Anticipated acquisition by Chargemaster plc of Elektromotive Limited

Decision on relevant merger situation and substantial lessening of competition

ME/6646/16

The CMA's decision on reference under section 33(1) of the Enterprise Act 2002 given on 20 January 2017. Full text of the decision published on 3 March 2017.

Please note that [✂] indicates figures or text which have been deleted or replaced in ranges at the request of the parties for reasons of commercial confidentiality.

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SUMMARY

1. Chargemaster plc (**Chargemaster**) has agreed to acquire 97% of the issued share capital of Elektromotive Limited (**Elektromotive**) (the **Merger**). Chargemaster and Elektromotive are together referred to as the **Parties**.

2. The Competition and Markets Authority (**CMA**) believes that it is or may be the case that the Parties will cease to be distinct as a result of the Merger, that the share of supply test is met and that, accordingly, arrangements are in

progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

3. The Parties overlap in the supply, installation and maintenance of electric vehicle supply equipment (**EVSE**) and the supply of EVSE network services to site hosts and consumers in the UK.

4. The CMA assessed the Merger on the basis of different frames of reference for the supply, installation and maintenance of home charging EVSE, public and workplace charging EVSE and rapid charging EVSE in the UK, based on evidence supporting limited demand and supply side substitutability between each type of EVSE, consistent with the Office of Fair Trading's (**OFT's**) decision in *Chargemaster/Elektromotive (2013)*.[1]

5. The CMA also assessed the Merger using a frame of reference for the supply of network services to hosts and EV drivers in the UK given that the evidence in the current case shows that consumer use of EVs has expanded rapidly since 2013 and will continue to do so into the future, that demand for public charging points is likely to increase commensurately and that EV drivers are increasingly being "charged for charging". Therefore, in the current case, the CMA's assessment has taken into account the consumer side of the market (ie B2C) in addition to the host side.

6. The CMA therefore assessed horizontal unilateral effects in relation to each of the following product frames of reference:

   (a) the supply, installation and maintenance of home charging EVSE;

   (b) the supply, installation and maintenance of public and workplace charging EVSE;

   (c) the supply, installation and maintenance of rapid charging EVSE; and

   (d) the supply of network services, incorporating the supply of EVSE network services to site hosts (B2B) and the supply of EVSE network services to consumers, either by subscription or on a PAYG basis (B2C).

7. In relation to the supply of each type of EVSE, the CMA found that the Merger would result in only a small increment and that there would be several credible suppliers remaining post-Merger.

8. In relation to the supply of network services, the CMA found that:

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[1] ME/5897/13, Anticipated acquisition by Chargemaster plc of Elektromotive Limited, OFT, 18 April 2013.

(a) while some host customers consider that the Parties are close competitors, all such customers told the CMA that there are a range of existing providers of network services to which they could switch, and that switching is not difficult.

(b) while the Merger will increase Chargemaster's control over Elektromotive's charging points:

(i) there remain many other public charging points which are not managed by the Parties, many of which are available free to consumers;

(ii) there is very little local overlap between the Parties' networks and, for those customers that are more likely to switch between the Parties' networks (ie EV drivers travelling long distances), Ecotricity is a particularly strong competitor;

(iii) the Parties' business models are differentiated, with Chargemaster focussed on selling hardware to hosts and on building a network of charging points to provide an attractive paid subscription proposition to consumers, and Elektromotive focussed on providing network services to hosts (often for services provided free to consumers) and solely charging hosts;[2] and

(iv) the industry is nascent (with the UK market for network services worth less than £3-4 million) and there is a widespread expectation of rapid future growth, which will provide existing and new network service providers the opportunity to emerge/expand and compete with the merged entity.

9. For these reasons, the CMA believes that the Merger does not give rise to a realistic prospect of a substantial lessening of competition (**SLC**) as a result of horizontal unilateral effects.

10. The Merger will therefore **not be referred** under section 33(1) of the Enterprise Act 2002 (the **Act**).

[2] Elektromotive charges consumers for an RFID card, which contributes towards the cost of making and distributing a card, but all Elektromotive charging points can also be accessed through a free mobile app.

ASSESSMENT

Parties

11. Chargemaster is a privately held company that manufactures and supplies EVSE, including the installation and maintenance of this equipment. Chargemaster also offers EVSE network services to charging point owners (ie site hosts). It makes its network of UK public charging points (branded as **POLAR**) available to EV drivers on a subscription basis or on a pay as you go (**PAYG**) basis. The turnover of Chargemaster in 2015/16 was around £13.5 million worldwide, of which around £13.4 million was generated in the UK.

12. Elektromotive is a supplier of EVSE, including installation and maintenance. Elektromotive owns Charge Your Car Limited (**CYC**), which provides EVSE network services to charging point owners. The turnover of Elektromotive in 2015/16 was around £2.4 million worldwide, almost entirely generated in the UK.

13. Chargemaster and Elektromotive sought to merge in 2013. The OFT reviewed that proposed transaction and decided that it would not give rise to a realistic prospect of an SLC.[3] The merger did not proceed at the time for commercial reasons.

Transaction

14. Chargemaster has entered into share purchase agreements with Elektromotive Group Ltd and Calvey Taylor-Haw to acquire 97% of the issued share capital of Elektromotive. Elektromotive Group Ltd is a company incorporated in Singapore and listed on the Singapore Stock Exchange. Calvey Taylor-Haw is the Chief Executive Officer of Elektromotive.

Jurisdiction

15. As a result of the Merger, the enterprises of Chargemaster and Elektromotive will cease to be distinct.

16. The Parties overlap in the supply of EVSE network services, which is a two-sided platform that includes the supply of services to site hosts (B2B) and to EV drivers by subscription or on a PAYG basis (B2C). In 2016, the Parties held a combined share of supply of around [30-40]%, with an increment of [10-20]%, calculated on the basis of the turnover of the Parties from both B2B

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[3] *Chargemaster/Elektromotive (2013)*.

and B2C sales. The CMA therefore believes that the share of supply test in section 23 of the Act is met.

17. The CMA therefore believes that it is or may be the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

18. The initial period for consideration of the Merger under section 34ZA(3) of the Act started on 23 November 2016 and the statutory 40 working day deadline for a decision is therefore 20 January 2017. The Merger was considered at a Case Review Meeting.[4]

Counterfactual

19. The CMA assesses a merger's impact relative to the situation that would prevail absent the merger (ie the counterfactual). For anticipated mergers the CMA generally adopts the prevailing conditions of competition as the counterfactual against which to assess the impact of the merger. However, the CMA will assess the merger against an alternative counterfactual where, based on the evidence available to it, it believes that, in the absence of the merger, the prospect of these conditions continuing is not realistic, or there is a realistic prospect of a counterfactual that is more competitive than these conditions.[5]

20. The Parties submitted that, as a result of an existing contractual arrangement between them, EV drivers subscribing to the POLAR network already have access to CYC-managed charge points in a number of locations. The Parties said that this limits any effects arising from the Merger.

21. However, the CMA notes that contractual arrangements are subject to change and, although the immediate effects of the Merger might be affected by the contractual arrangements in place, it is realistic that the contract will not remain in place indefinitely and, therefore, the effects of the Merger need to be considered in the absence of this transaction.

22. For this reason, the CMA believes that the relevant counterfactual against which to consider the impact of the Merger is the prevailing conditions of competition. The CMA notes that it has taken into account the relevance of

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[4] See *Mergers: Guidance on the CMA's jurisdiction and procedure* (CMA2), January 2014, from paragraph 7.34.
[5] *Merger Assessment Guidelines* (OFT1254/CC2), September 2010, from paragraph 4.3.5. The *Merger Assessment Guidelines* have been adopted by the CMA (see *Mergers: Guidance on the CMA's jurisdiction and procedure* (CMA2), January 2014, Annex D).

the contractual relationship between the Parties in its competitive assessment.

Frame of reference

23. Market definition provides a framework for assessing the competitive effects of a merger and involves an element of judgement. The boundaries of the market do not determine the outcome of the analysis of the competitive effects of the merger, as it is recognised that there can be constraints on the merger parties from outside the relevant market, segmentation within the relevant market, or other ways in which some constraints are more important than others. The CMA will take these factors into account in its competitive assessment.[6]

24. The Parties overlap in the supply of all types of EVSE (or have done so until recently) and network services to charging point owners and EV owners.

Product scope

25. The Parties told the CMA that EVSE[7] is typically grouped into three categories:

    (a) **Home EVSE** generally has a charge capacity of 3-7 Kw (alternating current) and is typically connected to a power source through a single socket. The charge time for an EV using home charging EVSE is approximately 3-7 hours from flat. Home charging is typically performed overnight in residential garages or on driveways. Home charging EVSE is typically purchased from EVSE suppliers by intermediaries (such as energy companies) for installation at residential properties and in some cases at businesses. Chargemaster told the CMA that the cost is typically around £750 including installation, but many consumers end up paying around £250 as the Government has provided a £500 grant under the Electric Vehicle Home Charge Scheme. Home charging EVSE is not normally part of a network.

    (b) **Public and workplace EVSE** generally has a charge capacity of 3-21 Kw (alternating current) and is typically connected through dual sockets. The charge time for an EV using public and workplace EVSE is approximately 3-7 hours from flat. Public and workplace charging EVSE is commonly purchased by local authorities and businesses. Some businesses (such

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[6] *Merger Assessment Guidelines*, paragraph 5.2.2.

[7] The CMA understands that the term “hardware” is sometimes used in the industry to refer to EVSE.

as supermarkets and car parks) make this EVSE available to customers or members of the public, while other businesses make it available only to their employees or use it for business purposes (such as charging fleet vehicles). Chargemaster told the CMA that pricing varies between £2,500 and £7,500 including installation. Chargemaster also told the CMA that publicly available EVSE is usually part of a network, whereas EVSE used in the workplace (eg for staff and visitors) is not.

(c) **Rapid EVSE** generally has a charge capacity of 50 Kw (direct current). The charge time for an EV using rapid EVSE is approximately 20-30 minutes from flat. Rapid EVSE customers tend to be local authorities and businesses, which make the EVSE available to the public or use it for business purposes. Chargemaster told the CMA that the price for rapid charging EVSE tends to be significantly more than for non-rapid public and workplace EVSE, typically around £30,000 including installation. Rapid charging EVSE is usually part of a network.

26. Network services are services associated with the management of a network of EV charging points (including rapid charging points) which consumers can access. They enable hosts of EV charging points to set tariffs and collect revenue for the use of their charge points[8] and may include the provision of information and support to hosts (eg usage data and status reports).[9] For EV drivers, network services enable drivers to access a charge point, typically using an RFID card or mobile phone app.

27. Chargemaster submitted that the narrowest candidate product markets in which the Parties overlap are:

(a) the supply and installation of home charging EVSE;

(b) the supply and installation of public and workplace charging EVSE;

(c) the supply and installation of rapid charging EVSE;

(d) the supply of EVSE network services to site hosts (B2B); and

(e) the supply of EVSE network services to consumers, either by subscription or on a PAYG basis (B2C).

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[8] Although currently most hosts do not charge users to use their charging point, as discussed further below.

[9] The CMA understands that the term “back office” services or support is commonly used within the industry to refer to the types of EVSE network services supplied to site hosts and local authorities.

Supply, installation and maintenance of home charging, public and workplace charging and rapid charging EVSE

28. In its review of the earlier proposed transaction between the Parties in 2013, the OFT assessed the merger on the basis of separate frames of reference for home charging EVSE, public and workplace charging EVSE and rapid charging EVSE. The OFT noted that households requiring home charging equipment would be unlikely to switch to commercial charging equipment in response to a small but significant, non-transitory increase in the price (**SSNIP**) of home charging equipment and that customers would not switch between different types of EVSE. The OFT noted that rapid charging EVSE was highly differentiated in its price, and that not all suppliers could manufacture rapid charging EVSE.

29. In the present case, the evidence received by the CMA from third parties supports the use of the same frames of reference. No third parties disagreed with the separate categorisation of home charging EVSE, public and workplace charging EVSE and rapid charging EVSE. On the supply-side, several third parties noted that, while it might be possible to switch production to a different type of EVSE, doing so would require a significant lead time (of up to 12 months).

30. The CMA also considered whether to include the supply of installation and maintenance services within the same frame of reference as the supply of each type of EVSE.

31. Chargemaster told the CMA that installation is normally included with the supply of each type of EVSE; however, in some instances, EVSE may be installed by a customer's own electrician rather than by the EVSE supplier. Chargemaster told the CMA that public and workplace charging EVSE and rapid charging EVSE are typically sold by a supplier with a three year guarantee and a maintenance agreement is included in the initial price. After the first three years, EVSE may be maintained by a third party. A specific maintenance contract is not normally included with the supply of home charging EVSE; however, the supplier will typically include a three year guarantee which allows the customer to make a claim against the supplier if the equipment breaks down during that period.

32. The majority of third party EVSE suppliers agreed that installation and maintenance were typically included within the contract for the supply of EVSE, whether supplied directly by the EVSE supplier or through sub-contractors. One competitor noted that installation and maintenance are important parts of any contract for suppliers.

33. On the basis of this evidence, the CMA believes that the relevant product frames of reference for the assessment of the Merger are the supply, installation and maintenance (together) of each of the three types of EVSE (separately). This is consistent with the OFT's approach in *Chargemaster/Elektromotive (2013).*

Supply of EVSE network services to site hosts (B2B) and to consumers (B2C)

34. In *Chargemaster/Elektromotive (2013)*, the OFT considered a separate frame of reference for EVSE network management services, ie the management of a network of EV charging points (including rapid charging points) which consumers can access through a convenient system.

35. The CMA notes that EVSE network services is a two-sided product,[10] which offers services to two groups of customers, namely:

    (a) hosts wishing to provide charging points,[11] eg a public authority providing on-street EV charging, or a business offering off-street EV charging to its customers; and

    (b) EV owners wishing to charge their EVs from public charging points.[12]

36. The CMA understands that there are a variety of arrangements between hosts and network services providers. A host may contract with its EVSE hardware supplier to manage its network, or it may purchase its EVSE and separately contract a network services provider. In some cases, the host (eg a public authority) provides the opportunity for a firm to install a public charging point, and the firm (eg Chargemaster) then owns and manages the charging point.[13]

37. In *Chargemaster/Elektromotive (2013)*, the OFT focussed on the hosts' side of the market as, at that time, there were few EVs in use and low consumer demand for public charging points.

38. Since the start of 2013, the number of EV drivers on UK roads has increased substantially, from an estimated 2,199 EVs in 2013 to an estimated 28,231 EVs at the end of 2015. In 2015, the supply of ultra-low emissions vehicles in the UK grew by 94% and, in the first half of 2016, the UK was the largest new

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[10] *Merger Assessment Guidelines,* paragraph 5.2.20.

[11] The need for network management arises if the host wishes to obtain revenue from charging or if usage records either have to be kept (eg due to Government requirements where a subsidy has been provided) or wish to be kept (eg for a business to understand its customers' behaviour).

[12] The CMA uses the term 'public charging point' to refer to any charging point made available to the public on a network including those hosted by private organisations.

[13] Chargemaster owns approximately 10-30% of the devices it manages; Elektromotive does not own any charging points.

ultra-low emissions vehicles market in the European Union.[14] The Go Ultra Low organisation (a joint venture between the Office of Low Emission Vehicles (**OLEV**)[15] and vehicle manufacturers) estimates that in ten years' time, the sale of EVs in the UK will outnumber the sale of petrol and diesel cars, with at least 1.3 million EVs sold per year, and that, by 2040, all new cars sold in the UK will be EVs.[16] The Government has set out an ambition for all cars and vans in the UK to be effectively zero emission by 2050.[17] This substantial increase in EVs is expected to create significantly greater demand for public charging.

39. The CMA notes that, since 2013, more hosts are now "charging for charging" rather than offering free public charging.

40. For these reasons, the CMA believes it necessary in the present case to take account of the EV driver's side of the supply of EVSE network services.

41. Notwithstanding the growth forecast for the supply of public charging points, the Parties and third parties told the CMA that the industry is facing challenges associated with the withdrawal of government funding for public charging infrastructure. The *Chargemaster/Elektromotive (2013)* decision highlighted the Plugged in Places (**PiP**) programme, which was a significant government funding scheme that allocated funds to eight regions in the UK for investment in public charging points. It resulted in the installation of 6,400 public charge points. However, funding for the PiP programme ceased in 2014. While OLEV continues to administer a number of government funding schemes targeted at individual EV drivers and workplaces,[18] there is now much less public funding available for public charging infrastructure investment.[19] The CMA understands from the Parties and third parties that the funding for future expansion of public charging points is expected to come

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[14] See Department for Transport, Consultation on proposed ultra-low emission vehicles measure for inclusion in the Modern Transport Bill, October 2016, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/562370/ulev-modern-tranport-bill-consultation.pdf.

[15] OLEV is a team working across government to support the early market for ultra-low emission vehicles. It is comprised of staff from the Department for Transport and the Department for Business, Energy and Industrial Strategy. See https://www.gov.uk/government/organisations/office-for-low-emission-vehicles/about.

[16] Go Ultra Low, Electric vehicle sales to outnumber petrol and diesels in 10 years' time, 29 June 2016, available at https://www.goultralow.com/electric-vehicles-outnumber-petrol-diesels-10-years/.

[17] See Department for Transport, Consultation on proposed ultra-low emission vehicles measure for inclusion in the Modern Transport Bill, October 2016, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/562370/ulev-modern-tranport-bill-consultation.pdf.

[18] Such as the Electric Vehicle Home Charge Scheme and Workplace Charging Scheme. See https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles.

[19] OLEV recently awarded £35 million in grants to four UK cities under the Go Ultra Low programme to enable them to become "global exemplars" for EV uptake. The funding is not specifically tied to investment in public charging infrastructure and it is expected that funds will be directed to a range of initiatives.

from significant private investment. There is already some evidence of this shift (as outlined in the competitive assessment below).

Conclusion on product scope

42. For the reasons set out above, the CMA has considered the impact of the Merger in the following product frames of reference:

    (a) the supply, installation and maintenance of home charging EVSE;

    (b) the supply, installation and maintenance of public and workplace charging EVSE;

    (c) the supply, installation and maintenance of rapid charging EVSE; and

    (d) the supply of network services, incorporating the supply of EVSE network services to site hosts (B2B) and the supply of EVSE network services to consumers, either by subscription or on a PAYG basis (B2C).

Geographic scope

43. Chargemaster submitted that the geographic market for EVSE products is at least European, if not global. Chargemaster said that, since the time of the *Chargemaster/Elektromotive (2013)* decision, competition from European and global manufacturers has continued to increase and the Parties now face considerable competitive constraints from these suppliers. In relation to network services, Chargemaster submitted that the Parties overlap in the supply of network services (for B2B and B2C) in the UK.

EVSE

44. In *Chargemaster/Elektromotive (2013)*, the OFT assessed the supply of each type of EVSE on a national basis, without concluding on the relevant geographic market. In that case, third parties told the CMA that some continental European EVSE manufacturers did not supply into the UK and that, while some European manufacturers were active, they tended to focus on their national markets. Third parties said that European suppliers would need a UK presence to compete in the UK.

45. In the present case, the evidence from third parties is similar to that provided in the previous case. Third parties told the CMA that, while there are some suppliers of EVSE in the UK from Europe, EVSE is supplied and maintained in the UK primarily by UK-based companies. One third party noted that, while customers are free to purchase EVSE from outside the UK, EVSE suppliers to UK customers would generally need to have, at the very least, either a sales

office in the UK or a distributor in the UK. Third parties also noted that the main EVSE suppliers in the UK (Chargemaster, Elektromotive, Rolec, APT and Pod Point) are all UK-based, even if, in some cases, they are ultimately controlled by overseas companies.

46. On the basis of this evidence, and on a cautious basis, the CMA believes that the relevant geographic frame of reference for the supply, installation and maintenance of each type of EVSE is the UK.

Network services

47. In *Chargemaster/Elektromotive (2013)*, the OFT also assessed the supply of network management services on a national basis.

48. In the present case, third parties told the CMA that there is very limited supply of network services in the UK by non-UK suppliers. One third party suggested that a UK presence is even more important for the supply of network services than for the supply of EVSE. It said that a supplier of network services to UK customers would need a sales and support office in the UK set up with the necessary financial systems to support billing.

49. A large continental European supplier of network services told the CMA that it does not offer network services in the UK because of the need to have a UK-based team to provide an effective solution for customers. Another supplier noted that, while some European operators were attempting to enter the UK, they were having difficulties due to incumbency advantages for the existing UK-based suppliers.

50. On the basis of this evidence, the CMA believes that the relevant geographic frame of reference for the supply of network services is the UK.

51. The CMA notes that, while EVSE hosts may be able to choose a network services provider from across the UK, EV drivers are mainly concerned with those local areas where they are likely to charge their EVs. Accordingly, the geographic frame of reference might be different for the two sides of the product. Accordingly, the CMA has taken local factors into account in its competitive assessment.

Conclusion on geographic scope

52. For the reasons set out above, the CMA has considered the impact of the Merger on a UK-wide basis, both for the supply of each type of EVSE (home charging, public and workplace charging, and rapid charging) and for the supply of network services.

Conclusion on frame of reference

53. Accordingly, the CMA has considered the impact of the Merger in the following frames of reference in the UK:

    (a) the supply, installation and maintenance of home charging EVSE;

    (b) the supply, installation and maintenance of public and workplace charging EVSE;

    (c) the supply, installation and maintenance of rapid charging EVSE; and

    (d) the supply of network services, incorporating the supply of EVSE network services to site hosts (B2B) and the supply of EVSE network services to consumers, either by subscription or on a PAYG basis (B2C).

Competitive assessment

Horizontal unilateral effects

54. Horizontal unilateral effects may arise when one firm merges with a competitor that previously provided a competitive constraint, allowing the merged firm profitably to raise prices or degrade quality on its own and without needing to coordinate with its rivals.[20] Horizontal unilateral effects are more likely when the merger parties are close competitors.

55. The CMA assessed whether it is or may be the case that the Merger has resulted, or may be expected to result, in an SLC in relation to horizontal unilateral effects in the above frames of reference.

EVSE

56. The Parties told the CMA that estimating shares of supply in the UK for any type of EVSE is difficult as it is a nascent industry with little transparency on revenues of competitors. Moreover, there are various new suppliers which have only recently begun selling EVSE in the UK. The Parties also submitted that there are no independent market research reports, or readily available data held by Government, from which to estimate shares of supply of EVSE.

57. The Parties submitted that Elektromotive is focussed on providing network services to hosts and supplies very little EVSE. The Parties submitted that

[20] *Merger Assessment Guidelines*, from paragraph 5.4.1.

Chargemaster faces competition from several other providers of EVSE in the UK.

58. While the CMA has not been able to estimate precise shares of supply for each type of EVSE, the CMA's market testing has shown, consistent with the Parties' submissions, that:

(a) Elektromotive is not particularly active in the supply of any type of EVSE; and

(b) the merged entity will continue to face competition from several credible competitors in each EVSE frame of reference.

59. Elektromotive explained to the CMA that, while it was an early pioneer in the supply of EVSE, it had struggled in recent years and had underinvested in its equipment relative to its competitors, particularly in relation to home charging EVSE and public and workplace charging EVSE. Consequently, it had switched to focusing on network services through its CYC business.

Home EVSE

60. Elektromotive's revenue from home charging EVSE in 2016 was very low, around £11,000. Third parties identified Pod Point and Rolec as particularly strong competitors to Chargemaster in home charging EVSE, with several other suppliers also competing, including Schneider, APT, EV Box, EO Charging and Siemens.[21]

Public and workplace EVSE

61. Elektromotive achieved higher revenues in relation to the supply of public and workplace charging EVSE, around £679,000. However, third party evidence indicated that Elektromotive has a small share of supply in this segment. Third parties identified Pod Point, Rolec and APT as significant competitors to Chargemaster in public and workplace EVSE, with several other suppliers also competing, including Siemens, the New Motion, EV Box, DBT, Ensto and ABB.

[21] In total, OLEV has approved 19 suppliers of home charging EVSE under its Electric Vehicle Homecharge Scheme, which provides grants to EV drivers to reduce the cost of installing a charge point at home. A full list of approved suppliers is available at https://www.gov.uk/government/publications/electric-vehicle-homecharge-scheme-approved-chargepoint-model-list.

Rapid EVSE

62. While Elektromotive was active in the supply of rapid EVSE in previous years, it did not achieve any revenue in this segment in 2016. Third parties identified APT, Siemens, Ecotricity, Chargepoint Services, ABB and DBT (among others) as significant competitors to Chargemaster in rapid EVSE.

63. No competitor or customer contacted by the CMA was concerned about the impact of the Merger on the supply, installation and maintenance of any type of EVSE.[22]

Conclusion on horizontal unilateral effects in the supply of EVSE

64. As set out above, the CMA believes that the Merger will result in only a small increment in the supply of home charging EVSE and public and workplace charging EVSE, and no increment in rapid charging EVSE. Post-Merger there will remain a significant number of credible competitors in all segments. No competitor or customer raised concerns.

65. Accordingly, the CMA found that the Merger does not give rise to a realistic prospect of an SLC as a result of horizontal unilateral effects in relation to the supply, installation and maintenance in the UK of home charging EVSE, public and workplace charging EVSE and/or rapid charging EVSE.

Network services

66. The CMA assessed whether the merged entity would have the ability to profitably impose price increases or reduce service quality on host customers or EV drivers through its enlarged network of charge points.

67. In particular, the CMA assessed whether the parties could raise prices or reduce service due to indirect network effects, ie that, as a result of the Merger:

    (a) EV drivers would be more inclined to subscribe to the combined network of the Parties because it offers access to a larger proportion of public charge points; and

[22] Some competitors had concerns regarding the effect of the Merger on their ability to supply EVSE as a result of the Parties' enlarged network. This issue is separate from the question of horizontal unilateral effects in the supply, installation and maintenance of EVSE, and is addressed further below (see section on other theories of harm).

(b) hosts would be more inclined to buy network services from the merged entity in order to ensure that they are part of the largest network (by charge points), which will therefore be of most value to their users.

Shares of supply

68. As with the EVSE frames of reference, the Parties told the CMA that it is difficult to estimate shares of supply on a revenue basis as there are no relevant industry reports or government data available and most competitors do not release their revenue results publicly. Estimates of shares from the Parties and from some of their competitors varied widely.

69. The CMA asked competitors to the Parties for their revenue data but it was not able to obtain revenue from all competitors. In particular, and among others, the CMA did not receive revenue information from Blue Point London, the network service provider for Source London, and Ecotricity. Nevertheless, on the basis of the information it received, the CMA estimated a market size of at least £2.6 million and shares of supply as set out in Table 1. Given the absence of revenue data from some suppliers which both the Parties and third parties indicated to be significant competitors, it is likely that the market size is greater and the Parties combined share of supply lower than shown in Table 1. The CMA also notes that it would expect the size of this market to grow over the next few years in line with growing consumer demand for EVs (see paragraph 38).

Table 1 – CMA's approximate estimates of shares of supply for network services[23]

Competitor	**Turnover in the provision of network services (B2B and B2C) (2016)**	**Share of supply (%)**
Chargemaster	**[✂]**	[10-20]%
Elektromotive	**[✂]**	[20-30]%
Combined	**[✂]**	**[30-40]%**
APT	**[✂]**	[0-5]%

[23] There are currently a range of business models used by suppliers of network services, with some focusing on generating revenues from the host side of the product (B2B) and some focusing on generating revenues from the consumer side of the product (B2C). These share estimates aggregate revenues on both sides of the product.

The New Motion	**[✂]**	[0-5]%
ICU	**[✂]**	[0-5]%
ChargePoint Services	**[✂]**	[10-20]%
Schneider	**[✂]**	[5-10]%
Siemens	**[✂]**	[0-5]%
POD Point	**[✂]**	[30-40]%
Total	**[✂]**	**100%**

Source: The CMA's estimates using the Parties' and third parties' revenue data.

70. Table 1 shows that the Parties would have a combined share of supply of network services of, at most, [30-40]%, with an increment of, at most [10-20]%.

71. Given the limited weight which could be ascribed to shares of supply on the basis of revenues, the CMA also sought to establish shares of supply on the basis of the number of charge points managed by network service providers. The CMA estimated that the merged entity would be the network services provider for approximately [30-40]% of the public charge points in the UK, excluding Chargeplace Scotland.[24]

Closeness of competition

72. The Parties submitted that they are not close competitors in the supply of network services to EV drivers or hosts. The Parties told the CMA that EV drivers do not regard POLAR and CYC to be offering competing networks as they are complementary in geography and siting. The Parties noted that users of Chargemaster's POLAR network already receive access to CYC's network[25] under an agreement between Chargemaster and Elektromotive, and therefore POLAR customers will not obtain any greater access to public charge points as a result of the Merger.

[24] Source: third parties. [✂] Elektromotive-managed charge points are administered by Transport for Scotland, branded as Chargeplace Scotland. Chargeplace Scotland operates as a separate network and, when Elektromotive signed its agreement with Chargemaster for Chargemaster's POLAR customers to gain access to Elektromotive charge points (see para 72), these sites were excluded at the request of Transport for Scotland.
[25] Excluding Chargeplace Scotland.

- *Competition for the supply of network services to EV drivers*

73. The Parties were unable to provide any pertinent internal documents or analysis on the usage of public charge point by EV drivers. They did provide data on the location of the charge points they manage which showed that their networks overlap in only 11% of UK towns where at least one of them is present and managing charging points. The Parties noted that, in respect of the few towns where both Parties' networks are present, there are very few locations where a POLAR charge point would be next to or within a short distance of a CYC charge point.

74. The Parties told the CMA that EV drivers predominantly charge their EVs at home or at their workplace and typically use public charge points to 'top-up', in particular where a convenient public charge point is available for free or at only a nominal cost (and is therefore cheaper than home charging).[26] The Parties said that a typical example would be where a person goes to their local supermarket and plugs into the free charge point provided by the supermarket while they are shopping. The Parties submitted that, with the exception of drivers travelling long distances for whom range may be an issue, the availability and the network of a charge point does not tend to dictate the destination for the driver as the driver will choose their destination (eg a supermarket) and only charge if a point is available and it is economic to do so. The Parties said that, for this reason, EV drivers do not tend to substitute between different charge points in a local area.

75. The CMA was not able to obtain data to verify the Parties' submissions on consumer behaviour in this respect.[27] However, the CMA recognises that for many drivers, ie those who are not driving long distances and who are able to charge at home, the cost of charging at home (ie the cost of electricity) may provide an upper band on the price they would be willing to pay to use a public charge point.

76. Drivers travelling long distances may have less choice regarding charge points as EVs currently have limited ranges.[28] However, the CMA notes that

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[26] EVs can take a long time to charge (see paragraph 25). Consequently, most EV drivers charge their EVs overnight at their home or during working hours at their workplace.

[27] The CMA notes that Ecotricity's website makes similar points: "*The average car in Britain travels around 20 miles a day, a distance most modern electric cars can sustain for almost a week without needing to charge. Most car owners have access to off-street parking (70 per cent apparently) and are able to charge at home at night. So most cars don't need to charge most days. It's longer journeys where charging is most needed. As well as the motorway network, we've also installed electricity pumps at IKEA stores, Liverpool and Birmingham airports, and plan to roll out to strategic A roads in the future.*" (https://www.ecotricity.co.uk/for-the-road/faqs/general-faqs).

[28] The CMA understands that the current generation of EVs can travel around 200 km before they need to be recharged, although it is expected that EV ranges may improve in the future with the development of new technologies.

the Parties have a limited presence on motorways and trunk roads. One competitor, Ecotricity, currently accounts for almost all motorway-based charge points. Therefore, the CMA does not believe that the Merger will materially impact this group of customers.

77. The CMA noted the large proportion of public charge points which are not part of the Parties' combined network ([60-70]%), most of which are available free to users;[29] the limited geographic overlap between the Parties' networks, which suggests that local users of charge points cannot switch between them; and the apparent focus of the Parties on local usage rather than long distance usage, as shown by the Parties having no presence at motorway service stations and limited presence on trunk roads. For these reasons, the CMA found that the Parties are not close substitutes for most EV drivers and that the increased post-Merger size of the network would be unlikely to have a significant impact on EV drivers' subscription decisions.

78. The CMA also notes that Elektromotive's charging points are not owned by Elektromotive; rather, hosts pay Elektromotive for the supply of network services (including maintenance) and hosts set prices for consumers (with most hosts (eg local authorities or grocery retailers) currently choosing to provide charging for free). Chargemaster will not be able to begin charging consumers of Elektromotive's charging points without changing Elektromotive's agreements with its hosts, at which point hosts will have a choice of other network service providers should they decide to switch.

- *Competition for the supply of network services to hosts*

79. Seven host customers of the Parties that responded to the CMA's questionnaire said that Chargemaster and Elektromotive were close competitors, though one customer did not consider them particularly close competitors and seven others provided neutral responses.

80. Chargemaster and Elektromotive operate very different business models. Chargemaster is focussed on selling hardware to hosts[30] and on building a compelling consumer proposition, offering users access to a wide number of charging sites; whereas Elektromotive is focused on offering network services to hosts, including management and maintenance. This difference is reflected in Chargemaster typically offering its services free to hosts but charging fees

[29] Currently, Chargemaster's monthly subscription fee is £7.85 (after the first six months, which are free) and its PAYG transaction fee is £1.20.

[30] The CMA notes that Chargemaster focuses on selling EVSE to hosts and typically sells network services alongside an EVSE sale; whereas Elektromotive is solely focussed on selling network services to hosts (and will often bid jointly for contracts with third party hardware suppliers).

to EV drivers (either a monthly subscription fee or transaction fees for PAYG users); while Elektromotive charges hosts but it does not charge EV drivers. It is also reflected in Chargemaster acquiring charge points from hosts (it currently owns between 10 and 30% of the sites it manages);[31] whereas Elektromotive does not own any of the public charge points it manages.

81. Consistent with the Parties' submissions, bidding data from the Parties and third parties indicated that Chargemaster [✂]; in contrast to Elektromotive which [✂]. This suggests a difference in the type of host contract for which each of the Parties will bid.

Competitive constraints

82. The CMA considered the extent to which hosts will have alternatives to the Parties post-Merger.

83. The Parties submitted that there are many other credible suppliers of network services to which hosts could easily switch, including:

(a) Blue Point London. Blue Point London is the current network services provider for Source London and is owned by Bollore, a large French company listed on the Euronext and a provider of electric vehicle charging solutions across France. In 2016, Bollore agreed a deal with Transport for London and 16 local authorities in London to roll out 400 new public charge points;[32]

(b) Chargepoint Services. Chargepoint Services is the current network services provider for Source East. It markets its network to consumers under the "Genie" brand and manages charge points across the UK;[33]

(c) POD Point. POD Point offers access to over 1,500 charge points nationwide and says that it has developed one of the UK's largest networks;[34]

(d) Ecotricity. Ecotricity has the largest network of public charge points at UK motorway service areas. Its website indicates an intention to continue to expand its network, focussed on trunk routes;[35] and

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[31] The Parties told the CMA that Chargemaster owns approximately 10% of the estate it manages, but data provided by Chargemaster suggested that it may in fact own closer to 30% of its estate.
[32] See http://www.autocar.co.uk/car-news/green-cars/london-gain-400-new-ev-charge-points-end-2016.
[33] See https://www.cpsgenie.com/dis/.
[34] See https://pod-point.com/about.
[35] See https://www.ecotricity.co.uk/for-the-road/our-electric-highway.

(e) ESB. ESB currently operates 1,200 charge points across the Republic of Ireland and Northern Ireland.

84. The Parties also submitted that there are several new entrants competing for network services contracts, particularly from Europe.

85. In order to assess the constraint posed by these competitors and others, the CMA analysed bidding data provided by the Parties and third party competitors and customers. The bidding data, while limited in scope, showed that the Parties competed in at least two out of seven tenders for the supply of network services and jointly bid in another tender over the last couple of years. However, the CMA noted that, in the tender process for the largest contract analysed, although Chargemaster and Elektromotive competed, Chargemaster was not shortlisted [✂], while Elektromotive was shortlisted and eventually won the contract. Although this was one of [✂] where the Parties competed, this significant customer did not believe Chargemaster and Elektromotive to be close competitors. Moreover, this customer identified three other consortia of providers of network services which it would have considered in the alternative to Elektromotive: [✂].

86. The CMA also noted that, in another significant recent contract, the customer shortlisted six providers to supply and operate the largest deployment of rapid chargers in the UK, with Chargemaster being shortlisted but not Elektromotive.

87. The bidding data provided by third parties also confirmed the Parties' submission that several new entrants, particularly from Europe, are bidding for UK network services contracts.[36] This evidence indicates that some new entrants are providing a current competitive constraint in tender processes for network services contracts.

88. In response to the CMA's questions, different customers identified different providers as credible alternatives to the Parties, suggesting that customers' needs are different and there is some differentiation between providers and/or that the sector is fragmented and at least some providers are only beginning to become established.

89. No customer which responded to the CMA was concerned that there would be insufficient alternative providers of network services after the Merger. Customers told the CMA that switching is generally easy and, if they were unhappy with the service offering or price asked by the combined entity, they

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[36] The bidding data indicated that the following firms have at least participated in tenders, either by themselves or in consortia: [✂].

could switch to another network service provider for minimal cost. Moreover, most customers identified price and service quality as the most important factors driving their purchase decision, with very few stating that the size of a supplier's network was a particularly important factor.

90. Several competitors were concerned about the Merger, in particular that it would make it harder for them to win tenders as hosts might be attracted to the large network of the combined entity. Some noted that larger hosts, and in particular public authorities, tend to be quite sticky and rarely switch, making it hard for smaller competitors to gain a foothold, and that this would be exacerbated post-Merger.

91. OLEV, the government body promoting the development of the industry, told the CMA that it was generally not concerned about the Merger, noting that the market was at an early stage of development. OLEV also noted that consolidation within the fragmented market was to be expected at this stage of the market's development and that it would be welcomed by customers.

92. The Parties noted that, with the removal of public funding for EVSE infrastructure, there is increasingly limited appetite from hosts (particularly public authorities) to self-fund or to subsidise free public charging. The Parties said that the trend is towards greater private investment in public charge points. The Parties submitted that there are many examples of firms which have raised funds for, or indicated an intent to invest in, significant new public charging infrastructure. The Parties noted that some of these firms are rolling out new public charge points, while others are building new private networks. The Parties provided the following examples:

(a) Instavolt, which has announced that it has raised £12 million to invest in 3,000 charging points across the UK by 2020;[37]

(b) Tesla, which is investing in charging points across the UK to support the sale of its cars.[38] The Parties told the CMA that Tesla is currently installing around 30 charging points a month across the UK;

(c) A consortium of motor vehicle manufacturers, including VW, Audi, Porsche, Ford, Mercedes and BMW, which announced in November 2016

[37] See http://www.zouk.com/news/38-infrastructure/157-instavolt-powers-up-for-growth-with-12m-investment-package.
[38] See https://www.tesla.com/en_GB/destination-charging.

a £1 billion investment in ultra-rapid charging units across Europe, including in the UK, over the next few years;[39] and

(d) Fuel companies, for which there has been much speculation about their plans to install charging points at their fuel stations.[40]

93. The CMA acknowledges that there is uncertainty as to how this nascent market will develop. In particular, there is uncertainty about the extent to which public charging will continue to be offered free, or substantially free, to users by some hosts (eg supermarkets and hotels), and whether at least some network service providers will continue to earn some revenue from hosts as well as from EV drivers.

94. On the basis of this evidence, the CMA believes that there are several credible alternative providers of network services to which site hosts could switch in the event of a price rise or a reduction in service quality, or to resist a change in business model (eg to begin charging users). These existing alternative providers are sufficient to constrain the merged entity post-Merger, though the CMA notes the nascent stage of the industry and the many new network service providers which may emerge and expand as the industry develops.

Conclusion on horizontal unilateral effects in the supply of network services

95. As set out above:

(a) while some host customers consider that the Parties are close competitors, all such customers told the CMA that there are a range of existing providers of network services to which they could switch, and that switching is not difficult.

(b) while the Merger will increase Chargemaster's control over Elektromotive's charging points:

(i) there remain many other public charging points which are not managed by the Parties, many of which are available free to consumers;

(ii) there is very little local overlap between the Parties' networks and, for those customers that are more likely to switch between the Parties'

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[39] See https://media.ford.com/content/fordmedia/fna/us/en/news/2016/11/29/bmw-daimler-ford-volkswagen-audi-porsche-plan-ultra-fast-charging-major-europe-highways.html.
[40] See https://www.theguardian.com/environment/2016/sep/13/electric-cars-could-be-charged-at-shell-service-stations-from-2017.

networks (ie EV drivers travelling long distances), Ecotricity is a particularly strong competitor;

(iii) the Parties' business models are differentiated, with Chargemaster focussed on selling hardware to hosts and on building a network of charging points to provide an attractive paid subscription proposition to consumers, and Elektromotive focussed on providing network services to hosts (often for services provided free to consumers) and solely charging hosts; and

(iv) the industry is nascent (with the UK market for network services worth less than £3-4 million) and there is a widespread expectation of rapid future growth, which will provide existing and new network service providers the opportunity to emerge/expand and compete with the merged entity.

96. For these reasons, the CMA found that the Merger does not give rise to a realistic prospect of an SLC as a result of horizontal unilateral effects in relation to the supply of network services, incorporating the supply of EVSE network services to site hosts (B2B) and the supply of EVSE network services to consumers, either by subscription or on a PAYG basis (B2C).

Other theories of harm

97. The CMA considered two additional theories of harm based on concerns raised by some competitors, namely:

(a) conglomerate effects from the Parties bundling the supply of public and workplace charging EVSE, or rapid charging EVSE, with network services to hosts; and

(b) foreclosure effects from the Parties limiting the compatibility of their network services with EVSE from competing suppliers.

98. As noted above, the CMA did not find that the Merger would result in horizontal unilateral effects in any of the frames of reference in which the Parties' activities overlap. For this reason, the CMA did not believe that the Parties would have market power such that they would have the ability to carry out either a successful tying or bundling strategy resulting in conglomerate effects or a vertical foreclosure strategy with the aim of excluding rivals from competing in the relevant product and service categories. Accordingly, it was not necessary for the CMA to assess these additional theories of harm in any detail.

Barriers to entry and expansion

99. Entry, or the expansion of existing firms, can mitigate the initial effect of a merger on competition and, in some cases, may mean that there is no SLC.[41]

100. In the present case, the CMA has not had to conclude on barriers to entry or expansion as the Merger does not give rise to competition concerns on any basis.

Decision

101. Consequently, the CMA does not believe that it is or may be the case that the Merger may be expected to result in an SLC within a market or markets in the UK.

102. The Merger will therefore **not be referred** under section 33(1) of the Act.

Sheldon Mills
Senior Director, Mergers
Competition and Markets Authority
20 January 2016

[41] *Merger Assessment Guidelines*, from paragraph 5.8.1.