced by SGRE,²⁸² which compensates for the potential slight underestimation of SGRE's share.

- (228) Overall, the Commission considers that the methodology behind the market shares in Table 1 is sound and if anything it overestimates the Parties' share and underestimates competitors' share. As such, in the absence of good quality data, it is an acceptable proxy.

(B.ii.c) Assessment of the effects of the Transaction based on market shares

- (229) For illustration purposes, in Table 4 the Commission assumes that in the counterfactual each competitor wins over an equal share of Senvion customers. The merger scenario involves adding up Senvion's and SGRE's market share while leaving the other market shares unchanged. Although SGRE acquires only 80 % of onshore OMS contracts the Commission allocated all of Senvion's market share to SGRE in the merger scenario as SGRE may be able to win some further onshore OMS contracts as a result of the advantage it might gain from Senvion's IP. It is therefore a conservative scenario. To simplify, ISPs and ASPs are treated as one competitor. Further, as discussed in paragraph (227), the ISP/ASP column should be viewed as the share of ISPs and Asset Owner ASPs. Moreover, as Enercon does not service non-Enercon turbines as a matter of business policy, no additional share is allocated to Enercon in the counterfactual (as it is unlikely that Enercon would compete for former Senvion customers in the counterfactual given its business policy). All other OEMs have or will have multi-brand capabilities in the short term and are likely to compete for Senvion customers in the counterfactual. The shift of market shares as a result of the Transaction is indicated in the table.

²⁸¹ Minutes of phone calls with Enercon, GE and Nordex on 8 November 2019, 15 November 2019 and 15 November 2019 respectively.

²⁸² Form CO paragraph 243. SGRE's share is closer to [60-70]% but to make sure the calculation is consistent with the calculation of the share for competitors, the Notifying Party used a share of 80%.

Table 4 : Effects of the Transaction assuming equal split of Senvion’s market share in the counterfactual

	Senvion	SGRE	Vestas	Enercon	Nordex	GE	ISPs/ ASPs
2016-2018 market shares	[5-10]%	[10-20]%	[20-30]%	[20-30]%	[5-10]%	[0-5]%	[20-30]%
Counterfactual assuming equal split of Senvion customers among all competitors except Enercon	n/a	[10-20]%	[20-30]%	[20-30]%	[5-10]%	[0-5]%	[20-30]%
Merger	n/a	[20-30]%	[20-30]%	[20-30]%	[5-10]%	[0-5]%	[20-30]%
Change in market share as a result of the Transaction	n/a	+[5-10]%	-[0-5]%	[0-5]%	-[0-5]%	-[0-5]%	-[0-5]%

- (230) The above example is just an illustration. As discussed in Section 5.3.1.1 (B.i.c), the assessment of the competition absent the Transaction would require identifying who would acquire the IP (as all else being equal this competitor is likely to acquire a larger market share), which competitors are close to Senvion (as all else being equal, close competitors would acquire a larger share) and which competitors expressed interest in the sale process (as all else being equal, they are likely to acquire a larger share).
- (231) However, this does not appear necessary, which can be demonstrated by assuming a “most competitive” counterfactual among the remotely realistic counterfactuals, (i.e. excluding counterfactuals that are truly not realistic such as a new entrant or a fringe competitor with close to 0% share winning over all Senvion customers and replacing Senvion). This is illustrated in Table 5. In this counterfactual the Commission assumed that GE, the smallest OEM competitor, would acquire the IP and win over all of Senvion’s current customers. As a counterfactual, such scenario would provide for the most competitive outcome as the smallest competitor acquires the entire Senvion share. Thus it is against this counterfactual that the Transaction would have the largest negative impact (i.e. “worst case scenario” for the Transaction). If this effect does not lead to a significant impediment of effective competition, nor will the effect stemming from any different counterfactual.

Table 5 : Effects of the Transaction assuming most competitive counterfactual

	Senvion	SGRE	Vestas	Enercon	Nordex	GE	ISPs/ ASPs
2016-2018 market shares	[5-10]%	[10-20]%	[20-30]%	[20-30]%	[5-10]%	[0-5]%	[20-30]%
Most competitive counterfactual assuming GE acquires all Senvion customers	n/a	[10-20]%	[20-30]%	[20-30]%	[5-10]%	[10-20]%	[20-30]%
Merger	n/a	[20-30]%	[20-30]%	[20-30]%	[5-10]%	[0-5]%	[20-30]%
Change in market share as a result of the Transaction	n/a	+[5-10]%	[0-5]%	[0-5]%	[0-5]%	-[5-10]%	[0-5]%

- (232) In this case, the Transaction would increase SGRE's market share by [5-10]% and reduce GE's by [5-10]%, i.e. SGRE would gain share at the expense of GE and thus prevent GE from becoming a larger competitor. Even in such a case, the merged entity's share would not exceed [20-30]% in the merger scenario and three OEMs and a large number of ISPs would remain on the market.²⁸³ However, this is an extreme example and the effect of the Transaction would be much less negative than what is indicated in Table 5.
- i.) In reality, it is unlikely that GE would win over all Senvion customers. As stated above, absent the Transaction, the Senvion onshore servicing business would not continue as a going concern. Even if a smaller competitor like GE would acquire the IP and thus a competitive advantage when competing for the Senvion customers, it seems very unlikely that such advantage would translate into winning most of the Senvion customers. Also, as SGRE expressed interest in expanding, it would surely win over some customers in the counterfactual, which reduces the increment to less than [5-10]%
 - ii.) It is likely that Vestas and the ISPs/ASPs would also win over some customers in the counterfactual.
 - iii.) As discussed previously, the market shares can be viewed as conservative and may thus overstate the Parties' share. Thus the combined share in reality would likely be less than [20-30]%
- (233) Thus, the post-Transaction market share of SGRE would be less than [20-30]% with an increment that is considerably less than [5-10]%. At the same time, the Transaction would decrease the shares of other competitors only slightly. Moreover, the number of competitors would not change.
- (234) Thus the analysis of market shares does not point to a significant impediment of effective competition. Nevertheless, market share data cannot be taken in isolation and needs to be complemented with qualitative assessment.

(B.iii) Qualitative assessment of the impact of the Transaction

(B.iii.a) Role of IP in the competitive process

- (235) As already discussed in Section 5.1.2.6, access to the SCADA system, the SCADA software, access to the turbine controller as well as technical drawings of the turbine and some of its spare parts is protected by IP. The owner of the IP is the OEM and thus the question is to what extent the IP strengthens the competitive position of the OEM vis-à-vis ISPs and ASPs.
- (236) As discussed in relation to market definition in Section 5.2.1.3.(C), the IP facilitates the performance of certain OMS tasks. For example, SCADA access the turbine can be stopped from a distance, whereas without access it can only be stopped manually on site.²⁸⁴ By its nature, remote monitoring and remote operation of the turbine is software based and thus requires some kind of access.²⁸⁵ SCADA access facilitates major correctives and component upgrades as after a major component exchange the

²⁸³ More detail on the nature of these constraints is provided in Section 5.3.1.1 (B.iii).

²⁸⁴ Minutes of a phone call with Enercon on 8 November 2019.

²⁸⁵ [Customer] response to Q2 Questionnaire to customers, question 21.

SCADA software needs to be reloaded and the SCADA computer reset.²⁸⁶ Supplying and installing spare parts is easier with access to drawings and other documentation.²⁸⁷

- (237) In the market investigation ISPs and Asset Owner ASPs had different views from OEMs as regards the advantage afforded to OEMs by the ownership of the IP.
- (238) An OEM for example explained that the customer has a licence to the SCADA system and has access rights.²⁸⁸ Using this licence and these access rights ISPs can access the system and perform most OMS tasks. In particular, an ISP can read the data displayed in the SCADA system and perform OMS tasks on that basis.²⁸⁹ Thus the IP does not provide advantages with regard to a large majority of OMS tasks.
- (239) OEMs acknowledge, however, that access of the customers and thus ISPs and ASPs is not full and that only the OEM has deeper level access.²⁹⁰ OEMs emphasise that deeper level access to SCADA has a security aspect as changing certain parameters of the wind turbines could permanently damage the turbines, compromise the safety of technicians, result in non-compliance with grid requirements and potentially damage parts of the grid network.²⁹¹ They consider however that such deeper level of access does not give them competitive advantage.²⁹²
- (240) ISPs and non-OEM ASPs (i.e. ASPs that do not have an own turbine business and thus view this issue from a pure non-OEM perspective) had a different view. These respondents considered that limited access to the SCADA system reduces ISPs' capabilities for innovation, reactivity, performance, cost efficiency and that as a result they are at a disadvantage in performing full-scope high quality OMS.²⁹³ As regards data access they agreed that they can access the SCADA output data on site but considered that this is not sufficient to fully manage the wind farm in all aspects. They also submitted that they do not have access to the 24/7 surveillance data.²⁹⁴
- (241) Thus, overall opinions on the nature and extent of the advantage are inconclusive and the issue can only be assessed by reference to specific market practices and outcomes. Overall, the Commission considers that while the IP affords OEMs with an advantage, ISPs and ASPs remain effective competitors. This is because
- i.) The IP advantage is mitigated by certain practices such as SCADA retrofitting, workaround methods and access to the IP against a licence fee. In addition, the bulk of OMS activities by value can be performed independently of the OEM.

²⁸⁶ [Customer] response to Q2 Questionnaire to customers, question 21; Response of [Customer] to Q2 Questionnaire to customers, question 21.

²⁸⁷ Responses of EDF, EnBW and ENGIE to Q1 Questionnaire to competitors, question 22.

²⁸⁸ Minutes of a phone call with Enercon on 8 November 2019.

²⁸⁹ Vestas's response to Q1 Questionnaire to competitors, question 55.

²⁹⁰ Minutes of phone calls with Enercon and Nordex on 8 November 2019 and 15 November 2019 respectively.

²⁹¹ Vestas's response to Q1 Questionnaire to competitors, question 54.

²⁹² Q1 Questionnaire to competitors, question 54.

²⁹³ Q1 Questionnaire to competitors, question 54.

²⁹⁴ Q1 Questionnaire to competitors, question 55.

- ii.) Observed market outcomes show that ISPs and ASPs are effective competitors.

(242) These points are explained below. As OEMs admitted that an advantage exists, the Commission takes this as a starting point and focuses on the reasons why, despite the advantage, ISPs and ASPs remain effective competitors.

Mitigating factors

(243) As discussed in Section 5.2.1.3.(C), there are three key factors that mitigate the advantage.

(244) First, a new SCADA system can be retrofitted on the turbine.²⁹⁵ Retrofitting overcomes all constraints from not having SCADA access. However, a number of market participants indicated that it is a more costly solution and not very prevalent so far.²⁹⁶ It was also submitted that third-party SCADA solutions do not have all functionalities and that retrofitting may carry the risk of losing certification.²⁹⁷

(245) By contrast, others considered retrofitting a workable option. For example, Ingeteam, an ISP, considered that this is a feasible solution²⁹⁸ while Vestas explained that “*Vestas does this and it is doable with some reasonable investments.*”²⁹⁹ The Commission also notes that DWT, an ISP, already services 377 Senvion turbines using a third-party SCADA system.³⁰⁰ There are also a number of companies active in the OMS space who specifically focus on offering retrofitting services such as DEIF and Mita-Teknik.³⁰¹ This suggests that there is a market for such services.

(246) Overall, in line with the majority of opinions the Commission considers that while retrofitting a third party SCADA involves some risks and costs, and thus it is not widespread, it remains an option that mitigates the IP advantage and certainly limits the advantages/rents that can be extracted from having access.

(247) Second, some ISPs have workaround methods.³⁰² Both customers and competitors were roughly equally split on the question whether such work around methods can fully eliminate the advantages stemming from SCADA access,³⁰³ which actually indicates that they can considerably reduce the advantage. However, such methods can carry some technical or legal risk or can be more costly.³⁰⁴ As ENGIE explained “*ISP is able to do the necessary maintenance in line with the contractual terms & conditions, but does not have full access to the SCADA data. This no good practice, since this forces the ISP to “work arounds” which may imply to intervene on the*

²⁹⁵ Form CO, paragraph 386.

²⁹⁶ Q1 Questionnaire to competitors, question 57. Q2 questionnaire to customers, question 51.

²⁹⁷ Q1 Questionnaire to competitors, question 57. Q2 questionnaire to customers, question 51.

²⁹⁸ Ingeteam’s response to Q1 Questionnaire to competitors, question 57

²⁹⁹ Vestas’ response to Q1 Questionnaire to competitors, question 57.

³⁰⁰ Deutsche Windtechnik Newsletter of December 2019, page 1.

³⁰¹ The Parties also submit that companies such as SCADA International, Bachmann, Spicotech, DNV-GL, Fos4x, ICONICS, Industrial Technology Systems, orbital, KK Wind Solutions, SCADA Solutions appear to provide various (multi-brand) SCADA-based retrofitting solutions for wind turbines.

³⁰² Form CO, paragraph 387.

³⁰³ Q1 Questionnaire to competitors, question 57, Q2 Questionnaire to customers, question 51.

³⁰⁴ Q1 Questionnaire to competitors, question 57.

software.”³⁰⁵ Others emphasised that such work around methods involve time and money.³⁰⁶ Thus, while such methods can considerably reduce the advantage, they too involve some costs or risks. However, certain customers do choose this option as the benefits may be worth the costs. For example, some Asset Owners chose to replace or convert the controllers, routers and interfaces, which grant user access to the SCADA system and data.³⁰⁷ Even before Senvion’s insolvency, German software provider Drehpunkt has been offering off-the-shelf interface solutions for Senvion turbines, which enable Asset Owners and operators to access, readout and store all data generated by Senvion’s pre-installed SCADA system.³⁰⁸ Thus the Commission considers that, while such work around methods do not fully eliminate the advantage they are a practice in the market and mitigate OEMs’ advantages to a certain extent.

- (248) Third, ISPs and non-OEM ASPs can get access to the IP against licence fees. While the OEM may not have an incentive to provide such access, it is clear from the market investigation that granting such access is part of market practice. For example, several ISPs submitted that they can have SCADA access rights but they have to pay for such access to the OEM and renew subscription to the access codes every three months.³⁰⁹ Likewise Cubico Sustainable Developments noted that Asset Owners can replace the OEM with an ISP through an agreement or by paying for the IP information needed.³¹⁰ Other Asset Owners submitted similar responses.³¹¹ Reasons why OEMs grant such access could include the desire not to alienate the customer who can also be an important customer in wind turbines.
- (249) While having to pay for access may be considered a competitive disadvantage, ISPs have lower overhead and did not have to bear the development costs of the IP. It was generally considered that ISPs’ advantage is price.³¹² Thus the disadvantage of paying for access is rebalanced to a certain extent by lower costs.
- (250) Finally, the Commission also notes that, as discussed in Section 5.2.1.3.(C), it appears that ISPs are in any event able to do the bulk of the service tasks by value fully independently of the OEM. Even though the remaining tasks are also essential to run a windfarm, ISPs can execute these tasks if they pay a licence fee to obtain the necessary access codes (or implement workarounds/retrofitting).

Observed market outcomes

- (251) The finding that ISPs and ASPs are effective competitors is in line with observed market outcomes.
- (252) First, as explained in Section 5.1.2.3, a significant share of customers self-service their turbines. For example in Spain and in the United Kingdom 28% and 21% of installed capacity is self-serviced respectively.³¹³ In that scenario, typically the Asset Owner provides 80% of the O&M but still has a support agreement with the OEM for

³⁰⁵ [Customer] response to Q2 Questionnaire to customers, question 51.

³⁰⁶ Responses of [Customers] Q2 Questionnaire to customers, question 51.

³⁰⁷ Notifying Party’s response to the Commission’s RFI 10, paragraph 1.3.

³⁰⁸ Notifying Party’s response to the Commission’s RFI 10, paragraph 1.3.

³⁰⁹ Q1 Questionnaire to competitors, question 55.

³¹⁰ Response of [Customer] to Q2 Questionnaire to customers, question 21.

³¹¹ Q2 Questionnaire to customers, question 21.

³¹² Q1 Questionnaire to competitors, question 55.

³¹³ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, pp.66, 73.

OMS tasks requiring more advanced engineering skills. As the remaining 20% of tasks are vital to operate a windfarm and it is more challenging to execute them in the context of self-servicing, the OEM could force the customer to use the OEM for 100% service needs but this does not happen. It is also unlikely that the OEM would charge for the 20% of the OMS services it provides a price equivalent to the full scope service as in that case the customer would be indifferent to taking a large part of the service work in-house. However, many customers apparently find it more cost-effective to take services in-house, which suggests that the OEM does not or cannot compensate the lost revenues by raising the price of the technical support services.

- (253) Second, similar considerations apply to ISPs. Currently ISPs service roughly 13% of each OEM's fleet,³¹⁴ whereas in 2010 their presence was negligible.³¹⁵ Furthermore, the share of ISPs is forecast to increase in all major EEA countries where such forecast is available, i.e. Germany, Spain, United Kingdom and France.³¹⁶ Thus, despite the IP advantage ISPs' share of the market is set to increase.
- (254) Third, there are observable examples of ISPs providing services in areas where OEMs would appear to have an advantage. For example, as discussed before DWT, a prominent ISP, has a remote monitoring service that offers 24/7 monitoring, proactive fault analysis and service hotline. The service covers Vestas, Enercon, Nordex, Senvion turbines.³¹⁷ As remote monitoring is by definition software based, OEMs have a natural advantage in this service. The examples of retrofitting of a new SCADA system can also be mentioned in this context.
- (255) Fourth, all OEMs except Enercon have moved into multi-brand servicing, i.e. became OEM ASPs. A large majority of market participants consider that in the next 5 years multi-brand servicing (i.e. servicing of the turbines of other OEMs) will increase.³¹⁸ Clearly, OEMs would not have entered the business serving other OEMs' turbines and would not consider this as a growth area if they had considered that they would not be effective competitors. This trend also suggests that customers have decreasing preference for the OEM of their turbines when selecting their OMS provider.

Conclusion

- (256) To conclude, the Commission considers that while the IP gives OEMs some competitive advantage, this does not render ISPs and ASPs ineffective as competitive forces.

³¹⁴ This is a rough calculation based on data submitted by the Notifying Party. Based on Form CO paragraph 241, currently roughly 80% of each OEM fleet is serviced by the OEM that installed the fleet. An exception is GE, the OEM with the smallest installed base in the EEA, where this ratio is 50%. Leaving aside GE, the 20% is roughly shared equally between ISPs and ASPs. However, on average 26% of OEMs' fleets are younger than 5 years and thus on average only 76% of the OEMs' fleets are addressable for ISPs. (See Form CO, paragraph 83) Viewed in that light both ISPs and ASPs service, on average 13 % of an OEM's addressable fleet.

³¹⁵ Minutes of a phone call with a market participant.

³¹⁶ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, pp. 59, 66, 73 and 81.

³¹⁷ <https://www.deutsche-windtechnik.com/remote-data-monitoring>

³¹⁸ Q1 Questionnaire to competitors, question 61, Q2 Questionnaire to customers, question 54.

(B.iii.b) Impact of the Transaction

- (257) The starting point of the assessment is that the Transaction does not reduce the number of competitors. Thus SGRE will face the same competitors absent the Transaction as in the merger scenario. These constraints include OEMs, ISPs, ASPs. In addition, although not included in the market shares, self-servicing by customers is also a competitive constraint.
- (258) OEMs include Vestas, GE, Nordex and Enercon. As discussed in relation to market shares, Enercon only services its own turbines and therefore it is not an effective constraint with respect to other turbines, including those of Senvion.
- (259) Vestas is the world's largest wind turbine supplier as well as wind operation and service maintenance provider and the clear market leader within the onshore market. It is also the leader in multi-brand servicing,³¹⁹ servicing 7-8 GW of non-Vestas turbines globally from all major OEMs outside of China, such as SGRE, Senvion, GE, Nordex, Enercon.³²⁰ Vestas was generally considered by customers and competitors as the strongest competitor in OMS.³²¹
- (260) GE is the fourth largest manufacturer of wind turbines globally (behind Vestas, Goldwind, a Chinese OEM and SGRE). GE offers all levels of services from remote monitoring to full maintenance. In total, GE services a fleet of over 30,000 turbines. GE offers services not only to the GE fleet but through its Universal Fleet Solutions³²² also to facilities manufactured by other OEMs. GE was ranked lower than Vestas or SGRE in terms of competitive strength in OMS,³²³ which is explained by the fact that its presence in the EEA is more limited. However, its global position shows that it is a capable competitor having the capital and technology to expand.
- (261) Nordex is a German OEM that has installed more than 7,100 turbines delivering more than 18 GW of energy worldwide and offering full scope OMS. The merger with Acciona in 2016 led to the development of its multi-brand OMS activity.³²⁴ Just like GE, it was ranked lower than Vestas or SGRE in terms of competitive strength in OMS, but it was acknowledged that the Acciona merger stabilised its position and that its multi-brand activity is expanding.³²⁵
- (262) In general all OEMs are large businesses, with a large asset base, full OMS capabilities, a deep understanding of wind turbine technicalities and strong R&D capabilities. Due to the advantage afforded by their IP, they are always the strongest with regard to their own brands. However, it is almost a universal expectation among market participants that in the next 5 years multi-brand servicing (i.e. servicing of the turbines of other OEMs) will increase.³²⁶ As OEMs' primary area for expansion is other OEMs' turbines (having already a naturally strong position in their own turbines), this suggests that OEMs are looking to expand their OMS activities. This

³¹⁹ Notifying Party's response to the Commission's RFI 1, question 16.

³²⁰ Minutes of a phone call with Vestas on 12 November 2019.

³²¹ Q1 Questionnaire to competitors, question 43, Q2 questionnaire to customers, question 38.

³²² https://www.ge.com/content/dam/gepower-renewables/global/en_US/downloads/brochures/wind-onshore-services-gea31819c-r2.pdf.

³²³ Q1 Questionnaire to competitors, question 43, Q2 Questionnaire to customers, question 38.

³²⁴ Q1 Questionnaire to competitors, question 43.

³²⁵ Q1 Questionnaire to competitors, question 43, Q2 Questionnaire to customers, question 38.

³²⁶ Q1 Questionnaire to competitors, question 61, Q2 Questionnaire to customers, question 54.

in turn suggests that OEMs are and will be an effective constraint on SGRE with respect to turbine brands other than their own. In other words, SGRE will face effective constraints exercised by OEMs and OEM ASPs.

- (263) The various types of onshore wind turbine servicing can also be provided by ISPs. There are a large number of ISPs that are active on the onshore wind turbine services market and they also constrain SGRE. They include DWT , Connected Wind Services, Yinfiniti, Ingeteam, Ponticelli, Mistras and many others. Respondents of the market investigation considered DWT to be the strongest ISP by far.³²⁷ Although ISPs in general were considered as less capable in providing a full service or executing OMS tasks with high engineering complexity, respondents considered that they have certain strengths, which include their price level, flexibility and agility.³²⁸
- (264) As mentioned previously, currently ISPs service roughly 13 % of each OEM's fleet,³²⁹ whereas in 2010 their presence was negligible.³³⁰ Furthermore, the share of ISPs is forecast to increase in all major EEA countries where such forecast is available, i.e. Germany, Spain, United Kingdom and France.³³¹ This indicates that ISPs are, and will be, effective constraints.
- (265) Asset Owner ASPs, i.e. Asset Owners that provide service to other Asset Owners as OMS suppliers are also competitors. The principle Asset Owner ASPs include E.ON, EDF and ENBW. As large utility companies their OMS business grew out of self-servicing. Given that in their capacity as Asset Owners they manage windfarms of most brands, they have multi-brand capabilities. Respondents considered that they have similar strengths and weaknesses as ISPs,³³² i.e. they are less strong than OEMs in areas involving access but they have lower prices and more flexible than the latter.³³³
- (266) Finally, as mentioned before, several Asset Owners, mainly large utilities have taken OMS servicing in-house and self-supply. Although this was not included in the market shares, they are an effective constraint, which is shown by the fact that a significant share of customers self-service their turbines. For example, in Spain and in the United Kingdom 28% and 21% of installed capacity is self-serviced respectively.

³²⁷ Q1 Questionnaire to competitors, question 43, Q2 Questionnaire to customers, question 38.

³²⁸ Q1 Questionnaire to competitors, question 46, Q2 Questionnaire to customers, question 41.

³²⁹ This is a rough calculation based on data submitted by the Notifying Party. Based on Form CO paragraph 241, currently roughly 80% of each OEM fleet is serviced by the OEM that installed the fleet. An exception is GE, the OEM with the smallest installed base in the EEA, where this ratio is 50%. Leaving aside GE, the 20% is roughly shared equally between ISPs and ASPs. However, on average 26% of OEMs' fleets are younger than 5 years and thus on average only 76% of the OEMs' fleets are addressable for ISPs. (See Form CO, paragraph 83) Viewed in that light both ISPs and ASPs service, on average 13 % of an OEM's addressable fleet.

³³⁰ Minutes of a phone call with a market participant.

³³¹ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, pp. 59, 66, 73 and 81.

³³² Q1 Questionnaire to competitors, question 46, Q2 Questionnaire to customers, question 41.

³³³ Q1 Questionnaire to competitors, question 46, Q2 Questionnaire to customers, question 41.

- (267) In general market participants considered competition to be strong on the onshore OMS market.³³⁴ For example Vestas explained that OEMs and ISPs offer competitively priced and scoped OMS service contracts *“In competitive tenders there is often detailed negotiations conducted with a minimum of 3 potential service providers (the final service providers vary depending on technical ability, customer requirements etc). The customer will take a final decision on who to award an OMS service contract to following an evaluation of a range of criteria the prospective service provider must fulfil such as contract price, availability guarantee offered, safety record, technical capabilities, financial stability etc.”*³³⁵ Customers echoed this sentiment and considered that their position has improved in recent years.³³⁶ Allianz Capital Partners submitted that *“Competition between OEMs / OEMs understanding the risk of the technology better and or becoming more efficient”*³³⁷ Banks Renewables explained that *“Pricing has reduced and availability warranties have increased. In my view this is due to competition in turbine and OMS sales in Europe and improvements in performance by OMS providers.”*³³⁸ Blackrock advised that *“Increased competition has improved pricing and standards”*³³⁹ Customers or competitors did not consider that the competitive nature of the market would decrease due to Senvion’s exit, which is independent from the Transaction. This is especially true because just like Enercon, Senvion did not service other OEMs’ turbines.
- (268) As discussed previously (Section 5.3.1.1 (B.i)), the Transaction will not eliminate any of the competitive constraints exercised on SGRE relative to the counterfactual. The effect of the Transaction is rearranging market shares across the same market participants by assigning Senvion customers to SGRE instead of the market share distribution that would result from competition for these customers. As the market is competitive even in Senvion’s absence, the shifting of approximately [5-10]% market share is unlikely to reduce the effective competition that characterises the market currently.
- (269) Indeed, as none of the competitive constraints described above are eliminated, the shifting of market shares would reduce competition significantly only if it changed the market structure in a significantly negative way. However, this is not the case. As discussed in relation to market shares, SGRE’s post-Transaction market share is likely less than [20-30]% with an increment that is likely less than [5-10]%. Under such circumstances, the competitive constraints and the intense level of competition is likely to remain on the market. Accordingly, a large majority of customers and competitors consider that competitive conditions will remain the same or that competition will increase in the next 3-5 years.³⁴⁰
- (270) The same conclusion follows from considering the impact relative to the counterfactual. As described in Section 5.3.1.1 (B.ii.c) the worst case scenario for the counterfactual is that a smaller competitor like GE will acquire the IP and win

³³⁴ Q1 Questionnaire to competitors, question 71. Q2 Questionnaire to customers, question 64. See also Minutes of phone calls with Enercon, Vestas, GE and Nordex on 8 November 2019, 12 November 2019 15 November 2019 and 15 November 2019 respectively.

³³⁵ Vestas’s response to Q1 Questionnaire to competitors, question 71.

³³⁶ Q2 questionnaire to customers, question 64.

³³⁷ Response of [Customer] to Q2 questionnaire to customers, question 64.

³³⁸ Response of [Customer] to Q2 questionnaire to customers, question 64.

³³⁹ [Customer] response to Q2 questionnaire to customers, question 64.

³⁴⁰ Q1 Questionnaire to competitors, question 72. Q2 questionnaire to customers, question 65.

over all former Senvion customers. The Commission emphasises that this is an unlikely and extreme scenario assumed only for analytical purposes. In that case the Transaction increases SGRE's market share and eliminates the gain GE would have had in the counterfactual. However, this would not reduce GE's competitive strength described above as it would remain a global OEM with strong capabilities. Likewise SGRE's market power would not increase to any significant extent in light of the constraints it faces. Thus even in this worst-case scenario the Transaction does not lead to a significant impediment of effective competition.

- (271) Another potential worst-case (and equally unlikely) counterfactual scenario is that the IP and Senvion customers are acquired by an even smaller competitor such as a smaller ISP. In that case the Transaction increases SGRE's market share and would prevent this ISP from becoming a larger competitor. As SGRE's market power would not increase to any significant extent (market share of [20-30]%), even in this case, in essence the effect of the Transaction would be to prevent the appearance of another larger competitor on an already competitive market, i.e. preventing the increase of competition. This also would not lead to a significant impediment of effective competition.
- (272) On the basis of the above the Commission considers that, in line with the analysis of market shares, the Transaction does not lead to a significant impediment of effective competition.

(B.iv) Barriers to entry and expansion

- (273) Both customers and competitors confirmed that there has been entry into the onshore OMS market in the last five years.³⁴¹ Namely, some Asset Owners (e.g. E.ON Wind Service (now RWE Renewables) have launched their service to third parties as an ASP and several smaller ISPs have entered. Ingeteam described that the "*O&M market is reasonably accessible, and there is constant evolution, companies getting into and companies exiting the market.*"³⁴² A large majority of customers and competitors expect further entry in the next five years.³⁴³ Iberdrola observed that "*The trend is to grow the market for OMS Services. The entry barriers are less than in the past.*"³⁴⁴ Enel explained that "*For sure new companies will enter in the market since wind capacity is always growing year by year. Very likely small companies will enter in OMS of older wind turbines, as soon as the know-how starts to spread in the market.*"³⁴⁵ Several respondents expect Chinese OEMs to enter as OMS suppliers.³⁴⁶ These comments suggest that the onshore OMS market is dynamic with frequent entry and exit.

³⁴¹ Q1 Questionnaire to competitors, question 67, Q2 Questionnaire to customers, question 60.

³⁴² Ingeteam's response to Q1 Questionnaire to competitors, question 67.

³⁴³ Q1 Questionnaire to competitors, question 68, Q2 questionnaire to customers, question 61.

³⁴⁴ [Customer] response to Q2 Questionnaire to customers, question 60.

³⁴⁵ [Customer] response to Q2 Questionnaire to customers, question 60.

³⁴⁶ [Customer] response to Q2 Questionnaire to customers, question 60. Vestas's response to Q1 Questionnaire to competitors, question 68.

- (274) By contrast both customers and competitors agreed that there are some barriers to entry such as the fixed costs associated with building up service centres, shortage of skilled workforce, the need to have project references when bidding, access to IP and data and bidding costs.³⁴⁷
- (275) On balance it appears that whilst some entry barriers exist, these are not prohibitive. Furthermore, the Commission recalls that, as discussed in Section 5.2.1.2 firms active exclusively in the offshore market switch to onshore OMS easier than this would happen vice-versa. Although such switching is outside the scope of supply-side substitution, these firms are well placed to enter the market.
- (276) Finally, as discussed in Section 5.3.1.1 (B.iii.b), a strong recent trend has been that OEMs are increasingly moving into multi-brand servicing (with the exception of Enercon). This suggests that barriers to expansion are not high and that several suppliers want to expand their activities.
- (277) The Commission thus considers that entry and expansion will also contribute to constraining the merged entity post-Transaction.

(B.v) Customers' buyer power

- (278) As regards customers' buyer power, a large majority of both competitors and customers consider that customers' buyer power is medium or strong.³⁴⁸ In addition a large majority of competitors considered that customers' buyer power has stayed the same or increased in recent years.³⁴⁹ Moreover, customers themselves were clearly of the view that their buyer power has increased in recent years and they are able to obtain better conditions than before.³⁵⁰ Furthermore, most customers and competitors expect that in the next 5 years conditions will remain the same or improve for customers.³⁵¹ In short, the market has become more favourable to customers and is likely to stay that way.
- (279) Buyer power is related to the fact, discussed in Section 5.1.1., that the onshore wind turbine sales have slowed down since their peak in 2017, which had repercussions on the OMS market. All OEMs agreed that due to decreased demand for wind turbines, OEMs have to offer increasingly better conditions to turbine customers, which in turn prompted OEMs to offer, and Asset Owners to demand, more competitive conditions in OMS.³⁵² Buyer power is also consistent with the fact that OMS prices have decreased by 65% since 2011 (see Section 5.1.2.5.(C)). Likewise, the perception that the market is very competitive and that customers are benefitting from improving conditions such as pricing, quality and availability (See Section 5.3.1.1.(B.iii.b)) is also in line with the responses on buyer power.

³⁴⁷ Q1 Questionnaire to competitors, question 69, Q2 Questionnaire to customers, question 62.

³⁴⁸ Q1 Questionnaire to competitors, question 71, Q2 Questionnaire to customers, question 64.

³⁴⁹ Q1 Questionnaire to competitors, question 70.

³⁵⁰ Q2 Questionnaire to customers, question 63.

³⁵¹ Q1 Questionnaire to competitors, question 72, Q2 Questionnaire to customers, question 65.

³⁵² Minutes of phone calls with Enercon, Vestas GE and Nordex on 8 November 2019, 12 November 2019 15 November 2019 and 15 November 2019 respectively.

(B.vi) Conclusion on the onshore servicing market

- (280) Based on the above the Commission considers that the Transaction will not lead to a significant impediment of effective competition in the market for onshore OMS.

5.3.1.2. Standalone offshore OMS services in the EEA

(A) Notifying Party's view

- (281) The Notifying Party did not assess the impact of the Transaction on the offshore OMS market in the Form CO.
- (282) When the Commission informed the Notifying Party that some market participants have indicated that the IP SGRE is acquiring may negatively affect the offshore servicing market, the Notifying Party submitted the following arguments as to why serious doubts as to the compatibility of the transaction with the internal market are not justified.³⁵³
- i.) Servion is not a competitive constraint as it has not won any offshore OMS tenders in recent years and will not participate in any tenders going forward.
 - ii.) SGRE's position is not enhanced through the Transaction and it will face effective competition from the remaining actors, notably MHI Vestas and GE and the Asset Owners who self-service.

(B) Commission's assessment

- (283) In the course of the investigation, certain market participants communicated their concerns to the Commission that the Transaction may significantly reduce competition in the offshore OMS market. It was submitted that the IP SGRE acquires also relates to offshore OMS and that, once SGRE is in possession of the IP, it will be able to impede effective competition and raise prices in offshore OMS.
- (284) Given the timing of these concerns and the fact that the Notifying Party did not discuss the impact of the Transaction on the offshore OMS market, the Commission had limited time to investigate these concerns and, as discussed in Section 1, informed the Parties at the State of Play meeting within the meaning of paragraph 33a) of DG Competition's Best Practices,³⁵⁴ that it could not be excluded that the proposed transaction, as originally notified, might raise serious doubts as to its compatibility with the internal market in the market for offshore OMS in the EEA. The Notifying Party subsequently submitted, and the Commission market tested, commitments on 29 November 2019 designed to eliminate the potential serious doubts identified by the Commission in accordance with Article 6(2) of the Merger Regulation. In parallel, the Commission further investigated the impact of the Transaction on the offshore OMS market inter alia by collecting further facts on the offshore market both from the Parties and from market participants.

³⁵³ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 23.

³⁵⁴ DG COMPETITION Best Practices on the conduct of EC merger control proceedings <https://ec.europa.eu/competition/mergers/legislation/proceedings.pdf>

(285) On the basis of this additional investigation the Commission has come to the conclusion that the Transaction does not raise serious doubts as to its compatibility with the internal market in respect of standalone offshore OMS. This conclusion is mainly based on the following reasons:

- i.) SGRE lacks significant market power, as attested by its low market share, and the increment it can plausibly achieve due to the IP in offshore OMS is small.
- ii.) SGRE will face sufficiently strong constraints post-Transaction; and
- iii.) The entry of additional ISPs is likely.

(B.i) Market shares

(286) As the Commission explained in Section 5.1.3, the distinction between bundled and standalone OMS discussed in relation to onshore OMS (Section 5.1.2.5) also applies to offshore OMS. The only difference is that due to the longer warranty period and the lower prevalence of LTPs, it is rather the warranty than the LTP that renders certain OMS captive and non-addressable by ISPs and ASPs. For this reason standalone offshore OMS can largely be equated with post-warranty OMS. Consistent with this, the distinction between standalone and captive OMS discussed in relation to market definition (Section 5.2.1.1) also applies to offshore OMS. Accordingly the Transaction's impact has to be assessed on the standalone offshore OMS market as captive offshore OMS forms part of the offshore turbine market.

(287) In addition, as the Commission noted in Section 5.1.3, offshore customers are mostly large utilities that prefer self-servicing as soon as the warranty expired and as a result self-service is very prevalent in offshore OMS. Indeed, on the basis of capacity serviced (in GW) self-service has a share of 62% of the post-warranty, addressable segment.³⁵⁵

(288) In analysing the onshore OMS market shares, the Commission did not take self-servicing into account in the market shares because self-servicing is much less prevalent in onshore OMS and the Transaction does not raise serious doubts even without taking this constraint into account in the market shares. However, due to its importance in offshore OMS, this constraint has to be included in the market shares.

(289) As discussed before in Sections 5.2.1.3.(C) and 5.3.1.1(B.iii.a), Asset Owners can perform the bulk of services (roughly 80-90%) by value. Although the Asset Owners usually conclude a support agreement with the OEM for the rest of the tasks, as explained in Section 5.3.1.1 (B.iii.a), there is no indication that the OEMs force the customer to use the OEM for 100% service needs. It also does not appear that the OEM would charge for the small part of the OMS services provided a price equivalent to the full scope service as in that case the customer would be indifferent to taking service in-house. On the contrary, a large part of customers apparently find it more cost-effective to take services in-house, which suggests that the OEM does not or cannot compensate the lost revenues by raising the price of the technical support services. In short, self-service is an effective constraint on OMS suppliers.

³⁵⁵ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 18.

Indeed, an overwhelming majority of customers that expressed an opinion (mostly those that do, in fact, self-service) considered that the possibility of self-servicing has a disciplining effect in terms of price and quality on OMS providers, including OEMs.³⁵⁶ As RWE noted *“It is a fact that self-servicing has brought down the cost of energy [i.e. the cost of producing electricity] by putting pressure on OMS providers to both improve the performance (deliver more MWh) and their decrease their margins.”*³⁵⁷ The fact that the OMS customer is often also a large wind turbine customer is likely to play a role in this. Namely, the OEM is likely to take into account that a price increase in OMS or an attempt to force the Asset Owner to procure 100% of its needs from the OEM will have repercussions on its turbine sales in the next turbine tender run by the same customer.

- (290) With the inclusion of self-service, the 2019 market shares in standalone offshore OMS are presented in Table 6.³⁵⁸ The shares were prepared according to the same methodology as the methodology used in relation to onshore OMS. As discussed in Section 5.3.1.1.(B.ii.b), the Commission considers these shares an acceptable proxy for the reasons discussed in that Section. Accordingly, the Commission notes that SGRE’s and other OEMs’ shares do not include their activity as ASPs but this has a minimal impact. ISPs share includes only ISPs and not Asset Owner ASPs as the latter do not have offshore presence.

Table 6: 2019 market shares in standalone offshore OMS

	Self-service	SGRE	Other OEMs	ISPs
Share	[60-70]%	[10-20]%	[10-20]%	[5-10]%

- (291) Other OEMs include MHS Vestas and GE. Senvion currently has no OMS contracts as in the absence of a buyer for the offshore business its offshore contracts have been terminated during the insolvency procedure. A large number of Senvion turbines are now serviced by DWT, a prominent ISP, although these may not be permanent arrangements.³⁵⁹
- (292) The assessment of the impact of the Transaction follows the principles outlined in relation to the onshore servicing market in Sections 5.3.1.1 (B.i) and 5.3.1.1.(B.ii.c), which also apply in relation to the offshore OMS market.
- (293) Assuming that the OMS contracts currently servicing Senvion turbines are only of a temporary nature, then absent the Transaction, the following scenario would apply. As discussed in Section 5.3.1.1 (B.i), a firm that so far has not been present in the standalone offshore OMS market would have acquired the offshore servicing business and/or the IP relevant to it. Therefore, this firm would have stepped into the Senvion contracts in the counterfactual. Assuming that Senvion’s customers did not self-service, then this new entrant would have gained [5-10]% market share.

³⁵⁶ Q2 questionnaire to customers, question 52;

³⁵⁷ [Customer] response to Q2 questionnaire to customers, question 52.

³⁵⁸ Slide deck presented to the Commission on the technical meeting related to offshore services of 3 December 2019, page 18. Data and methodology on offshore OMS market shares was submitted by the Notifying Party on 21 November 2019 as Response of the Parties to Commission’s RFI 5.

³⁵⁹ DWT’s response of 29 November 2019 to the Commission’s inquiry on the offshore market.

- (294) Compared to this counterfactual, in the merger scenario SGRE, ISPs and OEMs will compete for these customers, with SGRE having some advantage due to the fact it controls the IP. However, as SGRE is not acquiring the offshore business it is not stepping into the Senvion offshore contracts, which have already been terminated (see paragraph (291) above). In other words, contrary to the onshore market it cannot be assumed that SGRE will win all former Senvion customers as it would have to compete for this customers and it only has a certain advantage in this competition due to the IP. However, it also has the disadvantage that these customer are already using ISPs (DWT and others) temporarily for their OMS needs, which implies that these suppliers are in good starting position in bidding for the permanent contracts.
- (295) The discussion on the competitive advantage afforded by the IP in relation to onshore OMS (Sections 5.2.1.3.(C) and 5.3.1.1 (B.iii.a)) applies to the offshore market as well, as there are no differences between onshore and offshore turbines in this regard. Indeed, wind onshore and offshore wind turbines are not different in relation to SCADA systems and other aspects affected by IP protection. Thus, the IP gives the IP owner some advantage but it does not mean that the competitors cannot compete effectively. Indeed the Commission notes that for example, the Nordergrunde offshore wind farm (using Senvion turbines) has contracted DWT to perform OMS following Senvion's insolvency. According to the Parties, DWT has converted the turbines' router and now controls all SCADA communication to and from the wind farm. In response to the Commission's market investigation, Nordergrunde replied that *"we do not see any subcategories of services which cannot be done by ISPs, but OEMs may have price advantages due to deeper knowledge and volume advantages."* and *"the insolvency of Senvion opened business opportunities for ISPs, we think, that the competitive landscape for the servicing of Senvion turbines has improves/will improve"* and *"we do not see any impact, that is not caused by the insolvency itself"*. This evidence demonstrates, therefore, that while the acquisition of the IP provides SGRE with a competitive advantage, competitors will still constrain it.
- (296) Accordingly, as a result of owning the IP in the merger scenario SGRE's market share increment will not be [5-10]% but only a part of that. Indeed in its internal documents SGRE calculated with acquiring [20-30]% of customers whose contracts it did not take over. This was an average number for all Senvion customers whose contracts SGRE did not take over, i.e. other than EEA offshore customers this also included some onshore and some non-European customers. Thus the increment corresponding to the number of offshore EEA customers SGRE is likely to win over can be somewhat higher or lower than [20-30]% but SGRE certainly did not count to win over all EEA offshore customers as a result of the IP. The Commission recalls that SGRE would have to compete with ISPs who are currently serving these customers in a temporary manner and thus start from a good starting position, as well as against other competitors looking to win over these contracts. Accordingly, SGRE's market share increment in the merger scenario is unlikely to be more than half of the [5-10]% that Senvion turbines represent offshore.
- (297) Thus, the likely impact of the Transaction in offshore OMS is that it prevents the entry of a competitor that would have acquired [5-10]%, and increases SGRE's share by roughly [0-5]%. The share of some ISPs and other OEMs would also increase in the merger scenario. Thus although the Transaction indirectly eliminates a competitor with a market share of [5-10]%, increases SGRE's market share to roughly [20-30]% and increases other competitors' shares by a few percentage

points. As the post-Transaction market shares will remain modest and barely above the level associated with an affected market, the Transaction does not lead to a significant reduction of effective competition.

- (298) The same conclusion applies if it is assumed that the current OMS contracts under which Senvion turbines are currently served by ISPs are more permanent in nature. In that case it would be even more difficult for SGRE to win over customers in the merger scenario, resulting in an increment of less than [0-5]% and a post-Transaction share of less than [20-30]%.
- (299) The Commission also notes that whilst Senvion turbines currently represent [5-10]% of the total offshore installed base, since Senvion turbines will disappear (i.e. no new Senvion turbines will be installed going forward), but the offshore market will keep on growing, by 2028, the Senvion fleet is expected to represent only [0-5]% of the installed base. Thus the share of the market over which SGRE will have an advantage will prospectively shrink and make up an ever smaller share of the market.

(B.ii) Post-Transaction constraints

- (300) Not only SGRE's market share will be modest post-Transaction, it will be constrained by self-servicing Asset Owners, ISPs and other OEMs such as GE and MHI Vestas.
- (301) Self-service by Asset Owners alone is a significant constraint. Not only Asset Owners have a [60-70]% market share but Asset Owners service [70-80]% of SGRE's own fleet where the warranty has expired. Thus Asset Owners already constrain SGRE and will continue to do so post-Transaction. As discussed in paragraph 289 above, a large number of market participants consider that self-servicing has a disciplining factor on OEMs.
- (302) While self-service is the largest constraint, other OEMs like GE and MHI Vestas will also compete with SGRE. These are capable OEMs with similar competitive strength as SGRE. Market feedback indicated that both Vestas and GE are considered as strong competitors.³⁶⁰
- (303) Finally, SGRE will also be constrained by ISPs, which is demonstrated by the fact that currently ISPs service Senvion's offshore turbines. As discussed before, while it is unclear whether these arrangements are temporary or permanent, they at least show the agility of ISPs. Namely the fact that DWT is already servicing Senvion turbines and, as explained in paragraph 295 above, was able to neutralize the IP/SCADA advantage demonstrates that ISPs will remain effective constraints.

(B.iii) Expected entry by ISPs

- (304) The offshore OMS market is not as mature as the onshore OMS market. Therefore, despite some barriers to entry relating to IP, the vast majority of respondents to the Commission's market investigation expect more entrants in the market for offshore OMS. It is considered an attractive market (large and increasing) with more turbines coming out of warranty in coming years and opening up to competition for OMS.

³⁶⁰ Q2 Questionnaire to customers, question 38; Q3 questionnaire on the offshore market and remedies, question 14

Respondents see the market evolving in a similar way to how the onshore OMS market has evolved. For example, Nordsee One stated that “*we believe, we will see a similar situation like in onshore wind segment, where more and more independent service providers are available*”. Nordsee Ost expects more demand for offshore OMS “*as well as for multi-contracting instead of full service agreements*”. Vattenfall states that “*providers/OEMs are preparing multibrand servicing strategies currently*”.³⁶¹

- (305) The Commission therefore considers that competition in the offshore OMS will increase.

(B.iv) Conclusion on the offshore servicing market

- (306) Based on the Sections 5.3.1.2.(B.i)-5.3.1.2.(B.iii) above, the Commission considers that the Transaction will not lead to a significant impediment of effective competition in the market for offshore OMS.

5.3.1.3. Impact of the Transaction on the onshore wind turbine market

(A) Notifying Party’s view

- (307) The Notifying Party submits that Proposed Transaction does not give rise to any overlaps on the market for the supply of onshore wind turbines, as SGRE will not acquire Senvion’s (onshore or offshore) wind turbine business. However, the Notifying Party considers that through the acquisition of the onshore servicing business and the blade manufacturing facilities in Portugal, it may be in a position to gain some additional business in the onshore wind turbine market in Europe in the future.
- (308) The Notifying Party submitted 2016-2018 market shares for the supply of onshore wind turbines, which indicate that SGRE’s and Senvion’s market shares are [10-20]% and [10-20]% respectively. However, the Notifying Party considers that it is not appropriate to aggregate SGRE and Senvion’s onshore wind turbines market shares to assess the impact (if any) of the Proposed Transaction on the market for the supply of onshore wind turbines in the EEA. There is in fact no guarantee that going forward SGRE will be able to acquire any additional wind turbine orders in the EEA as a result of the acquisition of the Senvion Target Business. Senvion’s wind turbine manufacturing business will no longer exist as a result of the insolvency. Going forward, SGRE will, however, continue to face significant competition from the other onshore wind turbine OEMs. Nevertheless, SGRE has estimated that it may be able to win approximately [Incremental volume] of incremental onshore wind turbine volumes in the EEA, as an (indirect) result of the Transaction as the Transaction will
- i.) enable SGRE to establish a more competitive supply chain in Europe due to the acquisition of Senvion’s blades manufacturing facilities in Portugals; and
 - ii.) allow SGRE to access new customers as a result of the acquisition of Senvion’s European onshore servicing business, in particular in Germany.

³⁶¹ Replies to questions 37 and 39 of Q3 questionnaire to customers and competitors.

(B) Commission's assessment

- (309) As discussed in Section 5.3.1.1 (B.i), absent the Transaction, all the Senvion assets are likely to go into liquidation as funding for Senvion's operation would no longer be available. This also implies that, even in the merger scenario, assets that fall outside the scope of the Transaction will also be liquidated. Consequently, both in the counterfactual and in the merger scenario, Senvion's turbine manufacturing business will exit the market as a going concern and SGRE will have to compete for new turbine business. The effect of the Transaction in this regard is that due to some acquired assets, namely Senvion's IP, the blade manufacturing facilities in Portugal and new customer relationships through the acquisition of Senvion's onshore OMS business, SGRE may be in a better position to compete for additional onshore turbine sales than in the counterfactual.
- (310) The Commission considers that the relevant assets that enhance SGRE's position in this regard are the blade manufacturing facilities and the customer relationships rather than the IP. In relation to the IP, while OEMs considered that the IP could be valuable for the servicing business, none of the OEMs was of the view that Senvion's IP portfolio will give SGRE a meaningful advantage in the market for the manufacturing and supply of (onshore and offshore) wind turbines.³⁶² This is all the more likely as the SGRE will not produce Senvion turbines anymore and thus a large part of the IP portfolio may not be of any use for the manufacturing of onshore wind turbines.
- (311) As regards the magnitude of the effect, the Notifying Party's estimate is in line with SGRE's internal documents. Namely an update to the SGRE board on the Transaction considers that due to the acquired assets "*Transaction business case considers [Incremental volume] of incremental volumes in Europe for SGRE as a result of the transaction*"³⁶³ It is clear from the context that the volumes refer to onshore turbines. [Incremental volume] corresponds to [0-5]% market share as the total EEA market size is 10584 MW.³⁶⁴
- (312) As SGRE's market share is [10-20]%³⁶⁵ and the likely increment is [0-5]%, the Transaction would not give rise to an affected market and thus serious doubts even in the case of an actual overlap. In addition, the increment in this case is more uncertain than in the case of an overlap, i.e. in the case of the acquisition of a business as a going concern.

5.3.1.4. Impact of the Transaction on the offshore wind turbine market

(A) Notifying Party's view

- (313) The Notifying Party did not discuss the effect of the Transaction on the market for the manufacturing and supply of offshore wind turbines.

³⁶² Minutes of phone calls with Enercon, Vestas GE and Nordex on 8 November 2019, 12 November 2019 15 November 2019 and 15 November 2019 respectively. Enercon was concerned about the reshuffling of the patent portfolios between Siemens AG, SGRE and Senvion but this did not appear to be merger-specific and was not substantiated by Enercon. The market investigation also did not provide any support for this concern.

³⁶³ See SGRE Board Update "Project Snow", 25 September 2019, slide 12, submitted as Annex 10.28. to the Form CO

³⁶⁴ Form CO, Table 16.

³⁶⁵ Form CO, Table 16.

(B) Commission's assessment

- (314) As discussed in Section 5.3.1.3, the effect of the Transaction on the onshore turbine manufacturing market is that the acquisition of certain assets may enable SGRE to be in a better position to compete for additional onshore turbine sales than in the counterfactual. The same principle applies in the case of the market for the manufacture and supply of offshore turbines. SGRE's average market share in this market is [60-70]% in the EEA for 2016-2018.³⁶⁶ However, any advantages gained as a result of the Transaction that could transpose to increased sales of offshore wind turbines are highly speculative and limited.
- (315) First, SGRE is not acquiring Senvion's offshore OMS business and consequently is not stepping into any Senvion contracts as a result of the Transaction. As discussed in Section 5.3.1.2, it will have to compete for additional offshore OMS customers. As such, it will not gain additional customer relationships simply as a result of the Transaction.
- (316) Second, as discussed in Section 5.3.1.3, the IP does not appear to give SGRE any direct and meaningful advantage in onshore or offshore turbine manufacturing business. In line with the analysis of the Transaction's impact on offshore OMS (Section 5.3.1.2), the IP rather gives SGRE a limited advantage in the offshore OMS business (translating to a maximum [0-5]% increment), which may indirectly benefit the offshore turbine manufacturing business as SGRE could build new customer relationships, which could help its offshore turbine sales. However, as explained in Section 5.3.1.2, this increment is subject to uncertainty as SGRE will have to compete for these OMS customers. SGRE is also unlikely to be able to sell additional offshore turbines to all of these customers by virtue of these relationships. Offshore customers are large utilities and offshore projects involve large tenders where most OEMs are invited.³⁶⁷ As such any advantage is even more uncertain than the advantage SGRE can expect on the offshore OMS market.
- (317) Third, whilst the acquisition of the blade manufacturing facilities in Portugal may enable SGRE to establish a more competitive supply chain in Europe, this cannot automatically be considered to translate into future offshore turbines sales given the competitive landscape for the manufacture and sale of offshore wind turbines.
- (318) Consequently, the effect of the Transaction on the market for the manufacture and supply of offshore wind turbines is minimal, even if SGRE's pre-Transaction market share is high. Considering that SGRE faces strong competitors, such as MHI Vestas and GE, that customers use competitive tender procedures for the purchase of offshore wind turbines and that the likely growth of the offshore market will cause major players to increasingly focus on this segment, the Commission considers that the minimal advantage will not translate into a significant impediment of effective competition.

³⁶⁶ Parties' response of 10 December 2019 to the Commission's RFI 10.

³⁶⁷ Case COMP/M.8134 – Siemens/Gamesa, paragraph 25.

5.3.2. *Vertically affected markets: gearboxes*

5.3.2.1. Notifying Party's view

- (319) The Notifying Party recalls that the relevant market should be considered global in scope. Based on a global market definition, the Proposed Transaction would not give rise to any affected market in relation to gearboxes, as Siemens' estimated global market share amounts to [20-30]%.³⁶⁸
- (320) If the market were to be considered EEA-wide, the Transaction would give rise to a vertically affected market as Siemens's market share would be [30-40]%. Even in this case, however, the Notifying Party submits that the Transaction will not give rise to any harm due to input foreclosure as Siemens would lack the ability and the incentive to foreclose competitors in the market for standalone onshore OMS.³⁶⁹
- (321) As regards ability to foreclose, the Notifying Party considers that the upstream market for the supply of gearboxes is highly competitive. Siemens faces significant competition from suppliers of gearboxes such as ZF/Bosch (EEA share: [20-30]%), Moventas (EEA share: [10-20]%), Eickhoff (EEA share: [10-20]%) and CHST/NGC (EEA share: [5-10]%). In view of the highly competitive nature of the market for gearboxes, Siemens would not be able to foreclose SGRE's downstream rivals by raising prices or restricting the supply of gearboxes for wind turbines, as SGRE's downstream competitors (OEMs, ISPs etc.) would be able to quickly and cheaply source gearboxes from Siemens' upstream competitors. This is all the more likely as downstream competitors multisource gearboxes per individual wind turbine model.³⁷⁰
- (322) As regards the incentives, the Notifying Party notes that SGRE's volumes of gearboxes represent only a small part of Siemens' total supplies of gearboxes. In 2018, SGRE's gearbox orders from Siemens only amounted to approximately [10-20]% of Siemens' total gearbox sales to the wind turbine industry. [Siemens customers] procured significantly larger volumes of gearboxes from Siemens in 2018 than SGRE. [Siemens customers] purchased approximately similar volumes to SGRE. Senvion had a total spend on gearboxes of EUR [...], representing [0-5]% of Siemens' total gearbox revenues.³⁷¹ In the Notifying Party's view, if Siemens tried to raise upstream prices, SGRE's downstream competitors would switch to Siemens' upstream competitors and thus would continue to enjoy competitively priced gearboxes. As such, the downstream competitors could continue to compete with SGRE and the loss of upstream profits would not be compensated by incremental revenues downstream. This, in turn, implies that Siemens has no incentive to raise prices upstream or to restrict access to inputs.³⁷²

5.3.2.2. Commission's assessment

- (323) Although the Notifying Party discussed gearboxes only as an input to onshore servicing, they are also an input to offshore servicing, the manufacturing of onshore wind turbines and the manufacturing of offshore wind turbines. The Commission

³⁶⁸ Form CO, paragraph 338.

³⁶⁹ Form CO, paragraph 338-339, 343.

³⁷⁰ Form CO, paragraph 341-342.

³⁷¹ Form CO, paragraph 344.

³⁷² Form CO, paragraph 346.

will discuss the potential effects on all of the four downstream markets in the following sections.

(A) Potential effect on onshore OMS

- (324) As discussed in Section 5.2.2.3, the Commission considered that the market for gearboxes is rather EEA-wide in scope than worldwide but ultimately left the market definition open.
- (325) If the market was worldwide, Siemens's share would be less than [30-40] %, the Transaction would not give rise to an affected market and thus would not raise serious doubts.
- (326) If the market were to be considered EEA-wide, Siemens's upstream market share would be [30-40]%. Based on data submitted by the Notifying Party, Siemens's competitors in the upstream market are ZF/Bosch (EEA share: [20-30]%), Moventas (EEA share: [10-20]%), Eickhoff (EEA share: [10-20]%) and CHST/NGC (EEA share: [5-10]%). Under this market definition, the Transaction gives rise to an affected market. In this case, an assessment of the Transaction's effect on Siemens's ability and incentive to foreclose is warranted.
- (327) As regards ability, the Commission notes that the Transaction does not change Siemens' ability to raise prices or restrict OMS suppliers' access to its gearboxes as the Transaction does not affect its upstream market power. Thus, regardless of its ability to raise prices, there is no Transaction-specific effect on SGRE's ability to engage in input foreclosure.
- (328) As regards incentives, a vertically integrated player like SGRE generally faces a trade-off when considering input foreclosure strategies. An increase of prices in the upstream market will reduce profits due to decreasing sales to downstream rivals. On the other hand by raising rivals' input costs it may gain additional profits downstream by capturing additional sales or by increasing prices downstream. In this regard, the Transaction increases SGRE's downstream market share in onshore OMS with an increment of less than [5-10]%. In theory, the increment can increase SGRE's incentives to engage in input foreclosure as it can recoup more profits downstream than before the merger due to the fact that it has a larger sales base than pre-Transaction.
- (329) Whether this is likely or not depends on the actual ability of SGRE to raise downstream rivals' costs by raising input prices and, if that is the case, whether or not the gains downstream outweigh the losses upstream. Thus, even if SGRE's ability is not affected by the Transaction, its ability to increase prices regardless of the Transaction is of interest due to the changed incentives.
- (330) The Commission considers that Siemens is unlikely to have the ability to significantly raise input prices.
- (331) First, as indicated above, even though Siemens has the largest market share it faces four competitors in the upstream market, none of whom are fringe competitors.
- (332) Second, the market investigation suggests that Siemens lacks the ability to raise input prices to such an extent that it would influence the competitiveness of its downstream rivals. Namely, a large majority of customers considered that Siemens

is not an indispensable supplier of gearboxes, which suggests that it lacks the ability to engage in successful input foreclosure.³⁷³ As Enel explained *“There are several manufacturers of wind gearboxes, so even if we are not sure if all Winergy’s [Siemens subsidiary that manufactures gearboxes] gearboxes can be replaced with a model from another manufacturer, for sure Siemens-Winergy is not indispensable, although it is a good quality manufacturer.”*³⁷⁴ Respondents also pointed out that instead of replacing a faulty or old gearbox, it can also be serviced or upgraded and several firms provide such services. For example, Community Windpower explained that *“It is often possible to overhaul a gearbox at the third party company and put it back into service and several companies specialise in this reconditioned market.”*³⁷⁵ This implies that the sources of supply is even wider than the five competitors, which makes a successful price increase even less likely. When Siemens’s indispensability as a gearbox supplier was considered exclusively in relation to an input to OMS (as opposed to input to turbine manufacturing), competitors responses also did not suggest that Siemens would have the market power to raise input prices.³⁷⁶

- (333) Third, the Commission notes that, even though the supply of a gearbox can be important for the operation of a wind turbine, changing a gearbox is just one of out of the many OMS tasks. As noted above overhauling a gearbox is an alternative to supplying one. Even when the supply becomes inevitable it affects only one OMS module, namely “spares and distribution”. This module makes up roughly 30 % of EMEA OMS revenues according to an industry study.³⁷⁷ However, there are several thousand spare parts of a wind turbine of which the gearbox is only one.³⁷⁸ In addition, gearboxes do not have to be changed frequently. Thus although a large and expensive item, the supply of gearboxes is unlikely to make up more than a fraction of overall OMS revenues. It follows that even a significant price increase is unlikely to have a major impact on downstream OMS competitors’ ability to compete. This in turn implies that Siemens has limited ability to influence downstream prices.
- (334) Thus, Siemens’s ability to raise input prices (which is unaffected by the Transaction) is such that Siemens is not able to engage in input foreclosure. This in turn implies that even if the Transaction increased Siemens’s incentives to engage in foreclosure (by increasing its downstream share), Siemens will not be able to execute that strategy.
- (335) The Commission also considers that, even assuming ability to raise rivals’ input costs, it is unlikely that the Transaction would make such a strategy profitable. SGRE has a pre-Transaction downstream market share of [10-20]%, while [90-100]% of Siemens’s upstream sales are directed towards suppliers other than SGRE, including large volumes to [Siemens customers]. By raising gearbox prices for OMS purposes, Siemens could alienate both [Siemens customers] such that they might buy significantly less gearboxes also for turbines or stop buying gearboxes altogether and

³⁷³ Q2 Questionnaire to customers, questions 71.

³⁷⁴ [Customer] response to Q2 Questionnaire to customers, question 71.

³⁷⁵ Response of [Customer] to Q2 Questionnaire to customers, question 71.

³⁷⁶ Q1 Questionnaire to competitors, question 78.

³⁷⁷ Wood Mackenzie, Global Onshore Wind Operations and Maintenance (O&M) Trend 2019, p. 7.

³⁷⁸ For example, Vestas’ online spare part platform lists 30000 items across four brands.
https://shop.vestas.com/en/welcome?utm_source=adwords&utm_campaign=global_awareness&utm_term=turbine_spare_parts&gclid=EAIaIQobChMIgJaehqe75gIVgbHtCh0HWAAPeAAAYASAAEgLEdPD_BwE

switch to another supplier. Thus the losses on the upstream market could be substantial. At the same time, its sales base on the downstream market of [10-20]% is quite small, making it unlikely that it could recoup these losses. By adding less than [5-10]% to its downstream market share the Transaction is unlikely to change substantially the relative weights of upstream losses and downstream profits even assuming ability. It follows that Siemens is unlikely to have the incentive to engage in input foreclosure as a result of the Transaction.

- (336) On the basis of the above the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market on account of input foreclosure in relation to the standalone onshore OMS market.

(B) Potential effect on offshore OMS

- (337) As discussed in Section 5.3.1.2, SGRE's downstream market share is [10-20]% pre-Transaction and, in line with SGRE's internal documents and the fact that offshore customers are already served by ISPs, the increment due to the Transaction (advantage due to the acquisition of the IP) is maximum [0-5]%, The rest of the facts are the same as those discussed in relation to onshore OMS.
- (338) The assessment carried out in relation to standalone onshore OMS applies to standalone offshore OMS too, with minor differences.
- (339) If the market is worldwide, Siemens's share for the supply of gearboxes is less than [30-40] %, the Transaction does not give rise to an affected market and thus does not raise doubts.
- (340) If the market is EEA-wide, the impact of the Transaction on Siemens's ability and incentive to engage in input foreclosure needs to be considered. As discussed in relation to onshore OMS, Siemens's ability is unaffected by the Transaction but the Transaction may, in theory, increase Siemens's incentives to engage in input foreclosure due to the fact that SGRE's downstream market share increases. The Commission notes at the outset that given the maximum [0-5]% increment this is highly unlikely. Nonetheless, for the sake of completeness the Commission will complete the assessment.
- (341) Whether or not the Transaction induces Siemens to engage in input foreclosure depends on whether Siemens is able to raise downstream rivals' costs by raising input prices and, if that is the case, the gains downstream outweigh the losses upstream.
- (342) As regards ability, the same assessment applies as in the case of onshore OMS (Section 5.3.2.2.A). Thus the Commission considers that Siemens lacks the ability to raise rivals' costs by increasing input prices.
- (343) As regards incentives, the assessment in relation to onshore OMS applies with slightly different market shares. SGRE has a pre-Transaction downstream market share of [10-20]%, while [90-100]% of its upstream sales are directed towards suppliers other than SGRE, including large volumes to [Siemen's customers]. By raising gearbox prices for OMS purposes, Siemens could alienate both [Siemen's customers] such that they might buy significantly less gearboxes also for turbines or stop buying gearboxes altogether and switch to another supplier. Thus the losses on

the upstream market could be substantial. At the same time, its sales base on the downstream market of [10-20]% is quite small, making it unlikely that it could recoup these losses. By adding less than [0-5]% to its downstream market share, the Transaction is unlikely to change substantially the relative weights of upstream losses and downstream profits even assuming ability. It follows that Siemens is unlikely to have the incentive to engage in input foreclosure as a result of the Transaction.

- (344) If one were to consider that self-servicing offshore customers use OEMs and thus SGRE for replacing gearboxes in the context of a support agreement, SGRE's pre-Transaction share would be close to [70-80]% based on its share of the offshore installed base in the EEA.³⁷⁹ However, despite such a large potential share of supply, the market investigation did not provide any indication that pre-Transaction Siemens would restrict offshore OMS competitors' access to gearboxes or that it selectively raised gearbox prices vis-à-vis them. More importantly, regardless of Siemens' market share, the Transaction changes very little in Siemens's incentives due to the minimal downstream increment.
- (345) On the basis of the above the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market on account of input foreclosure in relation to the standalone offshore OMS market.

(C) Potential effect on the manufacturing of onshore turbines

- (346) Gearboxes are also an input to wind turbine manufacturing. As discussed in Section 5.3.1.3, due to the fact SGRE is acquiring Senvion's IP, a manufacturing facility and customer relationships, SGRE's share in the market for manufacturing and supply of onshore wind turbines is likely increase from [10-20]% to [10-20]% in the EEA. The [0-5]% increment is consistent with SGRE's internal documents in which SGRE [Reference to SGRE internal document]. The upstream market conditions for the supply of gearboxes have been described in relation to onshore OMS in Section 5.3.2.2.(A).
- (347) In this case too, if the market for gearboxes were worldwide, Siemens's upstream market share would be [20-30]% and the Transaction would not give rise to an affected market. Thus serious doubts can be excluded under this market definition.
- (348) On the basis of an EEA-wide market definition, Siemens's upstream market share is [30-40]% and the Transaction gives rise to a vertically affected market, which calls for the assessment of the Transaction's impact on Siemens's ability and incentive to foreclose downstream rivals, in this case onshore turbine OEMs.
- (349) The assessment in this regard follows the same principles as in the case of onshore OMS (Section 5.3.2.2.(A)). Namely, the Transaction does not change Siemens's ability to increase rivals' costs by increasing gearbox prices as its upstream market power remains unchanged. However, the Transaction may, in theory, increase Siemens's incentive to engage in input foreclosure as it increases the downstream basis on which the upstream losses resulting from a foreclosure strategy can be recouped.

³⁷⁹ Parties' response of 22 November 2019 to the Commission's RFI 6.

- (350) Whether this is likely to happen depends on Siemens's actual ability to raise rival onshore OEMs' costs by increasing gearbox prices and whether or not the additional profits downstream will outweigh the losses upstream.
- (351) As regards ability, the assessment is based on the same aspects as in the case of input foreclosure related to onshore OMS (see paragraphs 331-333) but the facts are somewhat different.
- (352) First, the fact that Siemens faces four competitors on the upstream market limits its ability to push through price increases in gearboxes.
- (353) Second, contrary to the assessment in relation to onshore OMS, the market investigation indicated that in the supply of gearboxes for onshore wind turbine manufacturing, Siemens is an important supplier that cannot easily be avoided.³⁸⁰
- (354) Third, contrary to OMS where a large part of OMS can be provided regardless of gearbox prices, every geared turbine needs a gearbox (i.e. unless a turbine uses direct drive technology). However, while the gearbox is likely to represent a greater share of input costs for onshore turbines than for onshore OMS and is an important input, it still represents only a small share of the overall turbine costs. Based on the study of the International Renewable Energy Agency, the gearbox represents roughly 10 % of the total cost of an onshore wind turbine.³⁸¹ Thus, while it is a bigger cost item than in onshore OMS, its impact on the final turbine price is still limited. For example, a significant 10 % upstream price increase, which is likely to lead to considerable losses on the upstream market, would increase the costs of downstream rivals only by 1%. Thus, even though the proportions are different, Siemens's ability to impact downstream rivals costs is quite limited.
- (355) Thus the Commission considers that Siemens has limited ability to increase rivals' costs in the onshore wind turbine market.
- (356) As regards incentives, SGRE has a pre-Transaction downstream market share of [10-20]%, while [90-100]% of its upstream sales are directed towards suppliers other than SGRE, including large volumes to [Siemens customers]. By raising gearbox prices for the purposes of manufacturing onshore turbines, Siemens could cause [Siemens customers] to switch significant volumes to rival gearbox producers. At the same time its sales base on the downstream market of [10-20]% is quite small, making it unlikely that it could recoup these losses. This is all the more the case because, as discussed, even significant input price increases (which cause great losses upstream), translate into minor cost increases and thus minor potential price increases downstream. Consequently Siemens has very little incentive to engage in input foreclosure strategies pre-Transaction and by adding approximately [0-5] % market share as per paragraph 346 above, the Transaction will not affect the relative weights of upstream losses and downstream profits in any meaningful way, even assuming ability.

³⁸⁰ Q2 Questionnaire to customers, questions 71.

³⁸¹ https://www.irena.org/documentdownloads/publications/re_technologies_cost_analysis-wind_power.pdf, page 18.

(357) Given that Siemens has limited ability and no incentive to engage in input foreclosure strategies as a result of the Transaction, the Commission considers that the Transaction does not raise serious doubts on account of input foreclosure relating to the manufacturing and supply of onshore wind turbines.

(D) Potential effect on the manufacturing of offshore wind turbines

(358) As discussed in Section 5.3.1.4, due to the fact SGRE is acquiring Senvion's IP and a blade manufacturing facility (and as a result may gain some new customers), SGRE's share in the market for manufacturing and supply of offshore wind turbines could increase marginally in the EEA. The upstream market conditions for the supply of gearboxes have been described in relation to onshore OMS (Section 5.3.2.2(A)).

(359) The same assessment applies as in the case of the effect on the onshore turbine market (Section 5.3.2.2.(C)) with certain differences.

(360) Namely, if the market for gearboxes were worldwide, Siemens's market upstream market share would be [20-30]% and the Transaction would not give rise to an affected market. Thus serious doubts can be excluded under this market definition.

(361) On the basis of an EEA-wide market definition, Siemens's upstream market share is [30-40]% and the Transaction gives rise to a vertically affected market, which makes an assessment of the Transaction's impact on Siemens's ability and incentive to foreclose downstream rivals, in this case offshore turbine OEMs, necessary.

(362) As in the case of manufacturing onshore wind turbines, the Transaction does not change Siemens's ability to increase rivals' costs by increasing gearbox prices as its upstream market power remains unchanged. However, the Transaction may, in theory, increase Siemens's incentive to engage in input foreclosure as it increases the downstream basis on which the upstream losses resulting from a foreclosure strategy can be recouped.

(363) Whether this is likely to happen depends on Siemens's actual ability to raise rival onshore OEMs' costs by increasing gearbox prices and whether or not the additional profits downstream will outweigh the losses upstream.

(364) The Commission considers that Siemens's ability to raise rival offshore OEMs' costs by increasing gearbox prices is limited for the same reasons as those outlined in relation to the manufacturing of onshore turbines in Section 5.3.2.2.(C). The ability is even more limited given that, as discussed in relation to market definition (Section 5.2.1.5), the cost of manufacturing offshore turbines is much higher due to the special requirements resulting from offshore use. On the other hand, as discussed in relation to the market definition of gearboxes (Section 5.2.1.4), separate onshore and offshore gearbox markets are not distinguished as the costs involved in adjusting production from one type to another are minor. It follows that the input cost of a gearbox for onshore and offshore use are similar but the cost of producing an offshore turbine is much greater than that of manufacturing an onshore turbine. Consequently, the cost of a gearbox is likely to make up much less than 10 % of the total cost of a turbine, which further limits Siemens's ability to influence downstream rivals' costs in manufacturing offshore turbines relative to manufacturing onshore turbines.

- (365) As regards incentives, the Commission considers that Siemens does not have an incentive to engage in input foreclosure as a result of the Transaction, for the same reasons as those outlined in relation to the manufacturing of onshore turbines in Section 5.3.2.2.(C). If anything, the Transaction's effect on Siemens's incentives is even less than in the case of onshore manufacturing as the expected increase of its downstream market share is negligible.
- (366) On the basis of the above, the Commission considers that the Transaction does not raise serious doubts on account of input foreclosure relating to the manufacturing and supply of offshore wind turbines.

6. CONCLUSION

- (367) 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
Executive Vice-President