Case No COMP/M.6360 - NYNAS/ SHELL/ HARBURG REFINERY

Only the English text is authentic.

REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 8 (1)
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PUBLIC VERSION

COMMISSION DECISION

of 02/09/2013

addressed to:

NYNAS AB

declaring a concentration to be compatible with the internal market and the EEA Agreement
(Case No COMP/M.6360 - NYNAS/ SHELL/ HARBURG REFINERY)

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings[1], and in particular Article 8(1) thereof,

Having regard to the Commission's decision of 26 February 2013 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

Having regard to the opinion of the Advisory Committee on Concentrations[2],

Having regard to the final report of the Hearing Officer in this case[3],

Whereas:

1. THE NOTIFICATION

(1) On 19 February 2013, the Commission received a notification of a proposed concentration pursuant to Article 4 of Regulation (EC) No 139/2004 ("Regulation (EC) No 139/2004") by which Nynas AB ("Nynas"), acquires sole control within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004 of part of Shell Deutschland Oil GmbH ("Shell Deutschland") by way of purchase of assets.

2. THE PARTIES

(2) Nynas (the "Notifying Party") is the parent of an international group of companies that produces and sells naphthenic base and process oils, transformer oils ("TFO")

[1] OJ L 24, 29.1.2004, p. 1. 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 C...,...200., p....

[3] OJ C...,...200., p....

and bitumen. Nynas is jointly controlled by Petróleos de Venezuela S.A ("PDVSA") and Neste Oil Oyj ("Neste Oil").

(3) Shell Deutschland is part of the Shell group of companies ("Shell"), whose parent company is Royal Dutch Shell plc. Shell is a fully integrated global group of energy and petrochemical companies.

(4) Shell Deutschland operates a refinery in Hamburg-Harburg, which currently comprises the following:

i) a fuels and distillates refinery, including a tank-farm for crude oil and fuel products (the "Refinery");

ii) a base oil manufacturing plant which is fed by distillates from the Refinery, a tank for blending TFO and bitumen facilities, together the three installations are the "Harburg Base Oil Manufacturing Plant ("Harburg BOMP")".

(5) This Decision refers to Nynas and Shell Deutschland as "the Parties".

3. THE CONCENTRATION

(6) The notified transaction relates to the Harburg BOMP and certain parts of the Refinery that are necessary to produce distillates from crude oil. This Decision refers to these assets as the "Harburg refinery assets" or the "Target".

(7) The Harburg refinery assets constitute a business with a market presence, to which a market turnover can be clearly attributed.[4] Shell Deutschland will not transfer contracts, customer lists or its pre-existing market position[5] and the Harburg refinery assets represent the basis of Shell Deutschland's current market presence for base and process oils in the EEA.

(8) The Harburg refinery assets are a part of an undertaking within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004.

(9) The notified transaction consists of a 25-year-lease of the Harburg refinery assets, including a put-option for Shell Deutschland and a call-option for Nynas enabling them to convert the lease agreement into an asset-deal.

(10) The notified transaction does not comprise the fuels refinery. Nynas will be undertaking a substantial modification of certain parts of the remaining refining assets to enable the Harburg refinery assets to produce base oil independently from a fuels refinery, which is currently not possible and from naphthenic crude only.[6] The acquisition of the Harburg refinery assets requires a […]* investment over a period of [Details of Harburg's conversion]* to convert and modify the assets.*

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4 Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (OJ C 95, 16.4.2008, p. 1), Paragraph 24.

5 Shell claims to remain active in the market for base and process oils, initially being supplied by Nynas and subsequently potentially sourcing internally Gas-to-Liquid ("GtL") base and process oils from a facility in Qatar.

6 The Harburg assets need to be modified for the production of naphthenic oils only because of the corrosive effect of naphthenic oil. The current production process alternating between naphthenic and paraffinic oils prevents this effect.

* Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

(11) The lease agreement entitles Nynas to operate the Harburg refinery assets in its own name and for its own account and to modify the assets according to its business model. Nynas will first take the Harburg BOMP on lease ("Lease South"). The lease of the relevant parts of the Refinery ("Lease North") will commence after Shell Deutschland has modified certain parts of the Refinery on Nynas' behalf. Lease North will commence on a date to be agreed by the Parties, but no later than two years after the commencement of Lease South.

(12) During the period that Nynas operates the Harburg BOMP and Shell operates the Refinery, Shell will supply Nynas with the distillates needed for the Harburg BOMP. Nynas and Shell have concluded two tolling agreements (the "Tolling Agreements"): Shell will purchase production capacity from the Harburg BOMP; Nynas commits to supply Shell with base and process oils to fulfil its needs [Tolling agreements terms]*.

(13) More specifically, under the Tolling Agreements regarding naphthenic base and process oils, [Tolling agreements terms]*. The volumes supplied by Nynas to Shell under the Tolling Agreements will progressively decrease. This phasing-out of the Tolling Agreements will allow [Tolling agreements terms]*. The Tolling Agreements provide for the following volumes to be supplied by Nynas to Shell:[Tolling agreements terms]*;[Tolling agreements terms]*.

(14) The operation will give Nynas control over the Harburg refinery assets on a lasting basis and thus constitutes a concentration within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004.

4. UNION DIMENSION

(15) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million[7] (Nynas: EUR 107 611 million,[8] Harburg refinery assets: EUR [9][…]). Each of the undertakings concerned has a Union-wide turnover in excess of EUR 250 million (Nynas: EUR 1 989 million and Harburg refinery assets: EUR […]).

(16) Although the Harburg refinery assets' Union-wide turnover is achieved entirely in Germany, Nynas does not achieve more than two-thirds of its Union-wide turnover in Germany.

(17) The notified transaction therefore has a Union dimension within the meaning of Article 1(2) of Regulation (EC) No 139/2004.

5. THE PROCEDURE

(18) On 26 March 2013, the Commission, having concluded that the notified transaction fell within the scope of Regulation (EC) No 139/2004 and raised serious doubts as to its compatibility with the internal market, decided to initiate proceedings under Article 6(1)(c) of Regulation (EC) No 139/2004 ("the Article 6(1)(c) Decision").

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[7] Turnover calculated in accordance with Article 5(1) of Regulation (EC) No 139/2004 and the Commission Consolidated Jurisdictional Notice (OJ C 95, 16.04.2008, p 1).

[8] FY 2011. The turnover of Nynas' jointly controlling parent companies, PDVSA and Neste Oil, is included.

[9] FY 2010.

(19) The Notifying Party submitted its written comments on the Article 6(1)(c) Decision on 9 April 2013 and 3 May 2013 (the "Response to the Article 6(1)(c) Decision"). A state of play meeting with representatives of Nynas and Shell Deutschland took place on 10 April 2013.

(20) The time limit for taking a final decision according to Article 8 of Regulation (EC) No 139/2004 was extended by 20 working days following the request of the Parties of 9 April 2013, pursuant to the second subparagraph of Article 10(3) of Regulation (EC) No 139/2004.

(21) On 14 May 2013 the Hearing Officer granted Ergon's application to be heard as an interested third person pursuant to Article 5 of Decision 2011/695/EU.[10]

(22) On 19 June 2013 the Commission issued a Statement of Objections (the "SO") pursuant to Article 18 of Regulation (EC) No 139/2004 to the Notifying Party. The SO referred to competition concerns on the EEA-wide markets for naphthenic base and process oils and the EEA-wide market for TFO's. The Notifying Party replied to the SO on 8 July 2013 (the "Response to the SO"). Shell Deutschland submitted comments regarding the SO on 8 July and on 10 July 2013.

(23) The meeting of the Advisory Committee took place on 21 August 2013.

6. MARKET DEFINITION

(24) The notified transaction will give rise to horizontal overlaps in the production and supply of base and process oils for industrial use and TFOs, and will give rise to vertical links in the production of naphthenic base oils and TFOs.[11]

6.1. The industry

(25) The oil and gas industry can be divided into upstream activities such as exploring, developing and producing gas and crude oil and downstream activities such as refining, manufacturing and marketing oil products.

(26) The overlap between the Parties is limited to downstream activities, namely the manufacturing and marketing of base oils for industrial use.

(27) The output of base oil manufacturing may be supplied to customers for use as base oils, process oils and blended as a finished product, TFO.

(28) The production of base and process oils and TFO involves two main steps. First, crude oil is refined to produce distillates. During this process, the distillation unit separates the components of the crude oil into different fractions. The different fractions of the crude have different boiling ranges. They evaporate and are condensed separately as the crude oil is heated, and thus they can be recovered at different temperatures. Second, the distillates are used to manufacture base and process oils.

(29) Crude oil is supplied on a worldwide basis. Many base and process oils and TFO producers such as Shell, ExxonMobil Petroleum & Chemical BVBA ("ExxonMobil") and Total S.A. ("Total") are vertically integrated companies that are active in the

[10] Decision 2011/695/EU of the President of the European Commission on the function and terms of reference of the hearing officer in certain competition proceedings, OJ L 275, 20.10.2011, p. 29).

[11] The Parties are also active in the bitumen market. The notified transaction however will not give rise to any affected market.

crude oil extraction themselves. Nynas sources crude oil from third parties, in particular from companies in the United States and the North Sea, as well as from PDVSA in Venezuela.

(30) The feedstock used in the refining process is crude oil. The majority of crude oil is used in the production of fuels, however, many other products, such as naphthas, solvents, oils, bitumen are also produced from crude oil.

(31) Crude oil is not of uniform quality but consists of several thousands of hydrocarbon compounds. These compounds can be divided into three main groups: paraffinic, naphthenic and aromatic. All three types of hydrocarbons are contained in all crude oils: based on prevalence of paraffinic or naphthenic hydrocarbons, crude oil may be categorised as either paraffinic or naphthenic. Naphthenic crude oils are younger and normally contain far less gas and light fuel components requiring fuel upgrading than paraffinic crude oils.

(32) The products mainly concerned by the notified transaction, namely base and process oils and TFO, are produced globally from paraffinic and naphthenic crude oils, with the majority of globally produced base oil being paraffinic, as naphthenic oils represent less than 5% of the total oil production.

6.2. The relevant product markets

6.2.1. Principles

(33) A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use.[12] Supply-side substitutability may also be taken into account when defining markets in those situations in which its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy.[13]

6.2.2. Naphthenic base and process oils

(34) Both Parties produce and supply base oils and process oils.

(35) Base oils are the main components of lubricants, which are used in various applications, in particular in the industrial segment as metalworking fluids ("MWF"), for example greases, hydraulic fluids or turbine oils. Base oils are sold to lubricant producers who combine base oils with additives to produce lubricants with different physical properties. The chemical additives used are application-specific and enhance the performance of the base oil. Base oil is also used to produce TFO.

(36) Process oils are used in the chemical industry as extenders or carriers in the production of a broad variety of end-products, for example adhesives, or as processing aids in the case of textiles, the extension of polymers for example in the production of industrial rubber, TPE[14] and tyres or as a base carrier fluid for other, more functional components for example chemicals in fertilisers, surfactants in defoamers, pigments in inks.

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12 Commission Notice on the definition of relevant market for the purposes of Community competition law; (OJ C 372, 09.12.1997, p. 5) ("Commission Notice on Market Definition") Paragraph 7.

13 Commission Notice on Market Definition, Paragraph 20.

14 TPE is a compound of polymers which consist of materials with both thermoplastic and elastomeric properties.

(37) Process oils are chemically the same as base oils. Base oils may be converted into process oils for a specific use. This entails the running of certain chemical tests to verify that the product meets the chemical properties required for its use in a specific industrial process. In some cases, process oils are obtained from blending different base oils in order to produce a product that meets the chemical requirements for a specific end-application.

(38) The key technical characteristics of base and process oils for industrial use include the following:[15]

(i) viscosity: a measure of a material's resistance to flow that is to say relative liquidity.

(ii) viscosity index ("VI"): a measure of the sensitivity of a material's viscosity to changes in temperature. A high VI means that the viscosity does not change much as the temperature rises. Certain applications require a high VI, for example automotive lubricants where operating temperatures can vary significantly. Other applications require a low VI. For example, cooling applications such as metalworking are better served by products with a low VI because of the lower viscosity at operating temperatures.

(iii) flash point: the temperature at which oil vapour ignites when exposed to a flame. A minimum flash point is normally specified for safety reasons. A high flashpoint indicates low volatility, which is a measure of a substance's tendency to vaporize.

(iv) aniline point: determines the solvency power of the base or process oil. The lower the aniline point, the better the base or process oil will be at dissolving additives and forming stable solutions and emulsions. Also, the lower the aniline point, the better the compatibility with most polymers and resins. The aniline point decreases with increased aromatic and naphthenic content but also with smaller molecular weight and lower viscosity.

(v) sulphur content: a measure of the degree of purity of the oil, together with the residual aromatics content of the oil, both of which are determined by how highly refined the oil is. Purity is critical in certain food applications for example certain defoamers and is relevant where environmental or health impact is a concern for example in some fertilisers and explosives and for certain hot-melt adhesives coming in indirect contact with food or the skin.

(39) The base and process oil distillates from the refinery undergo chemical or physical cleaning in the BOMP to convert or remove unwanted substances such as sulphur, certain aromatic hydrocarbons, organic acids, nitrogen and paraffin wax. The output of this cleaning process is either naphthenic or paraffinic base and process oil, depending on the crude used.

(40) Several alternative processes are used to upgrade distillates into base and process oils in a BOMP. Traditionally, solvent extraction is the standard process in paraffinic base and process oil refineries or plants. More modern refineries that produce more highly refined base and process oils use severe hydro-treating to produce base and process oils in one step. The Harburg BOMP uses both methods, producing paraffinic base oils using solvent extraction and hydro-treating and naphthenic base oils using hydro-treating. Nynas uses severe hydro-treating only.

[15] Form CO, Paragraphs 155-156.

6.2.2.1 Base oil vs. process oil

6.2.2.1.1. The view of Nynas

(41) According to Nynas, for the purpose of the notified transaction, it is appropriate to define a single relevant product market for base and process oils for industrial use.[16]

(42) First, base oils and process oils are generally identical in terms of physical and chemical characteristics. The only noteworthy difference between the two products is the process necessary to qualify base oil as process oil. The qualification of a base oil into a process oil generally takes less than a week, and costs an average of EUR 200 more per kiloton ("kt") than the estimated cost of testing base oils. The cost of qualifying a base oil for process oil applications is, therefore, low, further reducing producers' ability to discriminate between base and process oils.

(43) Second, the same physical product may be sold and is sold for the purposes of several base and process oil end-applications and it is, therefore, not possible to price discriminate between end-applications solely on the basis of the molecule.

(44) In addition, there is a high level of supply-side substitutability whereby the same refinery could produce any quality of industrial base and process oils, which makes it unlikely that a hypothetical monopolist in one end-application could profitably raise prices without being undermined by producers previously serving other applications.

6.2.2.1.2. The Commission's assessment

(45) The Commission agrees with Nynas' view.

(46) Although many base oil customers indicated that prices of base oils and process oils may be different, the majority of the base and process oil customers have confirmed that base oils and process oils are generally identical in terms of physical and chemical characteristics. In particular, "*base oils and process oils are in general terms comparable, […] with process oils requiring a further refinement in the production process.*"[17] The testing process for naphthenic base and process oils performed by customers to verify whether the naphthenic base and process oils meet their requirement is also similar, requiring one to six months, or less for some customers, and minor costs. *"The only differentiation between naphthenic base and process oils is a sales driven one (e.g. "base oil" shall be sold to a lubes business customer and "process oil" to a chemical/oil/industrial company)"*.[18]

(47) As far as the supply-side is concerned, competitors, while confirming a certain difference between base and process oils in terms of price, consider the products to be identical in terms of physical and chemical characteristics, the distinction lying only in the more detailed testing required to qualify process oils, which however is neither lengthy nor costly.[19] In this respect, competitors explained that the testing process for naphthenic base and process oils performed by suppliers is similar, requiring less than a month and minor costs to qualify both products as base or process oils and suppliers can produce any quality of industrial base and process oils in the same refinery.

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16 Form CO, Paragraph 198.

17 [Customer's identity number]* reply to questionnaire to process oil customers Phase I – question 17.1 [ID 843].

18 Minutes of conference call between the Commission and [Customer's identity number]* of 7 May 2013 [ID 5038].

19 Replies to questionnaire to competitors Phase II - questions 6-9.

6.2.2.1.3. Conclusion

(48) The Commission therefore considers that base oils and process oils are part of the same product market.

6.2.2.2. Segmentation by American Petroleum Institute ("API") group

(49) The API has created a classification of base oils that is widely used in the oil industry as a reference. API divided base oils into five groups, Group I, II, III, IV and V, depending on the specific physical characteristics of the oil. As base and process oils belong to the same product market, this distinction applies also to process oils.

(50) Group I, II and III oils are paraffinic base oils, Group IV oils are polyalphaolefines ("PAO"), which are synthetic oils, while Group V contains all other synthetic and mineral base oils, including naphthenic crude oils. Approximately 95% of the Group V oils sold into the industrial segment are represented by naphthenic base and process oils.

(51) In addition to the difference between paraffinic and naphthenic oils, crude oils can also be considered as heavy, medium or light crudes according to its measured API gravity. API gravity is a measure of how heavy or how light a crude oil liquid is compared to water.

(52) For naphthenic crude oils, the main difference between heavy and light naphthenic crudes lies in the yield structure of those crudes. The heavy naphthenic crudes only contain minor amounts of lighter fractions like naphtha and gasoil, while they comprise significant quantities of heavier fractions to produce bitumen, among other products. In general, however, naphthenic crudes have a lower API gravity than paraffinic crudes, which means that naphthenic crudes are heavier than paraffinic crudes.

(53) Hence, a refinery using paraffinic crude may be focused on fuel production and lighter fractions, whereas a refinery using naphthenic crude might be concentrated on the production of heavier distillates, such as bitumen and base and process oils, with little fuel production.

6.2.2.2.1. The view of Nynas

(54) Nynas considers a product market definition using API groups not to be appropriate in the case of base and process oils for use in the industrial segment.[20] First, the API classification was designed for engine oils for the automotive industry, and it is therefore of limited pertinence to oils sold in the industrial segment in which Nynas is active and in which Shell Deutschland sells the Target's output. Naphthenic oils were only considered in the Commission Decision of 29 September 1999 in Case COMP/M.1383 - Exxon/Mobil (OJ L 103, 7.4.2004, p. 1) insofar as they constrain prices of the paraffinic base oils affected by the COMP/M.1383 Exxon/Mobil transaction. The Exxon/Mobil Decision[21] does not consider the extent to which potential alternatives constrain the prices of naphthenic oils as these were not the subject of the transaction in that Decision. In fact, API groups do not reflect customer demand in the industrial segment and are, therefore, not a meaningful way of defining the scope of potentially relevant product markets.

[20] Form CO Paragraph 214-229.

[21] Commission Decision of 29 September 1999 in Case COMP/M.1383 - Exxon/Mobil (OJ L 103, 7.4.2004, p. 1) Recital 330.

(55) Furthermore, whilst naphthenic base and process oils are classified as Group V oils, they generally do not compete with the other oils that are classified in the same oil group whilst they closely compete with other oil groups, in particular with Group I.

(56) Therefore, the Parties consider that a product market definition by API oil group in the industrial segment is not appropriate.

6.2.2.2.2. Commission's assessment

(57) The Commission considers that it would be incorrect to define the relevant market for base and process oils by reference to API groups.

(58) The Commission has only investigated the base oil sector once in case COMP/M.1383-Exxon/Mobil[22] and concluded that Group I base oils constituted the relevant product market. In that case the Commission noted that "*competitors like NYNAS only produce naphthenic base oil (Group V) for specific industrial applications which cannot compete with paraffinic base stock used for automotive or general industrial lubricants (excluding specific applications such as printing inks or rubber) due to the price differential and technical characteristics. The same goes for those refineries which produce group III or IV base oils".*[23]

(59) During the Phase I market investigation, the Commission analysed the potential substitutability of Group V naphthenic base and process oils with the other API groups. In this respect, most customers indicate that Group V naphthenic base oils are not comparable in terms of product characteristics, such as viscosity range, viscosity index, volatility, solvency and sulphur content, to any other API Group. This result is also applicable to Group I which, according to Nynas, is the closest substitute to Group V naphthenic base oils.[24]

(60) Customers gave a number of reasons why they consider Group V naphthenic base oils not to be interchangeable with other base oils such as that naphthenic base oils have "*greater solvency due to the polarity of the* ring-*structure"*[25], *"lower pour point, greater solvency, different dielectric constant and are available in a wider range of viscosities"*[26].

(61) In terms of price, base oil customers also consider that naphthenic Group V base oils are not similar in terms of price to other API Groups. According to base oil customers, prices of naphthenic base oils are usually higher than those of Group I paraffinic oils, while Group III appears to be *'much more expensive than naphthenic'.* Customers also remark that prices mostly depend on product characteristics. None of the customers indicate that prices vary depending on the service provided by the manufacturer.

(62) Likewise, process oil customers do not consider Group V naphthenic process oils comparable with other process oils in terms of product characteristics. Nearly all customers indicate that Group II, III and IV process oils cannot be regarded as substitutes for Group V naphthenic oil, as they have *"different properties, for different applications and health care aspects", inter alia.*[27] However, some

22 See footnote 21.

23 Commission Decision of 29 September 1999 in Case COMP/M. 1383 – Exxon/Mobil, Recital 374.

24 Replies to questionnaire to base oil customers Phase I - question 13.

25 Reply to questionnaire to base oil customers Phase I - question 13 [ID 799].

26 Reply to questionnaire to base oil customers Phase I - question 13 [ID 864].

27 Replies to questionnaire to process oil customers Phase I - question 14.

customers also state that they do not have sufficient information to assess the differences between Group II, III and IV process oils and naphthenic process oils, as they either source naphthenic or paraffinic process oils. With respect to Group I, most customers confirm that naphthenic process oils are not comparable to paraffinic process oils in Group I, mainly due to the different characteristics of the process oils.

(63) In terms of price, customers' replies are not conclusive in the case of Group I as opposed to Group V naphthenic process oils, mostly due to the lack of knowledge of market participants as regards Group I and/or Group V prices. Customers nevertheless note that Group I paraffinic process oils are cheaper than Group V naphthenic process oils. One customer even specifies that *"naphthenic (process) oil is more expensive due to very few producers in Europe"*.[28] Concerning Group II, III and IV, most process oil customers envisage these categories as not similar to Group V naphthenic process oils in terms of price.[29]

(64) Competitors replying to the Commission market investigation also consider Group V naphthenic base and process oils not to be substitutable for other API Groups. An overwhelming majority of competitors indicates that Group V naphthenic base and process oils are not comparable in terms of product characteristics such as viscosity range, viscosity index, volatility, solvency and sulphur content to any other API Group. This result is also applicable to Group I which, in Nynas' view, is the closest substitute to Group V naphthenic base oils.[30]

(65) It follows from the above that competitors perceive API Group V naphthenic base and process oils as not comparable in terms of product characteristics such as viscosity range, viscosity index, volatility, solvency and sulphur content to any other API category.

(66) In relation to prices, the vast majority of competitors agree on the difference between Group V naphthenic base and process oils and the other API categories. There exists different pricing due to different feedstock, refining processes, demand and supply dynamics, and also because of different product characteristics.[31]

(67) Finally, and with respect to Nynas' claims on the heterogeneity of Group V, none of the respondents to the Commission's questionnaire consider that Group V naphthenic base and process oils and other Group V oils could be used in the same end-applications or purchased by the same customers.[32]

6.2.2.2.3. Conclusion

(68) The Commission considers that it would not be appropriate to define the relevant market for base and process oils by reference to API groups. The Commission also considers that Group V naphthenic base and process oils are not interchangeable with oils belonging to other API Groups.

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28 Reply to questionnaire to process oil customer Phase I – question 13 [ID 0560].

29 Replies to questionnaire to process oil customers Phase I – question 13.

30 Replies to questionnaire to competitors Phase I– question 10.

31 Replies to questionnaire to competitors Phase I – question 11.

32 Replies to questionnaire to competitors Phase I -question 12 and Replies to questionnaire to customers Phase I– question 12.

6.2.2.3. Segmentation between naphthenic and paraffinic base and process oils

6.2.2.3.1. The view of Nynas

6.2.2.3.1.1. Demand side substitutability

(69) According to Nynas,[33] the physical properties of paraffinic base and process oils in API Group I are similar to those of naphthenic base and process oils. Both have high viscosity and better solvency than the other oil groups and, therefore, are likely suited to similar end-applications. Nynas argues that it faces increasing competition from paraffinic base and process oil producers in most end-applications.

(70) Depending on the end-application segment in question, Nynas argues that its naphthenic base and process oils compete to a limited extent with paraffinic oils included in Group II and III. In particular, there is competition from paraffinic base and process oils in the segments for greases, metal working fluids, TPE, fertilizers and adhesives.

(71) In its response to the Article 6(1)(c) Decision,[34] Nynas indicates that the Commission's assessment of technical substitutability between naphthenic and paraffinic oils, in particular those in Group I, is ill-framed. In particular, Nynas states that each base and process oil grade is defined by a number of physical properties but only certain physical properties determine whether an oil is suitable for use in a specific end-application. Therefore, when comparing physical properties of naphthenic oils with other API group oils or paraffinic oils, the Commission wrongly focuses on verifying whether all physical properties are identical or in all respects comparable.

(72) Nynas also emphasizes that if certain physical properties of an oil are not appropriate for a specific end-application, they may be modified and are commonly modified by using additives or blending. Nynas also explains that, whilst naphthenic oils' high solvency is perceived as an added value in certain end-application segments, the solvency of certain alternative oils such as Group I sub-segments, Mildly Extracted Solvates ("MES"), Treated Distillate Aromatic Extract ("TDAE"), Residual Aromatic Extracts ("RAE") is equivalent or may be adjusted to a comparable level through blending or additives.

(73) Therefore, Nynas suggests that the relevant framework of assessment for technical substitutability between naphthenic and paraffinic oils should focus on whether they are *functionally substitutable*, taking into account the requirements of the relevant end-application and the common use of additives.

Pricing and cost

(74) As regards pricing, Nynas indicates [Nynas' pricing policy]*. Nonetheless, Nynas acknowledges that prices of naphthenic base and process oils generally have a premium over the paraffinic alternative [Nynas' pricing policy]*. According to Nynas, the premium over paraffinic prices reflects the value of services, such as logistical support and technical know-how, provided by Nynas.

(75) In addition, Nynas indicates that customers carry out an overall cost-performance evaluation when selecting products. In some instances, additive suppliers offer an

[33] Form CO Paragraph 261- 288.

[34] Supplemental reply to the Article 6(1)(c) Decision of 3 May 2013 – section 3 [ID 4747].

alternative formula at a lower price for paraffinic oils with additives instead of naphthenic base and process oils.

Switching between naphthenic and paraffinic base and process oils

(76) In Nynas' experience, switching between naphthenic and paraffinic base and process oils is highly feasible in most end-application segments. The approval process of customers is generally identical. Where switching tends to take longer, customers have usually already approved various suppliers between which they could switch at short notice.

(77) In its response to the Article 6(1)(c) Decision,[35] Nynas further claims first that the fact that relatively few base oil customers have switched does not contradict Nynas' claim that switching is technically and economically feasible. Second, switching would likely happen if Nynas were to raise its prices. Third, *"half of the respondents"* have switched in the past from naphthenic process oils to paraffinic process oils, which Nynas considers to be good evidence of substitutability between the two oils. Fourth, the Commission has not substantiated its argument that the cost of switching would be *"too high"*. Nynas has not explained how the cost of switching relates to the total expenditure on the base oil, including cost of additives, transportation and other costs involved in switching suppliers.

(78) Nynas also emphasises that some customers reported that *"the costs of switching from one naphthenic base oil to another naphthenic base oil"* are *"similar to the costs of switching from naphthenic to paraffinic base oils"*. This is consistent with Nynas' submission in the Form CO. Nynas claims that the cost of switching producers is in many cases not related to the type of switching. That is to say, whether the switch is made from naphthenic to paraffinic base and process oils or is made within one oil group, for example: from a Group I producer to another Group I producer, or from a Group I to a Group II producer.

(79) Finally, Nynas also points out that, in most end-applications, it has been losing volume to suppliers of paraffinic substitutes in the past years.

6.2.2.3.1.2. Supply side substitutability

(80) Nynas claims that the production of naphthenic base and process oils is similar to the production process of paraffinic base and process oils. First, the different components of the crude oil are separated in the distillation unit and then the relevant fractions are upgraded at a BOMP.

(81) However, given the corrosive nature of naphthenic crude oil, the process units have to be prepared to endure the corrosive acids of the crude, until the acids can be removed or converted. To that end, the distillation alternatives are the following: (i) to alternate the naphthenic crude with a paraffinic crude oil which will develop a passivating coating on the metal surface of the distillation unit. This protective coating will then gradually wear off when the distillation unit is run on naphthenic crude oil (this is what is presently done at the Harburg refinery assets). (ii) to neutralise the acids and remove them in an integrated neutralisation unit; or (iii) to change the metallurgy of the unit to high quality stainless steel.

(82) As a result of those alternative distillation methods, there are costs associated to the conversion of a paraffinic crude refinery into a refinery for naphthenic crude only.

[35] Supplemental reply to the Article 6(1)(c) Decision of 3 May 2013 [ID 4747].

Nynas estimates that its conversion of the Target into an exclusively naphthenic refinery will require [a significant investment]* and at least [a period of more than one year]*. Converting a paraffinic refinery into a naphthenic one normally requires an upgrade of the crude oil unit to be able to run exclusively on naphthenic crude, specifically by replacing pipes and heat exchangers and the lining of the columns with corrosion-resistant stainless steel and adding a hydrogen generation plant to make up for the loss of hydrogen supply caused by the shut-down of the fuel manufacturing part of the refinery. In paraffinic refineries, hydrogen generally comes from the gasoline processing units as a by-product. No such gasoline processing units exist in exclusively naphthenic refineries.

(83) Nynas also notes that dewaxing, the removal of waxes in a dewaxing unit, is a step required in the production process of base and process oils which are produced from paraffinic crude. This dewaxing unit would not be necessary in a naphthenic only refinery.

(84) With regard to knowledge requirements, Nynas believes that any paraffinic producer would have the necessary know-how to operate a naphthenic refinery. However, the exact parameters for optimising individual process units to achieve optimum product properties would have to be developed by the producer.

6.2.2.3.2. Commission's assessment

6.2.2.3.2.1. Demand side substitutability

(85) The Commission considers that naphthenic base and process oils cannot be substituted by paraffinic base and process oils with regard to the demand side.

(86) First, Naphthenic and paraffinic oils are different in terms of product characteristics and price.

(87) Second, for some end-applications in which naphthenic oils are used for example, MWF, insoluble sulphur, naphthenic oils cannot be substituted by paraffinic oils because of the difference in product characteristics such as solvency or volatility. For other end-applications for which technical substitution may not be excluded switching is costly and takes a very long time. The substitution between two naphthenic base and process oils is less costly and takes less time due to the inherent common chemical characteristics.

(88) Third, the relatively high cost of additives and the need for reformulation also confirm that naphthenic and paraffinic base and process oils are not substitutable with regard to the demand side.

(89) Finally, as explained in detail in Recitals (90) to (112), the results of the market investigation have not confirmed Nynas' view. Most respondents do not consider naphthenic base and process oils and paraffinic base and process oils as similar in terms of physical or chemical characteristics.[36] Likewise, most respondents indicate that there are significant price differences between naphthenic base and process oils and paraffinic base and process oils, which make naphthenic base and process oils not comparable in terms of price with paraffinic base and process oils.[37]

[36] Replies to questionnaire to base oil customers Phase I – question 10. Replies to questionnaire to process oil customers Phase I – question 9. Replies to questionnaire to competitors Phase I – question 7.

[37] Replies to questionnaire to base oil customers Phase I – questions 11. Replies to questionnaire to process oil customers Phase I – question 10. Replies to question to competitors Phase I – question 8.

The view of base and process oil customers

(90) Naphthenic base oils have characteristics which cannot easily be found in paraffinic base oils, specifically: (i) low pour point – low temperature for hydraulic applications, (ii) aniline point solvency for greases, metal working fluids and process oils, (iii) a wide range of available viscosity grades.[38] Base oil customers submit that only naphthenic base oils could be used in MWF emulsion, as they have greater emulsification characteristics[39]. Customers claim that MWF products cannot be produced from paraffinic base oils: "*Naphthenic base oils are required for our MWF products and we could not switch to Paraffinic base oils"*.[40]

(91) With regard to prices, most base oil customers consider naphthenic oils as more expensive than paraffinic oils,[41] indicating that *"naphthenic carries a premium price over paraffinic"*[42] and it is "*a different market and not the same basic (sic) for pricing"*.[43]

(92) Almost all base oil customers underline that changing from a naphthenic base oil to a paraffinic base oil and vice-versa is difficult, if possible at all[44]. In particular, both products need to be reformulated as they have different properties, performance and hence suitability for the end-application in which they are finally utilised. Further, the difference in the end-application market and the qualification requirements significantly impact the testing and approval requirements.[45] Therefore, switching would take generally from six months to one year, in order to develop new formulas and perform new tests, involving additional costs, which would generally be too high.[46]

(93) Another base oil customer has never switched from naphthenic to paraffinic base oils, because of the importance of solubility for the additive.[47] One base oil customer and producer of industrial lubricants that has tried to switch in the past declares that switching was not possible.[48] In addition, almost all base oil customers submit that a small but significant and non-transitory increase in price ("SSNIP") in naphthenic base oils would not be enough to change their purchasing patterns or supplier, which reinforces the likelihood of the existence of a separate market for naphthenic base oils.[49]

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38 Reply to questionnaire to base oil customers Phase I - question 10 [ID 864].

39 Reply to questionnaire to base oil customers Phase I - question 10 [ID 870].

40 Reply to questionnaire to process oil customers Phase I - question 39 [ID 870].

41 Replies to questionnaire to base oil customers Phase I - question 11.

42 Reply to questionnaire to base oil customers Phase I - question 11 [ID 870].

43 Reply to questionnaire to base oil customers Phase I - question 11 [ID 822].

44 Replies to questionnaire to base oil customers Phase I – questions 25-30. Replies to questionnaire to base oil customers Phase II – questions 7-12.

45 Reply to questionnaire to base oil customers Phase II, question 7 [ID 870]. [Customer's identity number]* reply to questionnaire to base oil customers Phase II – question 7 [ID 4280]. [Customer's identity number]* reply to questionnaire to base oil customers Phase II – question 7 [ID 4234]. [Customer's identity number]* reply to questionnaire to base oil customers Phase II – question 7 [ID 4114].

46 Reply to questionnaire to base oil customers Phase II – questions 7-12.

47 Reply to questionnaire to base oil customers Phase I – question 29 [ID 822].

48 Reply to questionnaire to base oil customers Phase I – question 29 [ID 716].

49 Reply to questionnaire to base oil customers Phase I - question 30.

(94) All base oil customers expect their production to be disrupted in the absence of naphthenic base oils.[50] All base oil customers also indicate that they do not have alternative formulations that do not rely on naphthenic base oils to manufacture their products.[51]

(95) As regards process oil customers, the majority confirmed that paraffinic process oils and naphthenic process oils are not comparable in terms of product characteristics. In particular, they indicate that paraffinic process oils and naphthenic process oils are not interchangeable due to the different molecules and chemistry, arguing, *inter alia*, that end-applications and formulations have specific requirements that must be met and cannot be changed. In this respect it seems that in many instances, naphthenic process oils cannot be substituted by paraffinic process oils. Moreover, they also consider naphthenic and paraffinic process oils as different in terms of prices, as naphthenic process oils are generally more expensive than paraffinic process oils.[52]

(96) As regards switching, the vast majority of process oil customers indicate that switching from using naphthenic process oils to paraffinic process oils, and vice-versa is not easy. Notably, the products' properties and technical features are different and some formulations specifically require naphthenic oil and others paraffinic oil. In addition, although it is difficult to provide a precise estimate as this depends on the final end-application, switching is also costly both in terms of price and time.[53]

(97) In particular, one customer, while confirming that switching from naphthenic to paraffinic process oil supplies would be an extremely long process, requiring more than 1 year and would be costly, explains that "*as the solubility of naphthenic and paraffinic oil is different, switching would imply that the interaction between oil and the other elements used would not be stable anymore"*. Moreover, "*special additives could improve the solubility of paraffinic oils, therefore enabling to obtain a more stable solution with the resins currently used. This process however can trigger side effects such as technical problems and thus jeopardize the quality of the result on paper. In addition,* […] *this method would probably be more expensive than using naphthenic base and process oils*"[54]. Another customer emphasizes that the "*cost of switching would be high given the requirement for certain physical properties, country specific registration aspects as well as the biological performance of the products"*.[55]

(98) Therefore, switching from a naphthenic process oil to a paraffinic one involves time for reformulation of existing products and "*several and different tests have to be carried out according to the final compound applications*"[56]. These tests could take, as indicated by most customers, from 3 months to over a year, depending on the

50 Reply to questionnaire to process oil customers Phase I – question 39.

51 Reply to questionnaire to process oil customers Phase I – question 40.

52 Reply to questionnaire to process oil customers Phase I – questions 9-14. Reply to questionnaire to process oil customers Phase II - question 7.

53 Reply to questionnaire to process oil customers Phase I - question 21-25.

54 Minutes of conference call between the Commission and [Customer's identity number]* of 7 May 2013 [ID 5038].

55 Reply to questionnaire to base oil customers Phase I - question 25 [ID 953].

56 Reply to questionnaire to process oil customers Phase I question 27 [ID 873]. Reply to questionnaire to process oil customers Phase I - question 25 [ID 789].

customer requirements.[57] Similarly, the majority of customers is of the opinion that switching costs are either high or too high.[58]

(99) In the case of process oils, customers state that their production would also be disrupted in the absence of naphthenic process oils.[59] Among the reasons for such disruption, customers mention that they *"would not be able to produce certain finished products",*[60] would *"need time to reformulate existing products using alternative oils",*[61] or would not be able to produce until *"the acceptation (qualification) of a new supplier".*[62]

(100) Moreover, most process oil customers indicate that "*it is easier to switch from naphthenic to another type of naphthenic because they are more similar". "In particular, when the products share identical/comparable properties, such as viscosity, colour, composition and aromatic/naphthenic/paraffinic content of the different naphthenic process oils a switch is not difficult".*[63] The vast majority of the process oil customers have indicated that switching would take from less than a month to 6 months and that the costs would be negligible or minor compared to a switch from a naphthenic to a paraffinic oil.[64]

(101) As indicated by Nynas, it is true that in the first phase market investigation, in response to the question whether customers had switched from naphthenic process oils to paraffinic ones in the past, half of the respondents replied "yes".[65]

(102) However, the same customers emphasize that switching was not easy and it was due to exceptional circumstances. In particular one customer states: "*we had to switch from naphthenic to paraffinic oil because the production of the naphthenic oil was discontinued. We needed 1 year to develop the new formulation and 1 year to get the approvals for the new formulation".*[66] Another customer explains that *"paraffinic oil was tested because naphthenic oil is more expensive due to few producers in Europe, however paraffinic oil was not suitable for our products"*[67]. Another customer explained that those who have switched in the past have had quality issues with their customers[68]. [Details of Shell's commercial strategy]*.[69]

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57 Reply to questionnaire to process oil customers Phase I – question 25. Reply to questionnaire to process oil customers Phase II – question 8.

58 Reply to questionnaire to process oil customers Phase I – question 25. Reply to questionnaire to process oil customers Phase II – question 8.

59 Reply to questionnaire to process oil customers Phase I – question 37.

60 Reply to questionnaire to process oil customers Phase I - question 37 [ID 953].

61 Reply to questionnaire to process oil customers Phase I – question 37 [ID 713].

62 Reply to questionnaire to process oil customers Phase I – question 37 [ID 703].

63 [Customer's identity number]* reply to questionnaire to process oil customers Phase II – question 10 [ID 4569] and [ID 4122].

64 Reply to questionnaire to process customers Phase I - question 26. Reply to questionnaire to process oil customers Phase II – questions 10-12.

65 Replies to questionnaire to process oil customers Phase I - question 27.

66 Reply to questionnaire to process oil customers Phase I - question 27 [ID 873].

67 Reply to questionnaire to process oil customers Phase I - question 27 [ID 560].

68 Minutes of conference call between the Commission and [Customer's identity number]* of 7 May 2013 [ID 5038].

69 See the file "DRB_2013-04-19 V2.pptx" attached to the email from [Name]* on 26 April 2013, Slide 15: Lubes analyses closure scenario 2.

(103) All customers that replied to the market investigation declare that they would not change their purchasing patterns even if a SSNIP in naphthenic process oils occured.[70]

(104) Furthermore, as indicated by Nynas, the physical properties of the oil that are relevant for use in a specific end-application may be modified through the use of additives or blending. In particular, additives can improve the solvency of paraffinic oils, therefore enabling a more stable solution to be obtained with the resins currently used. However, this process can "*trigger side effects such as technical problems (shrinking of the roller) and thus jeopardize the quality of the result on paper (doubled and non-sharp text). In addition, such method is considerably more expensive than using naphthenic base and process oils"*[71].

(105) Finally, the vast majority of process oil customers indicate that they do not have alternative formulations that do not rely on naphthenic process oils to manufacture their products[72]. Also, most customers do not rely on dual or multi-sourcing contract arrangements[73]. This is confirmed by the fact that a majority of customers declare that they only change supplier for their purchases of process oils once every several years[74]. The main reason for such behaviour appears to be high switching costs, mainly in terms of new testing and formulations.

The view of the competitors

(106) Competitors also confirm the customers' arguments. Most consider paraffinic and naphthenic base and process oils to be significantly different in terms of product characteristics. According to them: *"their predominant chemical structure is different which provides differences in pour point, viscosity index, volatility and solvency (aniline point)". "The product characteristics of naphthenic and paraffinic oils are significantly different in terms of compatibility with certain applications e.g. the solvency of a naphthenic product is significantly higher and also the volatility may be significantly higher. This leads to the fact that paraffinic products in most cases cannot substitute naphthenic products directly in the applications".*[75]

(107) Competitors also indicate that their process oil customers rarely switch suppliers, the majority of those that switch do so once every several years, although customers are usually concerned about the security of supply. Therefore, although it seems security of supply is an issue, most customers do not have dual or multi-sourcing arrangements with suppliers in order to secure their supplies. This could be due to the high costs associated to switching and qualifying new suppliers.[76]

(108) In addition, competitors have confirmed that naphthenic and paraffinic base oils have different performance characteristics and different behaviour even for the same application. In some cases the switch is technically impossible due to the different properties of the oils, in other cases the differences would have to be compensated for by changes in formulations and specifications and in all cases testing can be very

[70] Replies to questionnaire to process oil customers Phase I – question 28

[71] Minutes of conference call between the Commission and [Customer's identity number]* of 7 May 2013 [ID 5038].

[72] Replies to questionnaire to process oil customers Phase I – question 38.

[73] Replies to questionnaire to process oil customers Phase I – question 39.

[74] Replies to questionnaire to process oil customers Phase I – question 40.

[75] Replies to questionnaire to competitors Phase I – question 7.

[76] Replies to questionnaire to competitors Phase I – questions 26-27.

costly. Further when the properties of the oils are so different the final application also requires a change in the manufacturing process in case of changed raw material properties.[77]

(109) As far as prices are concerned, most competitors indicate that naphthenic base and process oils are not comparable in terms of price to paraffinic base and process oils.[78] Naphthenic base and process oils are more expensive than an equivalent volume of paraffinic base and process oils, reflecting the special equipment, more complex production processes, and specific feedstock required for naphthenic base and process oils.[79]

(110) Finally, regarding the end-applications, all competitors reply that they do not sell paraffinic base and process oils and naphthenic base and process oils to the same customers for use in the same end-applications.[80] In particular, *no direct substitution of paraffinic and naphthenic oil is possible. If offered for the same application significant adjustments have to be made by customers leading to significant costs and subsequently entry barriers. In most applications such adjustments are technically not possible at all.*[81]

(111) For instance, and according to Nynas' competitors, significant formulation changes and expensive testing would be needed to substitute a naphthenic with a paraffinic base oil in greases. If this were the case, the finished grease formulated with paraffinic could even be more expensive than the original naphthenic derived product. The adhesives end-applications segment is a difficult market as there are many types of adhesives on the market. One competitor notes that some of the highly refined naphthenic oils give some advantages for some adhesives, and therefore, paraffinic process oils could not be regarded as substitutes in those cases.[82]

(112) Even if in the case of industrial rubber, both paraffinic and naphthenic process oils may be used, for other end-applications in the industrial field a customer would choose either a naphthenic or a paraffinic extender oil. Finally, in printing inks naphthenic process oils provide far superior solvency with ink for cold-set applications, whilst low viscosity paraffinic oils are superior in heat-set applications.[83]

6.2.2.3.2.2. Supply side substitutability

(113) The Commission considers that there is limited supply side substitution between the production of naphthenic and paraffinic base and process oils. In particular, both production processes of naphthenic and paraffinic base and process oils require different equipment, facilities and feedstock.

(114) First, none of the competitors produce paraffinic and naphthenic base and process oils in the same facilities.[84]

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77 Reply to questionnaire to competitors Phase I – question 26 [ID 962]. Reply to questionnaire to competitors Phase I – question 26 [ID 900]. Reply to questionnaire to competitors Phase I – question 26 [ID 968].

78 Reply to questionnaire to competitors Phase I – question 8.

79 Reply to questionnaire to competitors Phase I – question 8 [ID 1022].

80 Reply to questionnaire to competitors Phase I – question 9.

81 Reply to questionnaire to competitors Phase I – question 9 [ID 900].

82 Reply to questionnaire to competitors Phase I – question 13.

83 Reply to questionnaire to competitors Phase I – question 13.

84 Reply to questionnaire to competitors Phase I - question 19.

(115) Second, the processing equipment and process for a naphthenic production facility is unique. The crude distillation equipment must have specialized metallurgy, as the naphthenic crude oils are highly corrosive. The crude oil distillation configuration must also be designed properly, since naphthenic oils have very specific viscosity and volatility requirements.

(116) In addition, the hydro-processing units used for production of the finished naphthenic oils are required to have the proper metallurgy as well as the catalyst volume and pressure necessary to meet the solvency requirements of the finished product.[85]

(117) Third, production of naphthenic oils requires very specific feedstock and specialised processing equipment. In particular, a 'naphthenic' refinery has to comply with certain characteristics in the installation, such as the use of stainless steel elements because of the corrosive nature of naphthenic crude oils, and the refining process for both types of oils uses different operating units involving distillation, extraction and dewaxing, and different operating parameters.[86]

(118) In order to meet naphthenic oil product specifications, a refiner must start with a defined naphthenic crude oil meeting certain criteria. Few of the available worldwide crude oils are suitable as a raw material for naphthenic oil production. These crude oils must be purchased well in advance, and segregation through the supply chain is critical in order to ensure integrity of the finished product. Consequently, logistical assets must be devoted to naphthenic oils and cannot be switched back and forth.

(119) Finally, none of the competitors consider it feasible to switch production from paraffinic to naphthenic base and process oils. In particular, competitors estimate that the switching costs to produce naphthenic process oil from a paraffinic process oil facility would be very high, and the time required very lengthy. Producers however can produce the wide range of naphthenic base and process oils in the same facilities.[87]

6.2.2.3.2.3. Price premium correlation study of Nynas

(120) Nynas submitted a price premium correlation study to support its view of the product market definition.[88] In particular, based on correlations between the premiums that is to say, [Basis of Nynas' pricing policy]*, the Notifying Party argues that the product market is sufficiently broad such that paraffinic substitutes for naphthenic specialty oil products constrain the prices of naphthenic specialty oil products.

(121) Price premium correlation, as a tool to facilitate market definition, is based on an arbitrage argument. If product A and B belong to the same relevant market and there is an increase in the price of product A, this creates an arbitrage opportunity: either customers of product A could buy the cheaper product B, thereby saving cost (or some resellers could buy product B and sell it to the customers of product A), or producers of product B can switch some of their production into production of product A exploiting the increased relative profitability of product A. That exploitation of the arbitrage opportunity would bring the price of A and B closer:

85 Ergon's reply to questionnaire to competitors Phase I – question 20 [ID 1022].

86 Reply to questionnaire to competitors Phase I - question 20.

87 See footnote 68.

88 Form CO, Annex 26. In addition, the Parties reported correlations between Nynas' naphthenic premiums in the Americas and the EEA, to support a broader market definition. This is further discussed in section 6.2.2.3.2.3.

The extra demand for B increases its price and the switching of A's customers results in a decrease in product A's price. Alternatively, the increased supply of product A results in a downward pressure on its price. Hence, if the two products belong to the same relevant product and geographic market their prices show a co-movement. Correlation is a statistical tool to measure the co-movement of two data series. It follows that if two products are on the same relevant market it is necessary that their prices should be strongly positively correlated. The correlation coefficient measures the strength of correlation between the two prices. Its value can be between -1 and 1, 1 indicating perfect parallel co-movement of prices, and 0 indicating lack of co-movement.

(122) The Commission considers that the methodology used by the Notifying Party to calculate the price premium leads to a so-called spurious correlation. The correlation between two price series can be high even if the underlying products are not related. This is the case, for example, when the two price series have a common cost trend. The resulting correlations are called spurious in this case. This means that they are not indicative of a common market. A way to deal with spurious correlation is to calculate the price premia (price minus common cost) and correlate these price premium series with each other. These premium series reflect the product specific components of the full price. The resulting correlations then test whether the arbitrage mechanism is strong enough to equilibrate the premia and, hence, indicating a common market.

(123) The Parties calculated the premium as the difference between the average price and the contemporaneous value of the VGO cost (a measure of the common cost component between different product categories and regions). However, the observed price reflects pricing decisions that were made earlier. Hence, the current VGO cost does not properly reflect the common cost component relevant at the time of the pricing decision. This resulted in an artificial spike in the premium time series in the […]* when the VGO cost fell very rapidly. The artificial spike in the premium time series caused high correlations across product categories and regions. The Notifying Party itself argues that this spike in the premium was caused by a "delayed response" of prices to changes in VGO prices,[89] and that "Nynas' sales prices to customers may respond to changes in VGO prices with some lag".[90] In other words, the date of the observed prices is not the same as the date of the relevant VGO price. This is explained by the fact that sales prices are based on longer term contracts which use as an input cost VGO prices from the time when the contract is signed, and therefore were determined before the sale actually takes place. Moreover, sales prices are reported in the accounting system at a later date than the actual date of the transaction, creating a further lag between the date when the sale price is reported, and the relevant price of the input.

(124) Once the methodological problem is corrected the results do not support the broad market definitions supplied by the Notifying Party. In particular, the Commission calculated price premiums as the difference between the average price and the VGO cost from three months earlier (that is to say, the three month lagged VGO cost) which are not subject to the spurious correlation problem. In this way, the Commission ensured a better alignment of the observed pricing decisions and the

[89] Additional Economic Information Submitted in Response to ECthe Article 6(1)(c) Decision, 24 April 2013 – page 11.

[90] Reply to Request for Information of 7 February 2013 - question 9, page 13 [ID 0264].

likely underlying common costs. On the basis of the lagged VGO cost, there is no spike in […]* in the implied premium series.[91] The correlations between these price premiums are substantially below those originally calculated by the Notifying Party.

(125) In particular, Nynas reports the following correlation coefficients between Nynas' paraffinic and naphthenic base and process oils price premiums, that is to say the average price net of VGO cost:[92] Greases […]*, Holt Melt […]*, Melt Adhesives […]*, Metal Working Fluids […]*,Cols Set Inks […]*,Industrial Rubber […]*, TPE […]*[…]* The respective correlation coefficients for the premium series on the basis of the lagged VGO cost, that is to say, the average price net of the three month lagged VGO cost, are [0.7-0.9]*,[0.3-0.5]*, [0.1-0.3]*, [0.2-0.4]* and [0.1-0.3]*. In all but one case the correlation coefficients substantially drop if the lag structure is taken into account. Moreover, with the possible exception of the grease correlations, the correlations are quite low, showing a weak co-movement of the respective price premium series.[93] This supports the view that the naphthenic and paraffinic products do not belong to the same relevant market.

(126) Nynas' submission also contains a price stationarity analysis to support its views on market definition.[94] In particular, Nynas submits a stationarity analysis of Nynas' naphthenic/paraffinic relative prices to support the broad product market definition including both naphthenic and paraffinic base and process oils. The Notifying Party uses the stationarity, or stability of the relative prices as an argument for a broader product market definition.

(127) The Commission considers, in particular in light of the results of the correlation analysis in Recitals (121) to (126), that the stability of the relative prices is not indicative of a broader relevant market. Stable relative prices can be consistent with a complete lack of co-movement of the component prices.[95] Hence, stationarity of the relative prices is not indicative of the existence of the arbitrage effects discussed in Recitals (121) to (122). It follows that the results of the stationarity analysis are not indicative in the context of defining the market.

6.2.2.3.3. Conclusion

(128) The Commission considers that there is a separate product market for the production of naphthenic base and process oils, as opposed to paraffinic base and process oils.

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91 This was also pointed out by the Notifying Party itself, arguing that "*[Basis of Nynas' pricing policy]* collapsed rapidly in the [Basis of Nynas' pricing policy]** […], *and while Nynas's prices also fell by a similar magnitude, they did so with approximately one quarter's lag*," (Reply to Request for Information of 7 February 2013 - question 9, page 13 [ID 0264].), and that "[t]*he delayed response reflects the contractual obligations of Nynas.*" (Response to the SO, page 24.)

92 Form CO, Annex 26, Table 2, page 10.

93 Moreover, the correlations between the naphthenic applications' prices are higher than those between the respective naphthenic and paraffinic applications.

94 Form CO, Annex 26.

95 If, for example, the two price series are independent stationary series their difference or ratio (the relative price) is also a stationary series. But the independence of the two components is consistent with the hypothesis of lack of arbitrage between the two products. This hypothesis cannot be rejected by simply testing the stationarity of the relative prices. If the two price series are both non-stationary but the implied relative price is stationary one can still not conclude that the two products are related. The stationarity of the relative price of non-stationary prices can be, for example, because they have a common cost. Whether there is price arbitrage between the two products can be tested by the calculation of the correlations between the price premia (that is to say, the components of the price series not attributable to the common trend). This is the test employed in the correlation analysis above (Recital (125)). Importantly, stationarity testing is insufficient to test this co-movement.

6.2.2.4. Segmentation by end-application

6.2.2.4.1. The view of Nynas

(129) Nynas submits that segmentation by end-application represents the narrowest segmentation that is applied in the industry, as reflected in third party reports[96].

(130) Nynas has considered product markets by end-application according to third party market reports.[97] In this respect, the Parties' activities would overlap in the following end-applications: (i) base oil used in greases and metal working fluids; and (ii) process oils used in adhesives, Thermo Plastic Elastomers –TPE-, insoluble sulphur, industrial rubber, inks, fertilisers defoamers, and additives. Additionally, the Parties have proposed potential further segmentations for MWF for emulsions only, hot-met adhesives and cold set inks, given the special characteristics of these submarkets.

(131) Nynas and Shell nevertheless state that in light of the limited ability of suppliers to price discriminate between different end-applications, especially in respect of base oil, a segmentation by end-application is not relevant in this case. The Notifying Party further underlines that it cannot estimate which end-application segment the base or process oil is ultimately used in. Nynas also claims that the same naphthenic base or process oil may be sold for the purposes of various applications.[98]

(132) Regarding supply side substitutability within naphthenic base and process oils, Nynas claims that the same facility can technically produce all types of naphthenic base and process oils. There is, therefore, no conversion, investment or time required to switch production from one naphthenic base and process oil to another naphthenic base and process oil. The production process of all naphthenic base and process oils, regardless of the end-application where the oil is ultimately used, is very similar. As a consequence, market delineation by end-application would not be appropriate in this case, due to the high supply side substitutability between different end-applications for naphthenic base and process oils.

6.2.2.4.2. The Commission's assessment

(133) The Commission considers that the market for base and process oils is not segmented according to end-application due to prevalent supply side substitution.

(134) From a supply perspective, competitors can produce all types of naphthenic base and process oils in the same facility. The production process of all naphthenic base and process oils, regardless of the end-application, is similar. It is possible to switch production from one naphthenic base or process oil to another.

(135) From a demand-side perspective, *"base and process oils' characteristics differ from one product* to *another"*[99], depending on the features and specifications of a base or process oil. Certain grades of base and process oil could be used in certain end-applications but not in others.

(136) Moreover, customers of industrial rubber argue that depending on the end-application a certain type of process oil is required, given that the process oil used

96 Form CO page 96 – Kline's Global Lubricant Basestocks Industry 2012-2012 and the figure published by the Independent Union of the European Lubricants Industry – F.

97 Kline and the figures published by the Independent Union of the European Lubricants Industry.

98 Form CO page 96.

99 Reply to questionnaire to base oil customers Phase I – question 22 and 24.

has a significant impact on the final quality of the product.[100] Customers of additives and defoamers claim that changing of process oil is only possible after significant reformulation of the products. In the case of TPE, the different molecules and chemistry of the process oils lead to specific requirements as regards the process oil used.[101]

(137) Overall, each end-application requires particular characteristics and performances. As a result, only base and process oils meeting all the necessary requirements could be used in a particular end-application.

6.2.2.4.3. Conclusion

(138) Although there is a distinct demand for oil for each end-application, the Commission considers that the market for base and process oils is not segmented according to end-application. In any event, such further product segmentation would not affect the competitive assessment.

6.2.2.5. Gas to Liquid ("GtL) oil vs. naphthenic base and process oils

6.2.2.5.1. The view of Nynas

(139) GtL technology is a process of conversion of natural gas into liquid fuel and other products. GtL technology enables the conversion of natural gas into liquid hydrocarbon products at the site of gas production. At present, two GtL processes have been identified: the Fischer-Tropsch process ("**F-T**") and methanol, or the methanol-to-gasoline process ("**MTG**"). The products which can be produced through GtL technology include GtL gasoil (diesel-type fuel), GtL kerosene, GtL normal paraffin, GtL naphtha and GtL base-oil.[102]

(140) GtL base oil, like any other base oil, can be defined by its chemical composition, viscosity (the measurement of a fluid's resistance to flow), viscosity index (the variation of the flowability at different temperatures), volatility and a number of subsidiary specification points, all of which determine its suitability for a given application. [Details of Shell's GtL products]* [103]

(141) Nynas considers that naphthenic base and process oils are substitutable with other products, including oils produced through GtL technology. For instance Nynas considers that GtL-based products may be a viable alternative to naphthenic process oils used in [Nynas' view of GtL substitutability]*. Also, GtL-based products may be a feasible alternative for process oils in the [Nynas' view of GtL substitutability]* segment, as they are high quality oils meeting the requirements of [Nynas' view of GtL substitutability]*.[104]

6.2.2.5.2. The Commission's assessment

(142) The Commission considers that it is uncertain whether GtL could be an alternative to naphthenic base and process oils for most end-applications, that the GtL production process is significantly more expensive than the production process of naphthenic base and process oils and that there could be high switching costs associated to switching from naphthenic base and process oils to GtL.

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100 Reply to questionnaire to process oil customers Phase I – question 14.5 and 17.

101 Reply to questionnaire to process oil customers Phase I – question 14.2.

102 Form CO, Annex 3.

103 Form CO, Annex 3.

104 Form CO 123-130.

(143) First, base and process oils for industrial applications produced from GtL technology appear not to be a valid alternative for customers of naphthenic base and process oils. In particular, GtL is not comparable to naphthenic base and process oils in terms of product characteristics, such as solvency, sulphur content, viscosity and volatility, and price.

(144) Second, most customers do not regard base and process oils produced from GtL technology as a viable alternative to naphthenic base and process oils for a number of reasons.[105] First, GtL base and process oils are new in the market and, therefore, would need to be tested in each and all production processes as its suitability for use in end-applications is not widely known. Second, the properties of both products are different.[106] For example, there is a significant difference between GtL and naphthenic base oils with regard to emulsification properties and solubility of other components.[107] Most base and process oil customers estimated that switching to GtL base and process oils, if possible at all, would take more than a year.[108] Third, GtL technology is much more expensive than the current naphthenic production process, which raises doubts as regards its potential substitutability.[109]

(145) Third, most competitors also consider that GtL base and process oils and naphthenic base and process oils are not comparable in terms of product characteristics. In particular, GtL and naphthenic base and process oils differ in terms of viscosity, viscosity index, volatility, solvency and sulphur content. The significance of each of these variables varies depending on the end-use application. For example, naphthenic base and process oils have high solvency and are particularly suitable in applications for which this characteristic is important. Therefore, they consider GtL base and process oils for industrial applications not to be an alternative to customers of naphthenic base and process oils.[110]

(146) In addition, competitors also believe that substitution of GtL base and process oils for naphthenic oils would be difficult for all or at least most end-applications, including MWF emulsion, greases, adhesives, TPE, explosives[111], insoluble sulphur, industrial rubber, fertilisers, printing inks, defoamers, additives and TFO[112]: *"molecular structures are different and involve different physical properties"*[113]. In this sense, according to one competitor: *"GTL's inherent lack of solvency could create significant and costly formulation changes for the customer for most applications. There are a select few applications where a switch from naphthenic to GTL could be accomplished, but these applications are the exception"*.[114] As a result, all competitors have indicated that for customers switching from naphthenic base and

105 Reply to questionnaire to base oil customers Phase I – question 16-17. Reply to questionnaire to process oil customers – question 15-16. Reply to questionnaire base oil and process oil customers Phase II – question 13.

106 Reply to questionnaire to base oil customers Phase II - question 13.

107 Reply to questionnaire to base oil customers Phase I question 16-17 [ID 870].

108 Reply to questionnaire to base oil customers Phase I – question 16 [ID 536]. Reply to questionnaire to base oil customers Phase I – question 16 [ID 953]. Reply to questionnaire to base and process oils customers Phase II – question 17.

109 Reply to questionnaire to base oil customers Phase I - question 16-17 [ID 522] and to questionnaire to base oil customers Phase II - question 15 [ID 4114].

110 Reply to questionnaire to competitors Phase II - question 21.

111 Reply to questionnaire to competitors Phase II - question 22.

112 Reply to questionnaire to competitors Phase I - question 15.

113 Reply to questionnaire to competitors Phase I - question 14 [ID 968].

114 Reply to questionnaire to competitors Phase I - question 17 [ID 1022].

process oils to GtL base and process oils is difficult, costly and requires more than a year.[115]

(147) Finally, competitors consider naphthenic base and process oils and GtL base and process oils not to be comparable also in terms of production costs. In particular, one competitor explained that GtL oils are produced from a different feedstock and utilize a different production process than naphthenic oils. Naphthenic base and process oils are produced from specific naphthenic crude sources through a process of crude distillation, hydro treatment with high-purity hydrogen, and fractionation of the finished products. The production process is intended to remove unwanted impurities such as sulphur, nitrogen, and poly-nuclear aromatic molecules, while preserving the desired solvency of the finished product. In contrast, the raw material required to produce GtL oil is methane and steam. The production process for GtL oils is more complex and more costly. The basic steps are syngas production, synthesis of wax, hydrocracking, isomerisation, and hydrotreatment. The resulting product is a branched paraffinic molecule with very little sulphur and very low solvency.[116]

(148) Another competitor emphasised that the initial investment for a GtL plant seems to be considerably higher than the investment for any conventional naphthenic base oil plant. The raw materials, stranded gas for GtL and naphthenic crude for naphthenic base oils, are very different from each other leading not only to different production cost consideration for the fixed cost element but also for the variable that is to say, the raw material cost.[117]

6.2.2.5.3. Conclusion

(149) The Commission considers that GtL and naphthenic base and process oils do not belong to the same relevant product market.

6.2.3. Transformer oil (TFO)

(150) TFO is used to insulate distribution transformers and power transformers. It consists of a blend of highly-refined base oils. TFO can be produced from naphthenic base oil, paraffinic base oil or a blend of both. In certain, very specific and limited applications, vegetable and recycled oils can also be used as TFO. The Parties submit that, in the near future, GtL-based products will also be used to produce TFO.

(151) Transformer oils can be classified as inhibited or uninhibited. The primary difference between an inhibited TFO and an uninhibited TFO is that a small amount of oxidation inhibitor is added to the inhibited TFO. The inhibitor delays the onset of oxidation of the TFO, thus prolonging the life of the TFO and of the transformer. In terms of production, higher quality oil is required for inhibited as opposed to uninhibited TFO. A higher degree of refining normally also provides a better response to the inhibitor. However, in general all types of TFO may be used with any transformer and TFOs may be mixed (for example, when topping up is required).

(152) TFO customers include manufacturers of transformers, that is to say, large engineering firms such as Asea Brown Boveri Ltd ("ABB") and Siemens AG ("Siemens"), and owners of transformers who need to refill or top up oil in their equipment.

115 Reply to questionnaire to TFO competitors Phase II – question 25-26 [ID 4766].
116 Reply to questionnaire to TFO competitors Phase II - question 16 [ID 4766].
117 Reply to questionnaire to TFO competitors Phase II - question 16.

6.2.3.1 TFO vs. base and process oils

6.2.3.1.1. The view of Nynas

(153) Nynas submits that TFO constitutes a separate product market distinct from base and process oils.

6.2.3.1.2. The Commission's view

(154) The Commission agrees with Nynas' view. TFO constitutes a separate market from base and process oils[118], notably due to different technical characteristics and production process. Base oil is the intermediate product, which comes out of the refining process and which is used for producing TFO through a blending process.[119] TFO has special dielectrical characteristics and needs special refinery treatment,[120] in particular, the key requirement is longevity and dielectrical stability, that is to say, the oil must be a very good electrical insulator.[121]

6.2.3.1.3. Conclusion

(155) The Commission considers that TFO constitutes a separate product market from base and process oils.

6.2.3.2 Segmentation into unused and reclaimed TFO

6.2.3.2.1. The view of Nynas

(156) The Parties are not active on the market for reclaimed TFO. Nynas submitted that reclaimed TFO competes with unused TFO only to a very limited extent due to significant differences in price and quality. Reclaimed TFO currently does not meet the international standards set by the International Electrotechnical Commission (IEC) or the American Society for Testing and Materials (ASTM), based on which customers generally buy TFO. Today paraffinic base oils in TFO are highly-refined, high quality oils (Group II and Group III oils), which are not generally cheaper than naphthenic base oils.[122]

6.2.3.2.2. The Commission's view

(157) The Commission considers that unused TFO and reclaimed TFO are not part of the same relevant product market. Most TFO customers consider unused TFO and reclaimed TFO not to be comparable in terms of price, reclaimed TFO being less expensive. Switching is also considered not to be easy, as internal standards generally require the use of unused TFO, notably as the quality of reclaimed TFO is not as good as the quality of unused TFO, and the use of unused TFO requires technical approval and customer approval, which can be lengthy and costly. For these reasons, the vast majority of TFO customers have never switched in the past from using unused TFO to reclaimed TFO.[123]

(158) Similarly, one competitor emphasized that due to the lack of international standards, quality variations, and lack of proven history in service, reclaimed TFO is often

118 Reply to questionnaire to TFO customers Phase I – question 5-8. Reply to questionnaire to competitors Phase I – question 13.12.

119 [Customer's identity number]* reply to questionnaire to TFO customers Phase I – question 5 [ID 834].

120 Reply to questionnaire to TFO customers Phase I – question 5 [ID 879].

121 [Customer's identity number]* reply to questionnaire to TFO customers Phase I – question 5 [ID 867].

122 Nynas' response to the Commission's request for information of 14 March 2013.

123 Reply to questionnaire to TFO customers Phase II – question 7-11.

heavily discounted in an attempt to gain market acceptance. In addition, customers cannot easily switch because of the potential lack of quality and consistency with reclaimed transformer oils. The industry is not eager to put reclaimed TFO in new equipment.[124] Another competitor emphasized that TFO is expected to last 30 years in a transformer, that there is not enough data about the long term permanence life of reclaimed TFO and that therefore the risk involved in switching is very high, involving testing and extrapolating useful life determination costs.[125]

6.2.3.2.3. Conclusion

(159) The Commission considers that unused TFO and reclaimed TFO constitute separate product markets.

6.2.3.3. Segmentation into inhibited and uninhibited TFO

6.2.3.3.1. The view of Nynas

(160) Nynas submits that a further segmentation of the TFO market into inhibited and uninhibited TFO would not be appropriate. Nynas claims that the same specifications apply to both inhibited and uninhibited TFO in terms of physical and chemical parameters that must be met by the oil. Inhibited TFO is more expensive, as it contains a synthetic antioxidant and it has a lower oxidation rate than uninhibited TFO. This ultimately contributes to prolonging the lifetime of the transformer in which inhibited TFO is used. Therefore, the initial higher investment cost in the inhibited TFO could be offset by the longer lifetime of the transformer.

(161) Inhibited and uninhibited TFO may be used interchangeably in any transformer and may be mixed.[126] The know-how to produce either is freely available in the market and switching production from inhibited to uninhibited or vice versa would not entail any additional investment in production facilities. According to Nynas, all major producers, including Ergon, PetroChina Co ("PetroChina"), Repsol S.A ("Repsol") and Apar Industries Ltd ("Apar"), offer both inhibited and uninhibited TFO. Inhibited and uninhibited TFO may be produced from a blend of naphthenic and paraffinic base oils or from only paraffinic or only naphthenic base oil. International TFO specifications do not require any particular oil group to be used and may be met by paraffinic or naphthenic base oils or a combination of both, in varying proportions.

6.2.3.3.2. The Commission's view

(162) The Commission considers that inhibited and uninhibited TFO should be considered as part of the overall product market for TFO.

(163) Inhibited TFO contains a synthetic antioxidant and it has a lower oxidation rate than uninhibited TFO.[127] This has an impact on product characteristics, such as performance, quality, end-application and price. Inhibited TFO is more expensive than uninhibited TFO.[128] Switching from using inhibited TFO to uninhibited TFO is

124 Reply to questionnaire to TFO competitors Phase II – question 7 [ID 4766].
125 Calumet's reply to questionnaire to TFO competitors Phase II – questions 8 and 10 [ID 5050].
126 When mixed, the antioxidant properties will be an average of the inhibited and uninhibited TFO.
127 Reply to questionnaire to TFO customers Phase II – question 32.
128 Reply to questionnaire to TFO customers Phase II – question 32.1, 35 and 36.

mostly linked to the end customers' requirements – certain customers require only one type of oil.[129]

(164) Competitors confirmed that the primary difference between inhibited TFO and uninhibited TFO is that a small amount of oxidation inhibitor is added to the inhibited TFO. Competitors also confirmed that inhibited oils perform to a higher standard, are more stable and of a higher quality.[130] One competitor specified that 70 % of TFO sold worldwide is uninhibited.[131]

(165) In addition, as regards TFO produced from GtL, respondents have indicated that GtL is a paraffinic product, requiring an inhibitor to be added to meet the required properties – so it can be a substitute only for inhibited TFO.[132]

(166) However, both inhibited and uninhibited TFO can be produced from naphthenic-only, paraffinic-only or blended base oils.[133] While the price of inhibited TFO is generally higher, it ensures a longer lifetime for the power transformer. Therefore, the choice between inhibited and uninhibited TFO is a business decision between higher initial investment and longer lifetime, and lower investment and shorter lifetime. All competitors supply both inhibited and uninhibited TFO. Therefore, substitution between inhibited and uninhibited TFO is both technically and economically possible both from the supply and from the demand side. The conservative approach of end customers linked to the long lifetime of the products used has an influence on the competitive situation on the market but it does not justify the definition of a separate market for inhibited and uninhibited TFO.

6.2.3.3.3. Conclusion

(167) The Commission considers that inhibited TFO and uninhibited TFO are considered as part of the overall relevant product market for TFO.

6.2.3.4. Segmentation based on the type of base oil used

6.2.3.4.1. The view of Nynas

(168) Nynas submits that TFOs are not dependent on the type of crude oil or base oil used: they may be produced from naphthenic and paraffinic base oil or, more commonly, a blend of both. In certain very specific and limited applications, vegetable and recycled oils may also be used as TFO. Nynas produces TFO [from different groups of oils]*. Shell produces TFO from naphthenic crude at the Harburg refinery assets.

(169) Nynas markets around […]* types of TFO which are [either blends of naphthenic and paraffinic base oil or not blended]*. Nynas believes that Shell's, Ergon's and PetroChina's TFO are all based on naphthenic base oil.

(170) Nynas submits that a further segmentation of the product market into TFO made from naphthenic oils, TFO made from paraffinic base oils, or TFO made from a blend of both, is not appropriate. TFO is sold as a final product, blended to the customer’s requirements which reflect the parameters set by national and

[129] Reply to questionnaire to TFO customers Phase II – question 38 [ID4203]. Reply to questionnaire to TFO Phase II – question 38 [ID 4058]. Reply to questionnaire to TFO customers Phase II – question 38 [ID 4164].

[130] Calumet’s reply to questionnaire to TFO competitors Phase II – question 35 [ID 5050].

[131] Ergon’s reply to questionnaire to TFO competitors Phase II – question 17 [ID 4766].

[132] Reply to questionnaire to TFO customers Phase II – question 27.1 [ID 4173]. Reply to questionnaire to TFO competitors Phase II – question 26.2.1 [ID 4766].

[133] Minutes of the conference call between Repsol and the case team on 06.06.2013 [ID 5015].

international standards. Customers typically purchase TFO based on guarantees of certain technical specifications, which are usually based on a number of certain functions of the oil but not the crude from which the component base oil is derived and not on the naphthenic or paraffinic carbon content of the TFO. A specification can generally be met by producers through various methods of blending or processing regardless of the crude used, save in exceptional circumstances in which the customer specifies the base oil type or the carbon content of the TFO. Therefore, Nynas explained that customers would not generally be concerned by the type of crude or base oil used or the blending process provided that the relevant national or international specifications are met.

(171) Therefore, a segmentation of the market into TFO made from naphthenic, or from paraffinic base oils, or from a blend of both is not justified.

6.2.3.4.2. The Commission's view

(172) The Commission considers that TFOs made from naphthenic oils, from paraffinic base oils, and from a blend of those oils are not considered as separate product markets.

(173) All customers responded that naphthenic base oils are essential components of the TFO they use.[134] In particular, respondents to the market investigation specified that the end customers, that is to say, the power generation and distribution companies, may choose to specify whether naphthenic or paraffinic base oil is to be used for the TFO.[135] The vast majority of customers also consider naphthenic TFO, paraffinic TFO and blended TFO not to be comparable in terms of product characteristics such as performance, quality and end use[136] as well as price. Prices of naphthenic and paraffinic TFOs differ as each of these products is produced from naphthenic or paraffinic base oil which is produced in different refineries.[137] The vast majority of customers also indicated that paraffinic base oil is generally not used for TFO and not accepted in the European market but only used in specific countries such as Canada or India.[138]

(174) For the supply-side, a competitor submitted that only naphthenic oils can meet the technical requirements for uninhibited TFOs and that technically it is very difficult, if not impossible, to produce a GtL based uninhibited TFO.[139] In particular, all GtL based TFO products on the market are currently inhibited and users of TFO are conservative and reluctant to switch to a product which has not been on the market for many years.[140] Another competitor confirmed that both naphthenic and paraffinic base oils can be used for the production of all kinds of TFO.[141]

(175) However, the segmentation between TFOs made from naphthenic base oils, paraffinic base oils, and a blend of both of those oils, is not appropriate. Although

134 Replies to questionnaire to TFO customers Phase I – question 5-8 and questionnaire to TFO customers Phase II – question 13.

135 Replies to questionnaire to TFO customers Phase I – question 5-8. Reply to questionnaire to TFO customer Phase II – question 16. Reply to questionnaire to TFO competitors – question 16.

136 Replies to questionnaire to TFO customer Phase II – question 14.

137 [Customer's identity number]* reply to questionnaire to TFO customers Phase II – question 15 [ID 4173].

138 Replies to questionnaire to TFO customer Phase II – question 17, 18, 21, 22.

139 Replies to questionnaire TFO competitors Phase I – question 13.12, 15.11.1 and 15.12.

140 Ergon's reply to questionnaire to TFO competitors Phase II – question 27.2 [ID 4776].

141 Minutes of the conference call between Repsol and the case team on 06.06.2013 [ID 5015].

there is a difference between the products in terms of chemical characteristics, price and production process, technically all kinds of TFO products can be used for all end-applications. The technical specifications defined in the international standards for TFO can be met regardless of the naphthenic or paraffinic nature of the base oils used.

6.2.3.4.3. Conclusion

(176) The Commission considers that TFOs made from naphthenic base oils, paraffinic base oils, and a blend of those oils should not be considered as separate relevant product markets.

6.3. Relevant geographic markets

6.3.1. Principles

(177) The relevant geographic market comprises an area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas.[142]

6.3.2. Naphthenic base and process oils

(178) In its Exxon/Mobil Decision,[143] the Commission found that the relevant geographic market for Group I base oils used in lubricants was EEA-wide. Among other factors, the following elements were taken into consideration in that Decision:

(i) Prices in the United States and Asia had been consistently above prices in the EEA;

(ii) Base oils for lubricants in Europe needed to conform to specific European consumption profiles as well as EEA requirements, and

(iii) There was no spot market for base oils in the EEA with any material liquidity and traders on the stock market had not imported base oil into the EEA in previous years.

6.3.2.1. The view of Nynas

(179) Nynas argues that the market conditions have significantly evolved since the Exxon/Mobil Decision, in particular in the industrial segment where the Parties are active.[144] First, the prices in the EEA and the United States have converged over time due to increased trade. In this regard, Nynas indicates that some of Nynas' customers have recently switched their base and process oil volumes for […]* and […]* to […]*, and process oil volumes for […]* to […]*. Both […]* and […] are […]* based companies.

(180) The Parties consider that, at present, base and process oils are produced and traded globally in accordance with international classification standards and quality requirements and demand for those oils is expressed on a worldwide basis. Customers are typically large, global companies which source base and process oils from a variety of suppliers and often have a number of approved suppliers. They can

142 Commission Notice on the definition of relevant market for the purposes of Community competition law (OJ C 372, 09.12.1997, p. 5) Paragraph 8.

143 Commission Decision of 29 September 1999 in Case COMP/M.1383 – Exxon/Mobil, Recital 330.

144 Form CO, Paragraphs 407-410.

and do easily switch to suppliers from outside the EEA in case of competitive offers by such suppliers or because their usual supplier experiences supply problems.[145]

(181) The Parties also consider that imports are economically viable, given that base and process oils are shipped over great distances at relatively low cost, and play a significant role in the industry.[146]

(182) Whilst Group I oils are imported to the EEA from Russia, Group II and III oils come to the EEA from the United States and Asia. Naphthenic base and process oils are primarily imported from North America into the EEA by Ergon, the global leader in naphthenic base and process oils production with around [10-20]*% of market share in the EEA market for base and process oils in 2011.[147] As regards exports, the main importing region in the world is Asia, especially China and India, due to the rapid economic growth in those countries.[148]

(183) According to the Parties, there is a significant production surplus of naphthenic base and process oils in North America, which has over four times the naphthenic base and process oil refining capacity of the EEA and twice the naphthenic base and process oil refining capacity of the Asia-Pacific region.[149] The Parties also claim that there is a significant volume of unused capacity in North America.[150] Due to the considerable overcapacity of naphthenic base and process oils production in North America (which is around nine times larger than the total European demand for naphthenic base and process oils), there are increasing trade flows from North America to the EEA and Asia. North America is, therefore, an important source of actual and potential supply constraining the supply of naphthenic base oils in the EEA. In particular, Ergon, the world's largest naphthenic base and process oil producer, has significant sales in the EEA.[151]

(184) Moreover, Nynas believes that non-EEA suppliers could enter the European market, as Ergon has shown. Ergon has been able to win considerable volumes from Nynas for the supply of customers in the EEA since its entry into the market in 2006-2007. For smaller customers that are far away from their storage facility, Ergon is using distributors, some of which could also resell base and process oils from other suppliers such as Calumet. In Nynas' view, the cost of starting up such an operation is low, as it does not require the operation of a refinery in the EEA.[152]

(185) In the Response to the SO, Nynas argues that the Commission's assessment in the SO ignores the global structure of trade. The Parties point to the fact that Nynas, Ergon and Shell trade globally, irrespective of the location of their refineries, and that customers have expressed their willingness to switch to suppliers based outside of the EEA. Furthermore, most naphthenic suppliers serve their global customers from one production site.

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145 Form CO, Paragraph 412.

146 Form CO, Paragraph 414.

147 The Brattle Group, Inc. (the "Brattle Group"), additional economic information submitted in response to the Article 6(1)(c) Decision of 24 April, Paragraph 2, [ID 4587].

148 Form CO, Paragraphs 415-417.

149 Form CO, Paragraphs 418-419 and 700.

150 *Ibidem*.

151 Form CO, Paragraphs 414-419.

152 Form CO, Paragraphs 713-714; see also The Brattle Group, Additional economic information submitted in response to the Article 6 (1)(c) Decision of 24 April, Paragraphs 2,3 and 18 [ID 4587].

(186) In addition, Nynas argues that a refinery's location is not relevant for the purpose of geographic definition of the supply market. The observation that customers mostly buy from EEA-based suppliers does not preclude customers from switching to non-EEA suppliers in response to a SSNIP.

(187) With regard to prices in particular, Nynas reiterates its claim that United States prices constrain European prices for naphthenic base and process oils. Nynas also states in the Response to the SO that the Commission has misinterpreted the meaning of price differences between the EEA and the United States, pointing out that price differences by themselves do not indicate separate markets. Nynas argues that the fact that United States prices have been consistently below EEA prices reflects a situation of excess capacity in the United States and constrained capacity in the EEA.

(188) Nynas further claims that transportation costs and import duties merely have the effect of raising non-EEA producers' costs, but do not indicate that the relevant geographic market should be limited to the EEA. They do not limit the ability and incentives of competing suppliers to expand sales in the EEA either, as the establishment by Ergon of a strong presence in the EEA indicates. According to Nynas, the Commission's conclusion in this regard is contrary to Nynas' experience and is at odds with many of the customer responses to the Commission's market investigation. Nynas further questions the answers provided by other non-EEA competitors with regard to transport costs, which would appear to reflect only rough estimates and not actual prices.

(189) In the Response to the SO, Nynas argues that distribution infrastructure is readily available. In Nynas' experience, storage tanks are readily available, at short notice, and do not require further investment to prepare them for naphthenic base and process oils, whereas a minor investment would be required for TFO.

(190) Finally, Nynas argues that Ergon has the capacity to undermine price increases in the EEA. According to the Parties, Ergon has the ability and incentive to increase imports in response to a price increase in the EEA. In response to the Commission's SO, Nynas has submitted a critical loss analysis for several products[153] which aims to prove that, at its current margins, a SSNIP would be unprofitable for Nynas.

6.3.2.2. The Commission's assessment

(191) The Commission takes the view that the geographic scope of the market for naphthenic base and process oils for industrial applications is EEA-wide.

(192) First, customers who use naphthenic base and process oils for their production in the EEA mostly opt for suppliers based in the EEA.[154]

(193) Most base and process oil customers indicate that they do not choose their suppliers on the basis of their location.[155] In practice, however, most base oil customers that responded to the market investigation indicated that they source base oils within the

153 TFO, greases, metalworking fluids, hot-melt adhesives, TPE, cold-set inks, insoluble sulphur, industrial rubber, fertilisers and defoamers.

154 Replies to questionnaire to base oil customers Phase I – question 32; Replies to questionnaire to process oil customers Phase I – question 30; Replies to questionnaire to base oil customers and process oil customers Phase II – questions 20 and 35.

155 Replies to questionnaire to process oil customers Phase I – question 31; Replies to questionnaire to base oil customers Phase I – question 33.

EEA.[156] Process oil customers also tend to source on an EEA level or even regionally.[157] Only three out of twelve process oil customers purchase naphthenic process oils from North America.[158] The Parties have not provided any information that would allow the dismissal of the actual purchasing patterns of customers as irrelevant for the purpose of the definition of the geographic scope of the market. Ergon's progression in the EEA does not contradict this assessment, as it serves its customers from Antwerp.

(194) Second, prices are different between the EEA and North America, as well as between the EEA and the rest of the world, an additional factor militating against the definition of a geographic scope for the naphthenic base and process oils market that is wider than the EEA.

(195) Most customers state that prices in the EEA are different from prices in the rest of the world.[159] According to base oil customers, the prices in North America are 10% to 15% lower than those in the EEA.[160] One process oil customer thus notes that there is a difference of "*up to 25% due to different topics, e.g. transport cost, tax, profit, …*",[161] while another states that "*naphthenic oil is at least 10% more expensive in Europe due few* (sic) *producers in Europe*".[162] One customer points out that "*price could vary according to the specifications of the products and to the final destination. Usually price is "ex Works" from dispatching storage + transportation cost to final destination"*.[163] Many customers do not have knowledge of the North American prices.[164]

(196) Competitors overall confirm that there are price differences between the EEA and North America regarding naphthenic base and process oils for industrial applications. According to Calumet, this is due to the fact that the "*economy is currently weak in the EU markets*".[165] For Ergon, the historical price difference between the two regions "*is driven by regional supply, regional demand, and the switching costs from naphthenics to competing paraffinic products*".[166]

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156 Replies to questionnaire to base oil customers Phase I – question 32; Replies to questionnaire to base oil customers Phase II – question 20.

157 Replies to questionnaire to process oil customers Phase I – question 30 and Reply to questionnaire to process oil customers Phase II – question 20.

158 [Customer's identity number]*: 40%, [Customer's identity number]*: 100% and [Customer's identity number]*: 70%. [ID 4324], [ID4122] and [ID 4383]. However, it should be taken into account that the customers do not bear transport costs of imports to the EEA because of the INCOTERMS used for their supplies, as explained in Recital (208).

159 Replies to questionnaire to base oil customers Phase I - question 34.

160 [Customer's identity number]* [ID 533], [Customer's identity number]* [ID 736] or [Customer's identity number]*[ID 522]. replies to questionnaire to base oil customers Phase II - question 23.2.

161 [Customer's identity number]* reply questionnaire to process oil customers Phase II - question 23.2 [ID 4516].

162 See [Customer's identity number]* reply to questionnaire to process oil customers Phase II - question 23.2 [ID 4146].

163 [Customer's identity number]* reply to questionnaire to base oil customers Phase II - question 23.2 [ID 4333].

164 Replies to questionnaire to process oil customers Phase II - question 23.2

165 Calumet's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 39 [ID 5049].

166 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 39 [ID 4908].

(197) None of the competitors consider EEA prices and non-EEA prices as similar.[167] Ergon points to the fact that "*there has been a premium on the order of [...] for naphthenic base oils in EEA as compared to North America and Asia*". Ergon further notes: "(h)*owever, historical prices in EEA are not as high as those in South America*".[168]

(198) Competitors confirmed that there have been instances in the past where the prices in the EEA and in North America have moved in different ways.[169] Calumet notes that "*for the past 2 years the EU pricing has been significantly lower*".[170] Ergon explains that raw material pricing for crude and VGO causes price increases or decreases that are consistent around the world, however, the impact of regional supply and demand balance can play a substantial role in price increases or decreases:[171]

"For instance, a geographically focused recession can cause a short term and regional pricing decrease. Also, if a major supplier has a planned or unplanned supply disruption, prices may increase in the primary area where that supplier competes. We have seen prices in the EEA move up and down relative to other regions of the world based on these supply/demand dynamics."[172]

(199) With regard to Nynas' argument that price differences do not indicate separate markets by themselves the Commission considers that although price differences by themselves are not conclusive as to the scope of the relevant market, they can be relied upon as indicators for defining a market.[173] In this case they constitute one of the elements pointing towards an EEA-wide geographic market for naphthenic base and process oils. In any event, the price correlation analysis (see Recitals (120) to (127)) also supports the EEA-wide market definition. Hence, the Commission relies not only on price level differences but also on the dynamics and co-movement of prices to conclude on the relevant market definition.

(200) The Notifying Party also submitted a critical loss analysis, in the Response to the SO, in order to demonstrate that a 5-10% price increase in TFO and certain end-applications in the EEA would be unprofitable for Nynas.[174] A critical loss analysis calculates how much sales a company can lose after a price increase without reducing its profits. Nynas submits that using its current margins, which are [10-20]*%-[30-40]*%, a 5-10% price increase would be unprofitable if it lost [10-20]*-[20-30]*% of its sales. Furthermore, the Notifying Party argues that Ergon would be able to increase its exports into the EEA at least to this extent, hence making a 5-10% EEA wide price increase unprofitable for Nynas.

(201) The Commission considers that this analysis fails to invalidate the Commission's assessment of the relevant geographic market. In its critical loss analysis the Notifying Party treats Ergon as a United States-based competitor that is currently not

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167 Replies to questionnaire to competitors Phase I - questions 39 and 40.

168 Ergon's reply to questionnaire to competitors Phase I - questions 39 and 40 [ID 1022].

169 Replies to questionnaire to naphthenic base and process oils competitors Phase II - question 40.

170 Calumet's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 40 [ID 5049].

171 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 40 [ID 4908].

172 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 40 [ID 4908].

173 Commission Notice on Market Definition, Paragraph 28-29.

174 Response to SO, Paragraphs 123-131.

present on the EEA market, and therefore is an out-of-market constraint. However, the purchasing patterns of customers have indicated that Ergon, by supplying its EEA customers from depots in Antwerp, is considered by customers as a player that is active within the EEA market, and is actually one of the only three firms active in the market at present. This invalidates the assumption made by the Notifying Party in its critical loss analysis. In particular, in view of the current oligopolistic structure of the market, Ergon would have the incentive to behave strategically in response to a price increase, that is, it would at least partially follow a price increase within the EEA.

(202) The Commission also considers that the price premium correlation study submitted by the Notifying Party[175] does not support the Notifying Party's view of a geographic market that is wider than EEA.

(203) That study is analysed in Recitals (120) to (127) regarding the product market and the reasoning applies in an analogous way to the geographic market. In particular, the Commission considers that the methodology used by the Notifying Party to calculate the price premium led to a so-called spurious correlation. Once the methodological problem was corrected, by calculating the premium as the average price net of the lagged VGO cost, the results did not support the broad market definitions.

(204) The Notifying Party reports the following correlation coefficients between Nynas' American and European naphthenic base and process oil price premiums (average price net of VGO cost):[176,177] Transformer Oils […]*, Greases […]*, Hot-Melt Adhesives […]*, Metal Working Fluids […]*, Cold-Set Inks […]*. The respective correlation coefficients for the premium series using the lagged VGO cost, that is to say, the average price net of the three month lagged VGO cost, are [0.3-0.5]*, [0.6-0.8]*, [0.4-0.6]*, [0.6-0.8]* and [0.1-0.3]*. In all cases the correlations substantially drop once a lag structure is taken into account. Moreover, with the possible exception of the grease correlations, the correlations are quite low, showing a weak co-movement of the respective price premium series.

(205) For these reasons, the Commission concludes that the analysis of price premium correlations does not support the existence of a market for naphthenic base and process oils which is wider than the EEA.

(206) The Notifying Party also submitted a stationarity analysis of Nynas' American and European relative prices to support the argument that the geographic market is wider than the EEA. For the reasons set out in Recital (127) which also apply to the geographic market, the Commission considers that the stationarity analysis is not indicative in the context of defining the relevant geographic market.

(207) Third, transport costs constitute a barrier to imports into the EEA. They constitute the main obstacle for non-EEA producers of naphthenic base and process oils who wish to sell their products in the EEA.

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175 Form CO, Annex 26.

176 Form CO, Annex 26, Table 1, page 8.

177 As explained in Recital (121), the correlation coefficient measures the strength of correlation between the two price premium series. Its value can be between -1 and 1, 1 indicating perfect parallel co-movement of prices, and 0 indicating lack of co-movement.

(208) Customers generally do not bear the cost of transportation of the products. Even if some customers indicate that transport costs do not limit their ability to purchase base and process oils from other geographic areas, many do not bear the transport costs incurred between the EEA and the rest of the world. Many purchase under the international commercial terms ("INCOTERMS"), alternatively or exclusively (Carriage Paid To ("CPT"), Delivered Duty Paid ("DDP"), Delivered At Place ("DAP"), Carriage and Insurance Paid to ("CIP") or Cost, Insurance and Freight ("CIF")); other respondents indicate the means of transportations, such as truck, barge, or "*free delivery by fuelling vehicle*"[178].[179] Only one customer indicates that it buys under the Free Carrier ("FCA") INCOTERMS, but it does so only from Nynas within the EEA, from Antwerp.[180]

(209) The main competitors also confirm this. Ergon notes that "*delivery terms can be CIF terminal or at the customer's location. This depends on the customer's preference*".[181] Calumet notes that deliveries are made "*[…] FOB and […] Delivered… terms mix is fairly evenly distributed*".[182]

(210) Internal documents from the Notifying Party also confirm that [Calculation of Nynas' transport costs]*.[183]

(211) According to some customers, transport costs for transport from North America to the EEA can reach up to 15-18% of the final price. Similar figures are indicated for transport to the EEA from South America and from Asia.

(212) Base oil customers indicate that, for transport from North America to the EEA, these costs can reach up to 18% of the final price. For transport from South America customers indicate figures between 10% and 20%, whereas for transport to the EEA from Asia the percentage of transport cost is around 10%.[184]

(213) Process oil customers indicate that transport cost from North America to the EEA can reach 15% of the final price, while others indicated that there are no such costs or that prices are under the INCOTERMS DDP (that is to say, the customer does not bear the costs). Customers indicate similar figures for transport to the EEA from South America and from Asia.[185]

178 [Customer's identity number]* reply to questionnaire to process oils customers, Phase II [ID 4295].

179 Replies to questionnaire to base and process oils customers Phase II- question 37.

180 [Customer's identity number]* reply to questionnaire to base oil customers Phase II - questions 35, 36 and 37.4 [ID 4114].

181 Ergon's reply to questionnaire to competitors Phase II - question 87 [ID 4908].

182 Calumet's reply to questionnaire to naphthenic competitors Phase II,- question 87 [ID 5049].

183 Ernst&Young's "Sardinia Draft Financial DD Report 2011" of 29 April 2011 (document NYN_000002190, [ID1091].

184 Replies to questionnaire to base oil customers Phase II - question 21.

185 Replies to questionnaire to process oil customers Phase II - question 21.

(214) Some customers point out that the transport costs depend on the volume of oil transported[186] and most customers consider the cost of transportation of oil is a barrier to imports.[187]

(215) In this regard, base oil customers state that "*Transportkosten tragen erheblich zur Kostenerhöhung bei*".[188] Total notes that "*Transport costs are part of the supplier cost and could influence the ability to be competitive in region (sic) where the oil is not produced*". According to process oil customers "*in general, transport costs will increase the total cost and limit the ability to economically import from other regions unless the production costs in the more remote region are smaller due to feedstock prices or energy costs*".[189] Another process oil customer notes that "(i)*f we purchase from outside Europe we must import container tanks and have the costs from habour to our plant this is more expensive as a road* tanker *from a refinery in Germany or EU to our plant* (sic)".[190] Customers thus note that "*the transport to Europe would be very expensive if we would purchase naphthenic oil outside of Europe*"[191] and that "*transport cost in case of purchase outside the EEA to EEA may significantly influence final price*".[192]

(216) The main competitors of the Parties also confirmed that transport costs constitute a barrier to export into the EEA.[193] In particular, competitors indicate that transport costs limit their ability to sell base oils and process oils from some geographic areas.[194] Ergon underlines that "*the differences in transportation costs among the various regions are driven by the distance to the end market and the availability of favourable shipping options*".[195] For United States based naphthenic base and process oil producers, these costs need to be added to each other, as products must first be transported from the production facility to a port from which they can be shipped to other regions.[196]

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186 [Customer's identity number]* reply to questionnaire to base oil customers Phase II - question 22 [ID 4114] or [Customer's identity number]* reply to questionnaire to process oil customers Phase II - question 22 [ID 4992].

187 Replies to questionnaires to base and process oils customers Phase II - question 22.

188 [Customer's identity number]* reply to questionnaire to base oil customers Phase II - question 22 [ID 4161]. Courtesy translation: "*Transport costs contribute significantly to raising costs*".

189 [Customer's identity number]* reply to questionnaire to process oil customers Phase II - question 22.1.1 [ID 4569].

190 [Customer's identity number]* reply to questionnaire to process oil customers Phase II - question 22.1.1 [ID 4176].

191 [Customer's identity number]* reply to questionnaire to process oil customers Phase II - question 22.1.1 [ID 4146].

192 [Customer's identity number]* reply to questionnaire to process oil customers Phase II - question 22.1.1 [ID 4185].

193 Replies to questionnaire to naphthenic base and process oils competitors Phase II - question 36.

194 Replies to questionnaire to competitors Phase I - questions 42 and 43.

195 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II – question 35 [ID 4908].

196 In this regard, Ergon notes: "*to obtain an appropriate comparison to transport costs in North America, there would be an additional cost to transport product from the terminal to the end user*" (Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II – question 35.1 [ID 4908].

(217) The cost of transportation of the products to the EEA is a significant hurdle to exports for non-EEA producers. Calumet notes that "*the high cost of freight makes exporting non-competitive*".[197] Calumet describes the transportation cost composition as follows:

"(i) freight charges from the refinery to the shipping dock; (ii) waterborne charges and (iii) overseas costs incurred in the EEA and linked to the product reaching its destination. Transport costs are roughly broken down as follows: rail transportation – USD [0-50] cts/gallon; waterborne transportation (within the US, they amount to [0-10]% of total costs/final price); overseas costs to the port in the EEA (not to the customer premises, i.e. does not include terminalling costs) amount to [10-20]% of total costs/final price".[198]

(218) In the Response to the SO Nynas questioned Calumet's response to the Commission's market investigation as being based only on rough estimates.[199] This does not, however, invalidate the fact that transport costs significantly raise Calumet's overall cost of supplying the EEA market and explain Calumet's lack of interest in expanding on the EEA market for naphthenic base and process oils.

(219) Although already present on the EEA market, Ergon still considers that it "*must overcome import duties and transportation costs in order to market naphthenic oils in the EEA*".[200] Thus, in the case of a 5-10% increase in the price of naphthenic base oils in the EEA, Ergon would only switch a percentage of its supply to the EEA, "*depending on the incentive*".[201] In any event, such a switching of supply requires additional investments in "*human resources as well as tanks and blending capabilities in the EEA*".[202]

(220) The Parties claim that transportation costs and import duties have not prevented Ergon from establishing a strong presence in the EEA. This argument does not, however, contradict the existence of high transport costs.

(221) Furthermore, Nynas itself has indicated that the transport costs for its own exports from the United States to the EEA, amount, on average, to [5-10]*% to [10-20]*% of the final price.[203] This percentage reaches [10-20]*%, as shown in Table 1, when including other associated costs.[204]

197 Calumet's reply to question 36 to the Phase II questionnaire to naphthenic base and process oils competitors [ID 5049].

198 Minutes of the conference call with Calumet of 25 April 2013 [ID 5048].

199 Response to the SO, page 29.

200 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 37 [ID 4908].

201 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II – question 37 [ID 4908].

202 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 38 [ID 4908].

203 Response to the SO, Paragraph 114.

204 Namely costs for United States and EEA-based depots and customs duty.

Table 1

Table 1: US Refinery to EEA Depot Transport Costs		
	Nynas USD mt	Calumet %
Within the US		
Transport, refinery to Houston	[10-30]*	
Houston depot costs	[10-30]*	
"Waterborne" within US	[30-50]*	
As a percentage of final sale price		[0-5]*%
To the EEA		
Transport, Houston to Antwerp	[50-70]*	
Customs duty	[20-40]*	
Antwerp depot cots	[10-30]*	
"Overseas" to port	[110-130]	
As a percentage of final sale price		[10-20]*%
Total costs, refinery to Antwerp	[150-170]	
As a percentage of final sale price		[10-20]*%

Source: the Parties

(222) Fourth, without local storage facilities and a distribution network in the EEA, it is difficult to respond to fluctuations in demand[205]. This also tends to place non-EEA producers of naphthenic base and process oils at a disadvantage vis-à-vis producers located in the EEA.[206]

(223) Calumet, for instance, considers storage a barrier to exporting into the EEA:

"(…) specialty products require special transportation, handling and storage facilities. It is not common to find a terminal available for lease with readily installed specialty equipment. Thus, storage facilities need to be modified and Calumet has to bear the restructuring costs. Calumet does not own terminals, and would have to rent/lease storage in the EEA."[207]

(224) Calumet also notes that it is "(c)*hallenging for specialty products to locate suitable storage capacity at economical prices*".[208]

(225) It appears from the financial due diligence prepared for Nynas by Ernst&Young AB ("Ernst & Young") regarding the acquisition of the Harburg refinery assets that local presence is important to penetrate a given market:

"Nynas delivers to customers all over the world dividing its customer base into the four market segments EMEA, Asia, North- and South America, using Antwerp and Houston as hubs for worldwide shipping. The Base Case includes related costs as "shipping and hub costs."

205 Replies to questionnaires to base and process oils customers Phase II - questions 22.3, 22.4, 22.5 and 22.6.

206 Replies to questionnaire to competitors Phase I - question 35.

207 Minutes of the conference call with Calumet of 25 April 2013 [ID 5048].

208 Calumet's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 36 [ID 5049].

For logistical reasons Nynas operates 27 local depots for NSP at different locations worldwide near major customers, for intermediate product storage and blending processing. The Base Case includes related costs as "local depot costs".[209]

(226) Nynas argued in the Response to the SO that storage tanks are readily available at short notice and without requiring any investment. The Commission notes that even if it were true that storage is easy to obtain, and that storage agreements comprise clauses allowing the provision of additional or emergency storage at short notice, the need for such storage by a non-EEA supplier raises its fixed costs of operation and thereby, of entry, and as such constitutes an additional obstacle to importing naphthenic base and process oils. Moreover, even the Notifying Party argues that, when relying on purchases outside the EEA, non-negligible fixed costs have to be incurred in order "*to cope with the uncertainty of supply and still be a reliable supplier*."[210]

(227) Most competitors indicate that their distribution channels and logistics are organized at an EEA or regional level.[211] Q8 states that it sells "*base oils out of* […] *Rotterdam, Netherlands, mainly to domestic EU customers*".[212] Customers claim that it is recommendable to have depots in the region where the company sells in order to supply the products, that is to say, some infrastructure is needed to be active in a specific geographic area. In this regard Ergon indicates that "*each region has a local office, dedicated management and administrative staff, and dedicated sales team*".[213]

(228) Fifth, the quality of naphthenic base and process oils is different in the EEA to that of naphthenic base and process oils in the rest of the world. This was confirmed by most of the customers.[214]

(229) Nevertheless, it appears that the main differences in quality are between the EEA and Asia (including the Middle East and the Far East), whilst customers regard the EEA and the United States as similar in terms of quality.[215] However, base oil customers point to differences in "*composition between the regions (different source of Crude oil)*".[216] A customer notes that "*the US does not appear to manufacture as an extensive range of viscosities and they are not always hydrotreated*".[217] Most customers do not seem to have knowledge of the quality of base and process oils outside the EEA.[218]

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209 Ernst&Young's "Sardinia Draft Financial DD Report 20011" of 29 April 2011 (document NYN_000002190, [ID 1091].

210 Nynas' response to Q5 of the Commission's request for information of 10 July 2013.

211 Replies to questionnaire to competitors Phase I - question 36.

212 Q8's reply to questionnaire to competitors Phase I - question 36 [ID 812].

213 Ergon's reply to questionnaire to competitors Phase I - question 36. [ID 1022].

214 Replies to questionnaire to base oil customers Phase I - question 37.

215 Replies to questionnaire to base oil customers Phase I - question 37. For instance, see [Customer's identity number]* reply: "*Qualität ist vergleichbar in USA und Europa*" [ID 533] and [Customer's identity number]* reply: "*Generally speaking the quality is consistent. However, a small number of Chinese-produced oils have unacceptable toxicologies for use in Europe*" [ID 864]. See also reply to questionnaires to base and process oils customers Phase II - questions 25.2.

216 [Customer's identity number]* reply to questionnaire to base oil customers Phase II - question 25 [ID 4114].

217 [Customer's identity number]* reply to questionnaire to base oil customers Phase II - question 25 [ID 4237].

218 All in all, the majority of respondents have indicated "other" as an answer.

(230) Whereas Ergon considers that quality is similar throughout the world,[219] Calumet indicates that it might differ between the EEA and, respectively, the Far East and the rest of the world, notably due to fewer product safety regulations.[220]

6.3.2.3. Conclusion

(231) The Commission considers that the geographic scope of the relevant market for naphthenic base and process oils for industrial applications is EEA-wide.

6.3.3. Transformer oils (TFO)

(232) The Commission has previously found in case COMP/M.1597 – Castrol/Carless/JV that "*there might be a UK market for the supply of electrical oil*"[221]. However, in its Exxon/Mobil Decision,[222] the Commission has found that the relevant geographic market for Group I base oils used in lubricants was EEA-wide.

6.3.3.1. The view of Nynas

(233) According to the Parties, TFO and base and process oils are produced globally in accordance with international classification standards and quality requirements and demand for them is worldwide. Furthermore, Nynas notes that base and process oils and TFO are traded globally to customers who are typically large, global companies that have similar performance and quality standards and must comply with harmonized environmental regulations, irrespective of the location of their production facilities or the final destination of their products.[223]

(234) Nynas considers that the Castrol/Carless/JV Decision is not relevant for the definition of the geographic market in this case due to the following changes: (i) national standards applied for TFO before 2004 have been replaced by the CENELEC European standards, now IEC international standards, in the EEA; (ii) the supply of TFO across the EEA does not require the operation of national logistics systems as such as transportation and storage services are readily available in the market; (iii) all TFO suppliers in the EEA, namely Ergon, Repsol, Apar, Rosneft and Savita, are international players who compete with Nynas across the EEA; (iv) small local refineries that produced TFO in the United Kingdom (for example Buchannan, Carless and Castrol) have ceased production, and (v) there are no national demand specificities, the same TFO is sold across the EEA and globally.[224]

(235) Nynas considers that the market for TFO is global in scope for the following reasons: (i) the existence of a global trade structure; (ii) global prices; (iii) consumption profiles and quality requirements are more and more globalised with global customers requiring the same quality and regulatory standards and specifications for all their supplies, and customers themselves driving the implementation of the standards; (iv) harmonization of global environmental standards has led to the streamlining of customers' requirements on a global basis.

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219 Ergon's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 41 [ID 4908].

220 Calumet's reply to questionnaire to naphthenic base and process oils competitors Phase II - question 41 [ID 5049].

221 Commission Decision of 14 October 1999 in Case COMP/M.1597 – Castrol/Carless/JV, (OJ C 16, 20.1.2000, p. 5), Recital 24

222 Commission Decision of 29 September 1999 in Case COMP/M.1383 – Exxon/Mobil, Recital 330.

223 Form CO, Paragraphs 411-412.

224 See Nynas' response to the Commission's request for information of 14 March 2013, [ID 1039].

(236) In its response to the Article 6(1)(c) Decision Nynas emphasizes the fact that more than one-third of the TFO sold in the EEA is actually shipped from outside the EEA. According to Nynas, the Commission's finding of a relevant geographic scope no wider than the EEA appears to be contradicted by the fact that in case of a 5-10% price increase, a third of the customers would start purchases from suppliers outside the EEA. If a 5% to 10% price increase leads to volumes falling by a third, then such a price increase would only be profitable if TFO margins were less than [Details of Nynas' pricing policy]*. If margins are higher than [Details of Nynas' pricing policy]*, then the profits foregone as a result of the volume reduction outweighs the benefits from the higher unit margins. In the case of Nynas, average annual gross margins for TFO sold in the EEA for 2010, 2011 and 2012 were [Details of Nynas' pricing policy]*, [Details of Nynas' pricing policy]* and [Details of Nynas' pricing policy]* respectively. A 5% to 10% price increase would thus be rendered unprofitable by customers' reactions. This means that the responses to the Commission's market investigation suggest that the relevant geographic market for TFO is wider than the EEA.

(237) In its Response to the SO, the Parties have raised several further arguments regarding the scope of the geographic market without distinguishing between naphthenic base and process oils on one hand and TFO on the other.

6.3.3.2. The Commission's assessment

(238) The Commission considers that the geographic scope of the market for TFO and its submarkets of inhibited and uninhibited TFO[225] is EEA-wide. The Commission's analysis of the Parties' arguments in section 6.3.2.2. also applies to TFO.

(239) First, a large part of the customers sources all or almost all TFO, that is to say, all categories of TFO in the EEA.[226]

(240) Several customers choose their suppliers on the basis of their location[227]. In this regard, one customer notes: "*we expect a regional presence of the suppliers. For deliveries to our factories, it is important that the suppliers maintain oil depots within the same geography – otherwise, the required delivery lead times (ca. 1 week) could not be fulfilled*".[228]

(241) Second, prices and competitive conditions differ between the EEA and North America (including the United States and Canada) as well as between the EEA and the rest of the world.

(242) Most TFO customers consider that prices in the EEA differ from those in the rest of the world.[229] According to a customer, "*TFO total cost is composed of Raw Material + Transformation and Logistics cost, therefor* [sic] *cost may differ depending of our location needs but also from supplier transformation localization*".[230] With regard to

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225 In the assessment of the relevant market, submarkets of inhibited and uninhibited TFO are only mentioned if the assessment is different from the overall market for TFO.

226 Replies to questionnaire to TFO customers Phase II - question 43.

227 Repies* to questionnaire to TFO customers Phase I - question 10.

228 [Customer's identity number]* reply to questionnaire to TFO customers Phase II - question 45 [ID 4210**]**.

229 Replies to questionnaire to TFO customers Phase I – question 11 and reply to questionnaire to TFO customers Phase II - question 46.

230 [Customer's identity number]* reply to questionnaire to TFO customers Phase I - question 11 [ID 834].

* Should read "Replies".

price differences, "*only players with a logistical presence in a certain geography are eligible*".[231]

(243) TFO competitors also largely confirm this price difference.[232]

(244) Specifically, as far as blended TFO is concerned, Ergon notes that differences in prices exist within the EEA, as well as between the EEA and the rest of the world. In comparison with North America, EEA prices are indicated by Ergon as higher "*due to the limited number of suppliers*".[233]

(245) Competitors further point to price differences between the EEA and North America for naphthenic TFO, inhibited TFO and uninhibited TFO.[234]

(246) In case of a 5-10% price increase in all types of TFO, it is noteworthy that Ergon would switch only a portion of its sales to the EEA, but it "*must overcome import duties and transportation costs in order to market naphthenic oils in the EEA*"[235] and this would require the same investment and time as for naphthenic base and process oils.

(247) Generally, most customers indicate that market conditions (such as demand growth, customer requirements, prices, types of base oils,) in the EEA and North America are different,[236] while many customers were not able to compare the EEA market conditions with those in Asia, South America or other regions.[237]

(248) The main competitors confirm that the conditions of competition that they face differ depending on the various geographic areas of activity.[238]

(249) In case of a SSNIP, only a third of the customers would start sourcing TFO from a supplier outside the EEA.[239]

(250) During the market investigation, one third of the customers have indicated that in case of a SSNIP they would start sourcing TFO from a supplier based outside the EEA. However, it cannot be assumed, on that basis, that a 5% or 10% price increase will lead to volumes falling by a third, as the Notifying Party claims. The customers' replies do not indicate what proportion of their needs they would start sourcing from outside the EEA following a SSNIP. Furthermore, given the important barriers to imports mentioned in this section, as well as the lead time and the necessity of just-in-time deliveries,[240] switching cannot be considered an option that is easy to implement for customers.

(251) Third, transport costs constitute a barrier to imports in the EEA.

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231 [Customer's identity number]* reply to questionnaire to TFO Customers Phase II - question 11 [ID 4210].

232 Replies to questionnaire to TFO competitors Phase I – question 41.

233 Ergon's reply to questionnaire to TFO competitors Phase II - question 54 [ID 4766].

234 Replies to questionnaire to TFO competitors Phase II - question 54.

235 Ergon's reply to questionnaire to TFO competitors Phase II - question 51 [ID 4766].

236 Replies to questionnaire to TFO customers Phase II – question 48.

237 Replies to questionnaire to TFO customers Phase II – question 49.

238 Replies to questionnaire to TFO competitors Phase II - question 63.

239 Replies to questionnaire to TFO customers Phase I - question 15.

240 Reply to questionnaire to TFO customers Phase I - questions 8, 10, 15; reply to questionnaire to TFO customers Phase II - question 45. For example, [Customer's identity number]* reply to questionnaire for TFO customers Phase II - question 45.1.5 [ID 4210].

(252) Most customers claim that transport costs limit their ability to source TFO from certain geographic areas :[241] "*Dès que l'on va depasser* (sic) *une certaine distance, l'impact du cout* (sic) *du transport va impacter fortement le prix de l'huile rendue sur le site. Donc pas d'interêt financier*".[242]

(253) Transport costs in particular constitute an obstacle to importing TFO from outside the EEA into the EEA for most customers.[243] According to customers, transport costs from North America to the EEA can form up to 20% of the final price of TFO[244]. Customers also indicate that the costs for transportation from Asia or South America to the EEA are similar.[245]

(254) Competitors consider that transport costs represent a barrier to importing TFO into the EEA from United States-based production facilities. In this regard, Calumet notes the following:

"Transport costs include getting the oil to the port, loading the oil onto a vessel and testing it, shipping the oil, receiving the oil (including testing), and distributing the oil to its destination. Larger volumes cost would include the need for special storage in strategic locations around EEA in order to provide competitive service to the customer (...)".[246]

(255) Third, access to storage, reliability of supply, difference in standard requirements or reputation constitute other barriers to imports of TFO into the EEA.

(256) Customers indicate that access to distribution and storage is considered a further obstacle to importing TFO into the EEA. It appears essential to customers that the "*supplier must have EEA storage tanks*",[247] as they "*expect a regional presence of the suppliers*"[248]. Indeed, "*Local storage is quite vital to have lesser inventory and quick to respond to customer requirement*".[249]

(257) Competitors view access to storage as a barrier to their imports. For Ergon, "*because the inventory requirement to establish a secure supply network is capital intensive, this could be a barrier to importing into the EEA*".[250] The existence of this barrier is also confirmed by Calumet, according to whom "*TFO requires specialized transport and storage vessel*".[251]

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241 Replies to questionnaire to TFO customers Phase I - question 13.

242 [Customer's identity number]* reply to questionnaire to TFO customers Phase I - question 13 [ID 675]. Courtesy translation: "*Above a certain distance, the impact of transport costs strongly impacts (sic) the price of oil delivered on site. Therefore, no financial interest*".

243 Replies to questionnaire to TFO customers Phase II - question 45. As this is the case for naphthenic base and process oils, customers rarely bear the costs of transportation under the applicable INCOTERMS - see replies to questionnaire to TFO customers Phase II - question 61.

244 Replies to questionnaire to TFO customers Phase II - question 44.

245 Replies to questionnaire to TFO customers Phase II - question 44.

246 Calumet's reply to questionnaire to TFO Competitors Phase II - question 50 [ID 5050].

247 [Customer's identity number]* reply to questionnaire to TFO customers Phase II - question 45 [ID 4203].

248 [Customer's identity number]* reply to questionnaire to TFO customers Phase II - question 45 [ID 4210].

249 [Customer's identity number]* reply to questionnaire to TFO customers Phase II - question 45 [ID 4173].

250 Ergon's reply to questionnaire to TFO competitors Phase II - question 50 [ID 4766].

251 Calumet's reply to questionnaire to TFO competitors Phase II - question 50 [ID 5050].

(258) For a vast majority of customers, reliability of supply is an additional barrier to imports[252]. Whereas Calumet does not consider this to be an issue,[253] other competitors also confirm the existence of this additional hurdle: "*this would be a barrier to entry for potential new market entrants*".[254]

(259) Ergon also notes that there is a difference in standard requirements for TFO:

"EEA requires IEC standards while the ASTM standard is preferred in North America. IEC and ASTM have different technical requirements for TFO and just because a TFO meets an ASTM requirement does not mean that it will meet the IEC requirement. This dynamic is an additional barrier to market entry".[255]

(260) Fourth, the quality of TFO is different in the EEA to that of the rest of the world.

(261) Some customers consider that the quality of TFO in the EEA is different to that in the rest of the world. Compared to North America (including The United States of America and Canada), for example, many customers consider the quality of EEA TFO different[256].

(262) That difference in quality has been largely confirmed by competitors,[257] who explained that the difference in price and quality between the EEA and other parts of the world is linked to technical specifications.

(263) Ergon confirms that differences exist, mainly linked to different international standards, between EEA paraffinic TFO and oil in North America, Asia and South America.[258] With regard to blended TFO, Ergon also pointed to differences between EEA paraffinic TFO and oil in North America, Asia and South America.[259]

(264) Ergon also pointed to differences between the quality of naphthenic as well as inhibited and uninhibited TFO in the EEA on one hand and in North America, Asia and South America on the other.[260]

6.3.3.3. Conclusion

(265) The Commission considers that the geographic scope of the relevant market for TFO is EEA-wide.

7. COMPETITIVE ASSESSMENT

7.1. Competitive structure – naphthenic base and process oils

7.1.1. The main players

(266) The market for the supply of naphthenic base and process oils for industrial applications in the EEA is characterised by the presence of major international petrochemical companies such as Nynas, Shell, Ergon, PetroChina and Calumet.

252 Reply to questionnaire to TFO customers Phase II - question 45.
253 Calumet's reply to questionnaire to TFO competitors Phase II - question 50 [ID 5050].
254 Ergon's reply to questionnaire to TFO competitors Phase II - question 50[ID 4766].
255 Ergon's reply to questionnaire to TFO competitors Phase II - question 50 [ID 4766].
256 Replies to questionnaire to TFO customers Phase II – question 47.
257 Replies to questionnaire to competitors Phase I - question 47.
258 Ergon's reply to questionnaire to competitors Phase II - question 58 [ID 4766].
259 Ergon's reply to questionnaire to competitors Phase II - question 59 [ID 4766].
260 Ergon's reply to questionnaire to TFO competitors Phase II - questions 60, 61 and 62 [ID 4766].

7.1.1.1. Nynas

(267) Nynas is currently the largest producer and supplier of naphthenic base and process oils in the EEA with a market share of [60-70]*%.[261]

(268) Nynas currently sells more than double the volume of naphthenic base and process oils in the EEA ([Nynas' sales (volume)]* in 2012) than the second biggest player that would remain on the market, Ergon ([Nynas' sales (volume)]* in 2012), sells.[262]

(269) According to the data provided by the Parties, Nynas is also the largest naphthenic base and process oil producer in terms of capacity in the EEA, operating with a total production capacity of [300-500]* ktpa. In addition, Nynas is a major player even at worldwide level, with overall sales amounting to almost [600-800]* kt in 2012.[263] In the EEA, Nynas operates naphthenic refineries in Nynäshamn and Gothenburg in Sweden as well as a refinery in Dundee, United Kingdom. It further holds a 50% stake in Eastham Refining Ltd, in Eastham, United Kingdom. Base and process oils are only produced in the refinery in Nynäshamn. The other refineries produce bitumen. In the Americas, Nynas has naphthenic base and process oil supply agreements with [Details of Nynas' supply agreements]*.

(270) Nynas produces base and process oils exclusively from naphthenic crude oil at its only base and process oil production site in Nynäshamn. By focusing on naphthenic base and process oil production, Nynas can compete with the large refiners in niche applications without being required to have a fuel refinery. By selecting naphthenic crude oils, all of the crude can be turned into bitumen and naphthenic base and process oils, avoiding refined fuel production altogether. Base and process oils and TFO are specialty products. They account for less than 1% of the global refining, and are usually regarded by big manufacturers as by-products of the refining process.

7.1.1.2. Shell

(271) Shell is the second largest EEA producer of naphthenic base and process oils, with a sales market share of [10-20]*%[264] in 2012 in terms of value and a production capacity of approximately [100-200]* ktpa.[265] The only refinery still owned by Shell in the EEA is the Harburg refinery, which is active in both the production of fuels and of base and process oils.

(272) According to Shell, the lease of the Harburg refinery assets would not trigger Shell's exit from the EEA market for base and process oils, as existing customers would progressively shift to GtL solutions, supplied from Shell's Pearl refinery located in Qatar.

7.1.1.3. Ergon

(273) Ergon, a United States based competitor, is the global leader in naphthenic base and process oil production with a production capacity of 608 ktpa[266] and is the largest importer to the EEA. Ergon does not have production facilities in the EEA. From 2008, Ergon has established a presence in the EEA market by investing in storage

261 Nynas' response to RFI of 26 April 2013 [ID 4742].
262 Nynas' response to RFI of 26 April 2013 [ID 4742].
263 Nynas' response to RFI of 8 May 2013 [ID 4801].
264 Nynas' response to RFI of 26 April 2013 [ID 4742].
265 Form CO, Table 127.
266 Form CO, Table 11.

and distribution facilities, having gained a market share of [20-30]*%[267] in terms of value, in the market for naphthenic base and process oils, based on Nynas' estimates[268]. Ergon supplies the EEA mainly through its larger terminal located in Antwerp, Belgium, but has also smaller terminals in Ellesmere Port, United Kingdom, in Varna, Bulgaria and in Izmit, Turkey. All of Ergon's naphthenic base and process oil output comes from its production plant in Vicksburg, Mississippi, United States, which has a production capacity of 1,132 ktpa.[269]

7.1.2. Evolution of demand

(274) The Notifying Party wishes to acquire the Harburg refinery assets in order to expand its base and process oil production capacity to meet increasing global demand as well as to improve the security and reliability of its industrial base oil supply.[270]

(275) Nynas claims that, while demand for naphthenic base and process oils will be relatively stable in the EEA and North America for the next 10 years, it will increase greatly in Asia, Latin America and other emerging markets. Demand for base and process oils from the chemical and lubricant industries is expected to grow in the coming years, as millions of people in developing economies increasingly gain access to vehicles and other industrial goods. Currently, the main importing region in the world is Asia, notably China and India, due to rapid economic growth in these countries. The combined volume that is imported to China and India accounts for almost 15% of global combined base and process oil and TFO production.

(276) During the Phase II investigation the Commission investigated whether Nynas' claims were correct.

(277) Ergon expects a loss of demand of 4% in the EEA over the next 5 years. On the other hand, the United States market is expected to grow, although at a slower pace than the Far East.[271] In turn, Calumet expects the EEA demand to grow over the next five years, but only a *"small percentage*", while demand in the Far East region is expected to rapidly grow.[272]

(278) Customers believe that the market for naphthenic base and process oils in the EEA will not grow. 12 out of 18 customers[273] expect the EEA market to either decrease or to remain stable over the next five years, as opposed to the Asian market which is expected to significantly grow.[274]

(279) In addition, all paraffinic producers consider that the EEA demand will also remain stable or decrease over the next five years, while they believe the demand will increase in the rest of the world.[275]

(280) Based on these statements, the Commission considers that while demand in Asia is growing, demand in the EEA is likely to remain stable in the next five years.

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267 Nynas' response to RFI of 26 April 2013 [ID 4742].

268 Ergon's sales data indicates that its market share is lower.

269 Form CO, Table 11.

270 Form CO, Paragraph 43.

271 Minutes of the meeting between the Commission and Ergon on 30th April 2013 [ID 4945].

272 Calumet's reply to questionnaire to naphthenic competitors Phase II - questions 62 and 64 [ID 5049].

273 Note that customers not active or not having information about the market have not been included.

274 Replies to questionnaire to base oil customers and process oil customers Phase II - question 28.

275 Note that producers not active or not having information about the market have not been included.

7.1.3. Evolution of supply

(281) Nynas claims to have had a shortfall in naphthenic base and process oil products over the last few years and may be forced to use unsecured supply sources. Nynas currently produces around [300-500]* ktpa of naphthenic base and process oils and TFO at its own production site in Nynäshamn. An additional [Nynas' production capacity]* ktpa of base and process oils, both naphthenic and, to a minor extent, paraffinic is purchased […]*.

(282) The agreement with [Details of Nynas' supply agreements]* provides Nynas with [Details of Nynas' supply agreements]* ktpa of naphthenic base and process oil supplies from the [Details of Nynas' supply agreements]*, which [Details of Nynas' supply agreements]*. However, Nynas claims that supply from the [Details of Nynas' supply agreements]* has proven unreliable due to production problems in an outsourced plant that produces steam and electricity for the refinery […]*. Over the last [0-5]* years, naphthenic base and process oil production has on average been around [70-80]* % of normal production, and very irregular. […]*.

(283) The supply agreement with [Details of Nynas' supply agreements]* concerns the entire naphthenic base and process oil production from the latter's [Details of Nynas' supply agreements]*, amounting to approximately [Details of Nynas' supply agreements]* ktpa. Nynas is concerned about the long-term survival of […]*'s naphthenic base and process oil unit, which is considered [Details of Nynas' supply agreements]* uncertain. The current long term agreement with [Details of Nynas' supply agreements]* comes to an end in [Details of Nynas' supply agreements]*.[276] Nynas has been in discussions with […]* since September 2012 but is yet to reach an agreement on whether the contract will be extended and, if so, on what terms. [Details of Nynas' supply agreements]*.

(284) Nynas internal documents confirm its intention to acquire a second production facility to secure its supplies to end customers.[277]

7.2. Competitive structure TFO

7.2.1. The main players

(285) The EEA market for the supply of TFO is characterised by the presence of major international petrochemical companies including both naphthenic producers such as Nynas, Shell, Ergon, PetroChina, Calumet and paraffinic producers such as Apar, Repsol, Savita and Rosneft (Angarsk).

7.2.1.1. Nynas

(286) Nynas is currently the largest producer and supplier of TFO in the EEA with a sales market share of [40-50]*% in terms of value in 2012.[278]

(287) Nynas produces TFO made from [Nynas' TFO production]*.

(288) Nynas has sold [Nynas' TFO sales (volume)]* kt of TFO, both inhibited and uninhibited, in 2012,[279] which corresponds to [Nynas' TFO sales (volume)]* as much as the second biggest player in the market, Ergon, which has sold [Nynas' estimate

276 Nynas' response to Q1 of the Commission's RFI of 10 July 2013.
277 Annex 6, Form CO.
278 Nynas' response to RFI of 26 April 2013 [ID 4742].
279 Nynas' response to RFI of 26 April 2013 [ID 4742].

of Ergon's sales volume]* kt of TFO in 2012.[280] In addition, with global sales amounting to [Nynas' TFO sales (volume)]* kt in 2011 and [Nynas' TFO sales (volume)]* kt in 2012,[281] Nynas is also the second largest supplier of TFO at worldwide level.[282]

(289) In the EEA, Nynas' production of TFO is based in the Nynäshamn refinery in Sweden. In the Americas, Nynas has supply agreements with the [Nynas' suppliers]*, and the [Nynas' suppliers]*.

7.2.1.2. Shell

(290) Shell is the second largest EEA producer of TFO, with a sales market share of [10-20]*% in terms of value in 2012 and sales reaching [Shell's 2012 sales]* kt in 2012.[283] The only refinery still owned by Shell in the EEA is the Harburg refinery, which is active in both the production of fuels and of base and process oils and TFO.

(291) According to Shell, the sale of the Harburg refinery assets would not trigger Shell's exit from the EEA TFO market, as existing customers would progressively shift to TFO produced with GtL technology, supplied from Shell's Pearl refinery located in Qatar.

7.2.1.3 Ergon

(292) Ergon, a United States based competitor, is the global leader in TFO production, having produced [Nynas' estimate of Ergon's sales volume]* of TFO in 2011[284] and is the largest importer to the EEA. Ergon does not have production facilities in the EEA. From 2008, Ergon has established a presence in the EEA market by investing in storage and distribution facilities. Nynas estimated that Ergon has gained a market share of [20-30]*%[285] in terms of value but based on actual sales data Ergon's market share is significantly lower.[286] Ergon supplies the European market mainly through its larger terminal located in Antwerp, Belgium, but also has smaller terminals in Ellesmere Port, United Kingdom, in Varna, Bulgaria and in Izmit, Turkey. All of Ergon's TFO output comes from its production plant in Vicksburg, Mississippi, United States of America.

7.2.1.4. Others

(293) Repsol is the third largest producer of TFO in the EEA. Nynas estimated that Repsol has a market share of [5-10]*% with sales reaching [Nynas' estimate of Repsol's sales volume]* in 2012.[287] Repsol produces TFO in Puertollano, Spain.[288]

7.2.2. Evolution of demand

(294) The Notifying Party wishes to acquire the Harburg refinery assets in order to expand its TFO production capacity to meet increasing EEA and global demand as well as to

280 Nynas' response to RFI of 26 April 2013 [ID 4742].
281 Nynas' response to RFI of 8 May 2013 [ID 4801].
282 Form CO, Table 32.
283 Nynas' response to RFI of 26 April 2013 [ID 4742].
284 Table 32, Form CO.
285 Nynas' response to RFI of 26 April 2013 [ID 4742].
286 Accessible on EC premises [ID 4765].
287 Nynas' response to RFI of 26 April 2013 [ID 4742].
288 Repsol confirmed that its actual production is below Nynas' estimate, therefore its market share is significantly lower. See minutes of the conference call between Repsol and the case team on 06.06.2013 [ID 5015].

improve the security and reliability of its industrial base oil supply, used for the production of TFO.

(295) On the demand side, the largest players are a number of major power transformer producers most of which are part of large industrial consortia. Another group of customers are the utilities themselves that purchase their TFO requirements from their transformer supplier or directly from a TFO producer.

(296) According to Nynas, TFO demand is growing globally. In emerging economies, this is explained by the expansion of electrification, while in more developed markets, such as the EEA and North America, the modernization and upgrading of electricity systems is the main reason for the increase in demand.

(297) Currently, the main importing region in the world is Asia, notably China and India due to rapid economic growth in these countries. The combined volume that is imported to China and India accounts for nearly 15% of global combined base and process oils and TFO production.

(298) The answers to the market investigation received from TFO customers show that customers are not in agreement regarding the future trend of demand in the EEA.

(299) Five out of ten TFO customers anticipate that demand in the EEA will increase in the next 5 years.[289] Expectations concerning North America (including the United States of America and Canada) are similar, with five out of ten customers anticipating an increase in demand[290]. On the other hand, nine out of ten respondents expect an increase in demand in the Asian market in the next five years,[291] mainly driven by the general economic growth that region is experiencing.

(300) No TFO competitor consulted by the Commission shares Nynas' view regarding a growing demand in the EEA market for TFO.

(301) Indeed, Ergon expects demand for TFO in the EEA to remain flat over the next five years and also expects that the preferred grade of TFO will continue to be uninhibited naphthenic TFO[292]. Repsol believes that TFO demand "*from EEA* (sic) *will be reduced due to by* (sic) *the low growing ratios of economy*".[293]

(302) On the other hand, both players expect an increase in TFO demand in the Asian market in the next five years, quantified by Ergon as ranging between 2% and 8%[294].

(303) Therefore, even if global demand for TFO increases, the Commission considers that the TFO demand in the EEA will remain stable in the next five years.

7.2.3. Evolution of supply

(304) Whilst demand is growing, Nynas has not had sufficient naphthenic base oil supplies over the last few years and may be forced to use unsecured supply sources. Nynas currently produces around [Details of Nynas' supply agreements]* ktpa of naphthenic base and process oils and TFO via its own production site in Nynäshamn. An additional [Details of Nynas' supply agreements]* ktpa of base and process oils,

289 Replies to questionnaire to TFO customers Phase II – Question 73.

290 Replies to questionnaire to TFO customers Phase II – Question 74.

291 Replies to questionnaire to TFO customers Phase II – Question 75.

292 Ergon's reply to questionnaire to TFO competitors Phase II – Question 84 [ID 4766].

293 Repsol's reply to questionnaire to TFO competitors Phase II – Question 84 [ID 4292].

294 Repsol's [ID 4766] and Ergon's [ID 4766] replies to questionnaire to TFO competitors Phase II – Question 86.

both naphthenic and, to a minor extent, paraffinic, is purchased [Details of Nynas' supply agreements]*.

(305) As indicated in section 7.1.3. the agreement with [Details of Nynas' supply agreements]* provides Nynas with [Details of Nynas' supply agreements]* ktpa of naphthenic base and process oils supplies from the [Details of Nynas' supply agreements]*, which [Details of Nynas' supply agreements]*. However, Nynas claims [Details of Nynas' supply agreements]*. Over the last [0-5]* years, naphthenic base and process oil production has on average been around [70-80]* % of normal production, and very irregular. [Details of Nynas' supply agreements]*.

(306) Finally, the supply agreement with [Details of Nynas' supply agreements] concerns the entire naphthenic base and process oil production from the latter's [Details of Nynas' supply agreements]* amounting to approximately [Details of Nynas' supply agreements]* ktpa. [Details of Nynas' supply agreements]* as explained in Recital (283).

7.3. Framework for assessing the notified transaction

7.3.1. Principles

(307) A concentration that significantly impedes effective competition in the internal market or a substantial part of it shall be declared incompatible with the internal market; its implementation shall be prohibited.[295] There is no basis for a prohibition, however, if the competitive structure of the market would deteriorate to the same or a greater extent without the concentration.[296]

(308) Thus, to assess whether a concentration significantly impedes effective competition, the Commission must compare the competitive conditions that prevail without the concentration with the conditions that would result from the concentration.[297]

(309) To determine the conditions that would prevail without the concentration, the Commission may take into account future changes to the market that can reasonably be predicted.[298]

(310) Of particular relevance may be whether, without the concentration, the relevant assets would exit the market. Where the assets would in the near future be forced out of the market if not taken over by another undertaking and where there is no prospect of a less anti-competitive alternative purchase than the notified concentration, the Commission may conclude that a deterioration of the competitive structure that follows the concentration is not caused by the concentration, since the competitive structure of the market would in any event deteriorate to at least the same extent without the concentration.[299]

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295 Articles 2(3), 8(3) and 14(2)(c) of Regulation (EC) No 139/2004.

296 See, to that effect, Joined cases C-68/94 and C-30/95, *France and Société commerciale des potasses et de l'azote et Entreprise minière et chimique / Commission* [1998] ECR I-1375, "*Kali & Salz*", Paragraphs 109 to 124. See also Paragraph 89 of the Commission's Guidelines on the assessment of horizontal merger under the Council Regulation on the control of concentrations between undertakings ("Horizontal Merger Guidelines"), (OJ C 31, 5.2.2004, p 5).

297 Horizontal Merger Guidelines Paragraph 9.

298 Horizontal Merger Guidelines Paragraph 9.

299 See, to that effect, Paragraphs 89 and 90 of the Horizontal Merger Guidelines. See also Commission Decision of 21 July 1994 in Case No IV/M.308 – Kali+Salz/MdK/Treuhand (OJ L 186, 21.07.1994), Recital 71; Commission Decision of 11 July 2001 in Case COMP M. 2314 - BASF/Eurodiol/Pantochim (OJ C102 of 31.03.2001), Recitals 136-143; Commission Decision of 10 May 2007 in Case COMP/M.

(311) It is for the notifying parties to provide in due time all the relevant information necessary to demonstrate that a deterioration of the competitive structure that follows the concentration is not caused by the concentration.[300]

7.3.2. What would happen in the absence of the notified transaction?

7.3.2.1. Shell will close the refinery if no other undertaking is willing to take over the Harburg refinery assets

7.3.2.1.1. The view of the Parties

(312) Shell claims that its future business strategy is to leave the naphthenic industrial oil sector. Shell has publicly stated that, failing a divestiture, it will close the Harburg refinery assets. The Parties therefore argue that, in the absence of the notified transaction, Shell will not continue to operate the refinery.

(313) In the absence of the notified transaction, Shell had planned to continue production […]* at the Harburg BOMP until […]*, and then to close the Harburg BOMP. Consequently, in the medium term, Shell will not continue to maintain an active presence in industrial naphthenic base and process oil and TFO markets, and the Harburg refinery asset's production capacity will exit the market for naphthenic base and process oils as the base oil production assets would be dismantled by Shell.

7.3.2.1.2. The Commission's assessment

(314) Based on the available economic evidence submitted by Shell, it appears that the continued operation of the Harburg BOMP would be more costly for Shell than its closure.

(315) In particular, in its comments on the SO, Shell submitted its latest internal assessment showing that the net present value ("NPV") of closing the Harburg refinery assets, in the worst case scenario, is approximately USD [300-550]* million (see also Recital (379)), while the NPV of continuing to operate the assets would be approx. USD [800 - 1 billion]*. As continued operation would lead to double the losses, it is evident that closure of the site is significantly more attractive to Shell. [301]

(316) Shell further stated that according to its latest forecast continuing to operate the Harburg refinery assets would result in annual pre-tax losses of USD [50 - 150]* million from […]* onwards including GtL substitution, where applicable, and capital expenditure associated with scheduled statutory shutdowns, turnarounds and reconfiguration following decommissioning of the fuels refinery asset.[302] This is further confirmed by previous financial data. The Harburg refinery has been, on average, loss-making during the period from [past 5 to 10 years]*. [Details of loss making]*.

(317) It follows that it would be economically rational for Shell to close down the Harburg site. This would not be the case for Nynas. According to Nynas, acquiring the Harburg site is in line with its business strategy, which is focused on the production

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4381 - JCI / FIAMM, Recitals 689-690; Commission Decision of 26 January 2011 in Case COMP/5830 - Olympic/Aegean Airlines, Recital 1811; Commission Decision of 30 March 2012 in Case COMP/M. 6447 - IAG/BMI, Recitals 608-610.

300 Horizontal Merger Guidelines, Paragraph 91.

301 Economics - Harburg Deal Team - DRB 2013-07-09.xlsx [ID 5220].

302 Shell's reply to Commission RFI dated 17 April 2013; Shell response to the SO counterfactual analysis dated 20 June 2013 [ID5168].

of naphthenic base and process oils. At present Nynas is capacity constrained, thus the acquisition of Harburg would allow Nynas to expand its capacity and to improve the security and reliability of its industrial base oil supply. In addition, Nynas would be able to achieve production efficiencies [due to reorganization]*.

(318) Furthermore, Shell's decision to exit the market is in line with its current business strategy. Shell has established a global manufacturing and supply strategy to focus its refining portfolio on larger scale, complex and integrated facilities and, in general, on assets which are crucial for a particular supply chain. This strategy is in line with the fact that over the last two decades, most of the major oil producers have exited the naphthenic business, focusing more on exploration and production activities as well as commodity products such as fuels.

(319) Shell's internal communication plan dated January 2011,[303] following the press release regarding the sale of parts of the Harburg refinery,[304] further reinforces Shell's decision to exit this market. Its internal communication includes statements around the closure: "*the decision to sell, convert or close the refinery is based on the strategic focus of Shell on large integrated refinery sites*". Several articles in the press have relayed the message of closure in the absence of a divestiture.[305] Also, the Commission analysed internal documents submitted by Shell and did not find any indication that Shell had plans to operate the Harburg refinery assets long-term or to invest in the Harburg refinery assets.[306]

(320) This overall strategy for streamlining Shell's downstream business is also confirmed by Shell's annual report for 2011, according to which one aim is "*refocusing our refining portfolio on the most efficient facilities – those that best integrate with crude supplies, marketing outlets and local petrochemical plants"*.[307] Further, the annual report mentions that "*asset sales are a key element of* [Shell's] *strategy – improving (…) capital efficiency by focusing investment on the most attractive growth opportunities*". More specifically, the Annual report notes the following:

"We have initiatives underway that are expected to improve Shell's integrated Downstream business, focusing on the most profitable positions and growth potential. Shell announced exits from 800 thousand b/d of non-core refining capacity and from selected retail and other marketing positions in 2009-2011, and has taken steps to improve the quality of its Chemicals assets".[308]

(321) Shell's 2012 Annual Report confirms this strategy:

"We continuously seek to improve our operating performance, with an emphasis on health, safety and environment, asset performance and operating costs. Asset sales

303 "Sao Paulo Communication Plan" Version January 12, 2011 [ID 5318].

304 Shell press release dated 12 January 2013.

305 "*Paketverkauf der Shell-Raffinerien ist vom Tisch"*, Die Welt, 19 June 2010; "*Shell muss sich nach neuen Käufern für Raffinerien umsehen"*, 20 July 2010; "*Verkauf der Shell-Raffinerien vorerst geplatzt"*, NDR Online, 2 July 2010; "*Shell to shut Harburg Refinery*", Lube Report (Lubes-n-Greases), 19 January 2011; "*Shell Germany refinery to close units in March 2013*", Argus, 30 January 2013; "*Shell to close most Harburg refinery units in March*", Reuters, 31 January 2013; "*Verkauf der Harburger Shell-Raffinerie: Gelingt der Neuanfang?*", Harburger Anzeigen und Nachrichten, 17 June 2013.

306 Shell's internal documents submitted to the Commission in response to Commission RFI dated 27 March, 2013.

307 Royal Dutch Shell Plc. annual report and Form 20-F for the year ended December 31, 2011. [ID 368].

308 Royal Dutch Shell Plc. annual report and Form 20-F for the year ended December 31, 2011. [ID 368].

are a key element of our strategy – improving our capital efficiency by focusing our investment on the most attractive growth opportunities. Sale of non-core assets in 2010-2012 generated $21 billion in divestment proceeds. Exits from further positions in 2013 are expected to generate up to $3 billion in divestment proceeds. We have initiatives underway that are expected to improve Shell's integrated downstream business, focusing on the profitability of our portfolio and growth potential".[309]

(322) Shell has already commenced the conversion of parts of the refinery which are excluded from the notified Transaction, into a terminal. The latest presentations to Shell's management prepared in April and July 2013 refer to continued operations only until […]*.[310] At present, this conversion has reached a stage at which it can no longer be reversed. Therefore, the Harburg refinery can no longer be operated as a fuel refinery. Certain units of the Harburg refinery have already been shut down and cannot be restarted without entirely replacing them, which would require substantial investment. The concerned units are the crude distiller 2 ("CDU"), the fluid cat cracker unit ("FCCU") and the hydro desulphuration unit ("HDS2").[311]

(323) More precisely, [Details regarding Shell's conversion of parts of the refinery]*. Both the FCCU and CD2 units are in the process of being demolished.

(324) The conversion into a terminal also involves the construction of a large rail tank car unloading facility, which Shell has already undertaken at a cost of USD [Investments by Shell relating to the terminal conversion]*. The facility is in operation since the shutdown of the CD2 and FCCU units in April 2013. To properly operate the facility, Shell has started reorganising various pipes and connections on the Harburg refinery. These conversions have had a significant impact on fuels output of the Harburg refinery. The facility is used to supply Shell's retail and marketing divisions.

(325) Both CD2 and FCCU have passed the date for any statutory turnaround and Shell no longer holds the required permissions to run these two units. […]*.

(326) Shell's Board of Directors, however, has not yet taken a binding decision to close the Harburg refinery, as it does not intend to make a binding decision to close the Harburg refinery assets before the outcome of the Commission's investigation. Such a decision would make both Nynas and Ergon less interested in the acquisition. According to Shell, it must endeavour to have the notified transaction approved by the Commission, to protect its shareholder's interest. Moreover Shell has referred to its obligations towards the employees to ensure the continued operation of the site as, if the Harburg refinery assets are to be closed, only a small number of the 528 full time employees (in April […]*) on the site can be transferred to the part of the Harburg refinery which is to be converted into a terminal and to be operated by Shell, that is to say, the part excluded from the notified Transaction.

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309 Royal Dutch Shell Plc. annual report and Form 20-F for the year ended December 31, 2012. [http://reports.shell.com/annual-report/2012/servicepages/about_disclaimer.php].

310 "DRB_2013-04-19 V2.pptx" attached to the email from […]* dated 26 April 2013 [ID 4563]; internal Shell email (and attachments) containing the agenda for a Decision Review Board conference call, named "INF: Pre-Read for Sao Paolo Deal DRB (July, 5th 2013 - conference call) and dated 4 July 2013.

311 Shell's Additional response to the Statement of Objections – Counterfactual Analysis dated 10 July 2013 [ID 5194].

7.3.2.1.3. Conclusion

(327) The Commission therefore concludes that it is very likely that the Harburg refinery will be closed and that the assets will in the near future be forced out of the market if not taken over by another undertaking, because of their poor financial performance and because of Shell's strategic focus on other activities.

7.3.2.2. Nynas is the only undertaking that is seriously interested in taking over the Harburg refinery assets

7.3.2.2.1. The view of the Parties

(328) The Parties consider that the only possible alternative buyer to Nynas is Ergon, with whom Shell negotiated the possible sale of the Harburg refinery assets between June 2010 and June 2011. However, the Parties question Ergon's incentive to acquire the Harburg refinery assets, referring to Ergon's excess capacity and allegedly more favourable cost structure in the United States. Last, the Parties claim that, in the absence of the notified transaction, Ergon would potentially stand to benefit from higher base oil prices in the EEA.

7.3.2.2.2. The Commission's assessment

(329) The Commission considers that there is no less anti-competitive alternative purchase of the Harburg refinery assets than the notified transaction.

(330) Based on the evidence on the Commission's file, Ergon is the only credible alternative purchaser of the Harburg refinery assets that would need to be assessed. In 2011 Ergon started negotiations with Shell as a competing bidder to Nynas. In July 2013 Ergon claimed a possible interest in restarting negotiations with Shell if the notified transaction fails.

Attempts to divest the Harburg refinery before the exclusive negotiations with Nynas (2008-2010)

(331) Before engaging in negotiations with Nynas regarding the sale of the Harburg refinery assets, Shell had commenced internal planning efforts at the end of 2008 for the sale of the Harburg and Heide refineries and a number of parties expressed their initial interest:[…]*. Additionally, Shell had been approached by a number of intermediaries claiming to represent undisclosed interested clients. Those contacts did not lead to any further negotiation.

(332) Twelve companies[312] including Essar and Nynas received Information Memoranda outlining details of the Harburg and Heide refineries. […]*, […]* and Essar were the only companies to make bids in May 2009. The bid from Essar was by far the most attractive offer as not only it was the most competitive but it also included a bid for all three refineries, the Harburg, Heide and Stanlow refineries. Shell then entered into a second phase of more extensive due diligence and negotiations during the second half of 2009. On 16 October 2009, Shell signed an exclusivity agreement with Essar for the Harburg, Heide and Stanlow refineries. However, negotiations with Essar were delayed due to due to an initial public offering that the company was involved in regarding its energy company in April 2010. Essar subsequently withdrew its interest in the Harburg refinery as well as the Heide refinery in order to concentrate

[312] [Identity of other potential buyers]*, Nynas and [Identity of other potential buyers]*.

its efforts on securing the Stanlow refinery in the United Kingdom. It completed the purchase only of the Stanlow refinery on 31 July 2010.

(333) Since then, there has been no credible interest from buyers to purchase the whole of the Harburg refinery. Niche base oil players had expressed an interest in acquiring the Harburg BOMP alone, however this would have left Shell with a stranded fuels refinery asset.[313]

Negotiations with Ergon prior to granting exclusivity in negotiations to Nynas (2010-2011)

(334) After realising that it would not be able to sell the entire Harburg refinery (that is to say, the Harburg refinery including the Harburg BOMP), based on the interest expressed by niche players in acquiring the Harburg BOMP only, Shell developed a new divestment concept. Shell decided to retain part of the North site in order to convert it into a terminal and to try to sell the remaining part of the North site together with the Harburg BOMP to a potential niche base oil producer. This was announced on 12th January 2011. The terminal project is independent of the sale process and would have happened regardless of whether a sale or closure had taken place.[314]

(335) Nynas and Ergon were identified as the only potential buyers based on the new divestment concept. Between June 2010 and June 2011, Shell was in discussions with both Nynas and Ergon regarding the purchase of the Harburg BOMP and part of the North site which was necessary to run the Harburg BOMP, thereby maximising job retention.

(336) Ergon was primarily interested in the Harburg BOMP rather than the fuels refining assets on the North Site, but agreed to take those assets as part of the deal. On 20 April 2011, Shell sent out a process letter to both Nynas and Ergon[315] requesting final binding bids for the assets by 5 May 2011.

(337) By 26 April 2011, Shell, [Details of Shell's negotiations with Ergon]*[316], had not received any response or clarifying questions from Ergon. Shell subsequently offered further clarifications to Ergon if such were required.

(338) On 28 April 2011, Shell received an e-mail from Ergon explaining […]*, resulting in the decision not to make a final and firm offer for the Harburg refinery assets. [317] Ergon summarized its due diligence findings in a financial model in April 2011, which showed that estimated return was far below the "hurdle" rate that they would find acceptable for such investments. This was because operating costs and capital expenditure were significantly higher than Ergon's initial estimates. […]*

(339) Further contacts between Shell and Ergon took place regarding the assumptions to the Ergon model in order to ensure that Ergon had all of the information it required and understood that information. From Shell's point of view, these meetings were arranged in order to induce Ergon to submit a binding bid as demanded in Shell's

313 [Details of Shell's negotiations with niche players]*.

314 Form CO, Annex II.

315 [Details of Shell's negotiations with Ergon]* Annex E to the documentation submitted to the Commission during the meeting of 12 April 2013 between Shell and the case team. [ID 5054]

316 Shell's response to the Commission SO dated 8 July 2013 [ID5168].

317 [Details of Shell's negotiations with Ergon]* Annex F to the documentation submitted to the Commission during the meeting of 12 April 2013 between Shell and the case team. [ID 5055].

process letter of 20 April 2011. On 15 June 2011 Ergon discussed with Shell revised terms under which Ergon would consider to acquire the Harburg refinery assets. Shell compared Ergon's proposed terms to Nynas' offer and to the cost of closure, referred to as "Limax". Shell's calculations on Ergon's requests were summarised in the excel file "Brown valuation final.xlsx" where it is shown that the revised terms from Ergon implied a NPV [40-60]* million USD higher than Limax]*.[318] Shell claimed during the meeting with the Commission on 12 April 2013 and in subsequent submissions that the [Details of Shell's negotiations with Ergon]*. Shell has provided a calculation prepared for the purpose of the Commission's investigation which shows that the NPV of the transaction based on Ergon's revised terms was [negative]*".[319]

(340) Shell explained that Ergon's requests included Shell's list of naphthenic base and process oil customers that Shell was not and is still not willing to give up, as that would undermine its GtL strategy, outlined in section 6.2.2.3.2. It was the high value of the customer list that pushed the value of Ergon's deal terms below Limax. As elaborated in Recitals (353) to (360). the Commission has evaluated the likelihood of a deal in 2011 taking into consideration the different values that Ergon and Shell attributed to the customer list. The Commission also explains in Recitals (353) to (360) how it has adjusted the quantitative evaluation to reflect the likelihood of a Shell-Ergon deal in 2013 in the case of failure of the notified transaction.

(341) Based on the failure to conclude an agreement with Ergon, Shell concluded in 2011, that Ergon had no intention to make a credible binding offer. Indeed, Ergon has never made such an offer. When Shell communicated to Ergon that it chose not to proceed under the terms requested by Ergon, Ergon indicated that "*sometimes, despite all the efforts by both sides, common ground cannot be found to make a deal"*.[320] Shell interpreted this answer as a confirmation of its assessment that Ergon was not interested in acquiring the Harburg refinery assets. Shell pointed out in its response to the SO that it has not received any subsequent communication from Ergon indicating any interest in the Harburg refinery assets after 2011.[321]

Renewed attempt to negotiate with Ergon in July 2013

(342) Following the adoption of the SO in this case, Shell addressed a process letter to Ergon on 10 July 2013.[322] In this letter Shell invited Ergon to confirm its formal interest in acquiring the Harburg refinery assets based on the scope of the proposal discussed in 2011. Shell requested Ergon to confirm its interest no later than 12 July 2013. [Details of Shells's negotiation with Ergon]* Following this round of negotiations, Ergon was to submit an unconditional notarized final offer no later than […]*.

(343) On 12 July 2013 Ergon responded to Shell's process letter. In its letter, Ergon claims that "*if Shell's agreement with Nynas were terminated, Ergon would be interested in re-engaging with Shell regarding a possible agreement"*. However, Ergon argued, amongst other things, that changes had occurred in the marketplace since the 2011

318 Internal Shell email on 21.06.2011 – Shell Annex A to Shell reply to RFI of 30 May 2013 [ID 4899].

319 Shell's response to RFI of 17 April 2013 [ID 4370].

320 [Details of Shell's negotiations with Ergon]*. Annex T [ID 5065].

321 Shell's response to the Statement of Objections.

322 Letter from Shell sent to Ergon dated 10 July 2013, attached to an email from Shell's counsel to the Commission dated 11 July 2013. [ID 5222].

negotiations and pointed out that *"it would be impossible to consummate such a complicated transaction and negotiation in the unrealistic timeframe set forth in the process letter".*[323]

(344) Ergon thus decided not to renegotiate the acquisition of the Harburg refinery assets with Shell under the conditions set out by Shell's process letter of 10 July 2013. In response to this, Shell addressed a further email to Ergon pointing out that it was still open to discussion, without altering the timetable set in the process letter of 10 July 2013.[324]

Reduced strategic incentives of Ergon to acquire the Harburg refinery assets in the absence of the notified Transaction

(345) The changes in circumstances between 2011 and the present date, including the possible outcomes of the Commission's investigation of the notified transaction, have probably had a material impact on Ergon's incentives to purchase the Harburg refinery assets.

(346) In particular, due to the fact that in 2011 Ergon was competing as a bidder against Nynas, it may have had an additional incentive in acquiring the Harburg refinery assets, as this would have reduced the capacity available to its main competitor in the EEA market. This incentive would disappear if Nynas were to be prevented from acquiring the Harburg refinery assets by the Commission. In that case, even if Ergon were not to acquire those assets, the capacity controlled by Ergon's competitors on the relevant markets would be reduced, as the assets would most likely be shut down.

(347) Instead of acquiring the Harburg refinery assets, Ergon could therefore use its idle capacity in Vicksburg, United States to serve the EEA market without having to make new investments. In this context, based on Nynas' estimates,[325] Ergon's capacity utilisation level was around [60-70]* % in 2012. Ergon itself acknowledged that currently it has unused production capacity at Vicksburg, United States.[326] Even if Nynas' estimate were not entirely accurate, the unused capacity at Vicksburg would technically give Ergon the ability to supply most of the EEA market.

(348) Therefore, if Nynas were to be prevented from acquiring the Harburg refinery assets by the Commission, acquiring those assets would be associated with an opportunity cost for Ergon, in the form of reduced production and profits in Vicksburg. This opportunity cost would have been significantly lower in 2011, when Ergon was competing with Nynas for the acquisition of the Harburg refinery assets.

(349) In addition, it is unusual for a producer with overcapacity to invest in acquiring additional capacity.

(350) Therefore, the Commission considers that Ergon's strategic interest and incentives in acquiring the Harburg refinery assets would most likely diminish in the event of a prohibition Decision.

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323 As Shell pointed out: "*it would be perfectly feasible to negotiate a sale to Ergon in a very short timeframe. Ergon has already conducted very extensive due diligence of the target and is familiar with the parameters of the deal and the assets. Far more complex transactions have been negotiated and agreed within a week and even less*" – see email from Shell's counsel to the Commission dated 15 July 2013.

324 Email from […]* (Shell) to […]* (Ergon) dated 12 July 2013, attached to email from Shell's counsel to the Commission dated 12 July 2013. [ID 5223].

325 Form CO, Table 30.

326 Minutes of the conference call with Ergon on 24 May 2013, page 4. [ID 5029].

(351) Ergon, as an interested third party to the notified transaction has, during the Commission's investigation, made statements according to which it is potentially interested in restarting negotiations with Shell regarding the acquisition of the Harburg refinery assets. [327] However, Ergon has failed to submit concrete evidence that would allow the Commission to conclude that it is to be considered as a real and credible alternative purchaser of the Harburg refinery assets.

(352) On 5 April 2013, the Commission requested that Ergon submit all internal documents related to the notified Transaction from 1 June 2010 onwards. Ergon did not point at any specific internal document which evidenced a continued strategic interest in acquiring the Harburg site. The Commission analysed the internal documents submitted by Ergon, but it did not find evidence of Ergon's continued strategic interest in acquiring the Harburg refinery assets.

Impossibility of quantitatively establishing the likelihood of Ergon acquiring the Harburg refinery assets

(353) The Commission has also considered whether a quantitative analysis of Ergon's incentives to acquire the assets and of Shell's incentives to sell, potentially even at a negative price, can be used to establish the likelihood of an acquisition of the Harburg refinery assets by Ergon in the absence of the notified transaction.

(354) An appropriate method for measuring the likelihood of an agreement between Ergon and Shell is to assess the joint profit or surplus of both firms flowing from the asset sale. Generally, two parties are more likely to conclude an agreement where each party expects to benefit from that deal. As the parties can easily agree on monetary transfers, for example, purchase price or considerations, and therefore can ensure that the joint profit can be distributed in a way that is acceptable to both parties, the analysis can focus on the joint profit that the parties would obtain from an agreement, compared to their alternative options.[328]

(355) In its initial analysis set out in the SO, the Commission computed as a starting point the joint profit of a sale of the Harburg refinery assets by Shell to Ergon in 2011. In its analysis, the Commission assumed that the list of Shell's customers of its naphthenic base and process oil business would remain with Shell […]*.. Based on the joint profit of Shell and Ergon from a sale of the Harburg refinery assets to Ergon, the Commission concluded that these circumstances indicate that an agreement could have been concluded between Ergon and Shell in 2011 had Nynas not submitted a bid that was much more attractive for Shell.[329] The Commission has further stated in the SO that it found no indications that the environment has significantly changed in a way that would render the acquisition by Ergon less attractive now than it was in 2011.

(356) In order to account for statements made in Shells' additional response to the SO, the Commission adjusted this analysis as follows:[330]

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327 Minutes of a phone call between Ergon and the case team on 24 May 2013 [ID 5029], and Ergon's response to the Commission's request for information of 08 April 2013, questions 36, 57, 58, 101 [ID 4908].

328 This analysis is based on Ergon's and Shell's internal financial models.

329 SO, Paragraph 281.

330 Shell's additional response to counterfactual analysis [ID 5194].

(i) The Commission adjusted Ergon's initial financial model for the Harburg bid by incorporating the opportunity cost of foregone profits in Vicksburg as already set out in Recital (348). Including these opportunity costs reduces the benefit to Ergon of acquiring the Harburg refinery assets and thus makes a deal less likely.

(ii) The Commission has adapted the NPVs so as to reflect updated estimates from Shell regarding the closure scenario. More precisely, between 2011 and 2013, Shell's estimate of a number of costs linked to closure of the Harburg refinery assets has increased. While in 2011 Shell associated the closure scenario with an NPV of roughly [50-200]* million USD, its estimate decreased by roughly [200 – 300]* million USD to an estimate of approximately USD [300-550]* million in 2013. This NPV reduction is mainly due to lower margins in the Harburg refinery assets prior to closure as well as a higher estimate of demolition and remediation costs. The Commission considers that reduced margins in the Harburg refinery assets would affect a sale to Ergon and a closure and exit similarly and therefore, would not materially affect the likelihood of a sale to Ergon. However, higher demolition and remediation costs increase Shell's value of selling the Harburg refinery assets instead of closing it, since by a sale those costs could be delayed or even avoided, thereby reducing the NPV of those costs. An increase in the demolition and remediation costs in itself thus increases the joint profits of Ergon and Shell and makes a sale more likely.[331]

(357) It is important to note that the negative NPV of USD [300 -550]* million of a closure scenario does not mean that Shell would find a negative price of USD [300-550]*million acceptable. As mentioned in Recital (339), the willingness of Shell to accept a negative purchase price would depend on the costs that can be actually saved from Shell's perspective by selling the Harburg refinery assets to Ergon compared to the cost of closure of the Harburg refinery assets and exit from the market. For example, from the perspective of Shell, a sale to Ergon only delays the demolition and remediation costs but does not avoid them altogether. Shell estimated in 2013 that the NPV of the demolition and remediation costs ranges [from USD 150 million to USD 300] * million. Considering a capital cost of [Shell and Ergon's incentives to sell/acquire the Harburg assets]*% and an inflation rate of [Shell and Ergon's incentives to sell/acquire the Harburg assets]*%, the NPV gain from deferring the demolition and remediation costs by [Shell and Ergon's incentives to sell/acquire the Harburg assets]* years would be in around [Shell and Ergon's incentives to sell/acquire the Harburg assets]*% or around USD [75 - 150]* million. When deciding on an acceptable purchase price, Shell would likely only take the implied value gain from delaying the demolition and remediation costs into account, since it would have to anticipate that even after a sale, it would have to bear the demolition and remediation costs at a later point in time.

(358) On the other hand, in order to make a sale of the Harburg assets attractive for Ergon in the absence of the notified transaction, Shell would likely have to accept a negative selling price, especially if both parties agreed on Ergon bearing the final closure and remediation costs. This is because when including the opportunity costs mentioned in

[331] Whether Shell or Ergon would bear the final closure and remediation costs does not materially change the result of the analysis since the joint profit would be largely unchanged.

Recital (348), Ergon could only expect relatively small operating profits, or even losses, depending on the parameters, but would nevertheless have to make significant investments in addition to the final closure and remediation costs.

(359) Due to the uncertainty of key parameters, notably the opportunity costs of foregone profits at Vicksburg, the quantitative analysis of the likelihood of Ergon acquiring the Harburg refinery assets in the absence of the notified transaction is not very precise. Depending on the assumptions made on the value of lost production in Vicksburg, the total joint profit estimate could become negative or could be larger than in 2011, which would mean that there could be either no scope for an agreement or a likely sale, respectively. Therefore, considering the lack of precision of the estimate of the total joint profit from the deal, the Commission's quantitative analysis is inconclusive in itself and did not provide additional indications as to whether a closure or a sale to Ergon would be more likely in 2013, in the absence of the notified transaction, as well as whether it would be likely that Ergon would be willing to buy the Harburg refinery assets at a, possibly negative, price that Shell would be still willing to accept.

7.3.2.2.3. Conclusion

(360) The Commission considers that Nynas is most likely the only undertaking that is seriously interested in taking over the Harburg refinery assets. No other undertaking is likely to have the ability and incentive to take over the Harburg refinery assets in the absence of the notified transaction. In particular, Ergon is unlikely to purchase the Harburg refinery assets. Therefore there is no prospect of a less anti-competitive alternative purchase of the Harburg refinery assets.

(361) It follows from sections 7.3.2.1. and 7.3.2.2. that, in the absence of the transaction, the most likely outcome that can reasonably be predicted is that Shell will close the Harburg refinery assets. Rebuilding the Harburg refinery assets elsewhere would be prohibitively expensive and would take a very long time (see section 7.4.3(352)). Thus, in the absence of the notified transaction, the Harburg refinery assets would most likely exit the market.

7.3.3. Conclusion

(362) The Commission considers that, in the absence of the notified transaction the most likely scenario is that Shell will close the Harburg refinery assets and the Harburg refinery assets would exit the market. The Commission has therefore assessed the effects on competition of the notified transaction in comparison to the effects on competition of a closure of the Harburg refinery assets (sections 7.4. and 7.6.).

7.4. Horizontal non-coordinated effects of the concentration compared to the effects of a closure of the Harburg refinery assets on the competitive structure of the EEA-market for naphthenic base and process oils

7.4.1. Principles

(363) When appraising concentrations, the Commission has to take into account any significant impediment to effective competition likely to be caused by a concentration.[332]

(364) The Commission considers all the relevant factors and conditions,[333] which may include, for example, market share levels, barriers to entry, and possible efficiencies submitted by the parties.[334]

7.4.2. Analysis of market shares

7.4.2.1. Principles

(365) Market shares provide useful "first indications" of the market structure and of the competitive importance of both the merging parties and their competitors.[335]

(366) The larger the market share, the more likely a firm is to possess market power.

7.4.2.2. The view of Nynas

(367) Nynas submits that in view of the anticipated growth in global demand and the increase in available supply, Nynas does not expect its market share to increase significantly over the next three to five years. In Nynas' opinion, its market share will grow [0-5]*% in most end-application segments in the EEA in the next three to five years, and will grow slightly more at worldwide level.[336]

(368) According to Nynas, the notified transaction will not directly and immediately result in any accretion of Nynas' market share because no part of Shell's market position will be transferred to Nynas. First, Nynas states that Shell will not leave the market following the notified transaction. Shell will remain active in the market for base and process oils initially through the Tolling Agreements with Nynas and will later migrate its base and process oil supply to a new substitute product relying on GtL technology.[337] In addition, Nynas argues that Shell will not transfer any brands, know-how, trade secrets, customer contracts or customer lists. In its response to the SO, Nynas further remarks that the Tolling Agreements with Shell,*"which are designed to ensure Shell has sufficient supply of naphthenic and paraffinic base/process oils to continue to supply the market in anticipation of the intended transition to GtL base oils, will give many of Shell's current naphthenic customers at least […]* years to consider switching should they fear an increase in prices after the transaction".*

(369) Nynas further submits that "*competition for Shell's current customers/contracts would be open in the event of an exit by Shell".* According to Nynas "*even if Shell*

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332 Horizontal Merger Guidelines, Paragraphs 1-2.
333 Horizontal Merger Guidelines, Paragraph 13.
334 Horizontal Merger Guidelines, Paragraphs 11 and 12.
335 Horizontal Merger Guidelines, Paragraph 14.
336 Paragraph 766 Form CO.
337 Please refer to section 6.2.2.5.

were to decide not to serve certain customers or end-applications or were to be unable to do so, it is highly unlikely that the customers concerned will automatically switch to Nynas. Rather, these customers will be "up for grabs" and all suppliers already active on the market or which may enter the market as a result of Shell leaving it would be able to compete for their business. All these actual and potential suppliers would thus have an equal opportunity to capture these customers/contracts. In addition, Nynas states that *in the event of a market exit by Shell, it is very unlikely that these dual-sourcing customers would automatically switch to Nynas, in particular in cases where they are already also supplied by Nynas".* [338] Moreover, in its Response to the SO, Nynas stated that "*customers will choose the best price offer for their supply, especially if this also gives them the possibility to source from two different suppliers".* […] "*it is flawed to assume that, in the event of Nynas' acquisition of Harburg, customers would switch to Nynas, especially to the extent that customers expect prices to rise".*

(370) In addition, according to Nynas, it faces strong and increasing competition in the Union from Ergon, which has excess capacity and could further expand in the future if needed. [339] Ergon's share of EEA sales has grown markedly between 2009 and 2011 and Nynas has continued to lose significant volumes to Ergon in 2012 and 2013. This shows that Ergon is very capable of competing for EEA customers from its current production site. [340]

7.4.2.3. The Commission's assessment

(371) The Commission considers that in this case the analysis of market shares does not give an accurate indication of the effects of the notified transaction on the competitive situation on the market.

(372) As explained in section 7.3, the effects of the notified transaction are to be compared with effects of closure of the Harburg refinery assets and its exit from the market.

(373) When assessing the effects of the notified transaction on market shares, the Commission considers it appropriate to use the standard assumption that the post-merger combined market share of the merging parties is the sum of their pre-merger market shares.[341] Following that assumption, post-transaction Nynas would have a combined market share in the EEA of around [70-80]*%,[342] in naphthenic base and process oils in 2012 in terms of volume, with an increment of [10-20]*%.[343]

338 Supplemental reply to the Article 6(1)(c) Decision of 3 May 2013 [ID 4747].
339 Supplemental reply to the Article 6(1)(c) Decision of 3 May 2013 [ID 4747].
340 Nynas' Response to the SO. [ID 5164].
341 Horizontal Merger Guidelines, Paragraph 15.
342 Nynas' response to RFI of 26 April 2013 - Tables 1 and 2 [ID 4742].
343 Nynas' response to RFI of 26 April 2013 - Tables 1 and 2 [ID 4742].

Table 2

Base and process oils - Industrial segment (volume in kt) – Naphthenic oils only								
	EEA							
	2009		2010		2011		2012	
	kt	%	kt	%	kt	%	kt	%
Nynas	[…]*	[60-70]*	[…]*	[60-70]*	[…]*	[60-70]*	[…]*	[50-60]*
Target	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[10-20]*
Ergon	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[20-30]*
Calumet	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*
PetroChina	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*
Total	251	100	305	100	330	100	328.4	100

Source: Nynas

(374) Post-transaction, Ergon will account for [20-30]*% and Calumet and Petrochina will account for only [0-5]*% and [0-5]*% of the EEA market, respectively.[344] According to Ergon, Nynas has either overestimated Ergon's sales or underestimated the market size.[345] However, even according to the data provided by the Parties, the combined entity would have very high market shares.

(375) Shell Deutschland currently supplies [Shell's TFO production and sales]* ktpa of naphthenic base and process oils to third parties. The remainder of the production of the Harburg refinery assets is used captively by Shell to produce TFO ([Shell's TFO production and sales]* ktpa) and finished lubricants.

(376) The Tolling Agreements between Shell and Nynas will allow Shell to have access to naphthenic base and process oils until [Tolling agreement terms]*. However, the contracted quantity (up to [Tolling agreement terms]* kt in [Tolling agreement terms]* decreasing to [Tolling agreement terms]*kt in [Tolling agreement terms]*) only allows Shell to use it for its internal needs to [Tolling agreement terms]*. Therefore, Shell will exit the naphthenic base and process oil market as a supplier post-transaction and its current sales of [Tolling agreement terms]*ktpa will be supplied by competitors.

(377) Shell Deutschland has not shared its list of naphthenic base and process oil customers with Nynas, as it plans to convince those customers to substitute naphthenic base and process oils with GtL alternatives produced by Shell in Qatar. As was explained in

344 Nynas' response to RFI of 26 April 2013 - Tables 1 and 2 [ID 4742].

345 Minutes of the meeting between the Commission and Ergon of 30th April 2013 [ID 4945].

section 6.2.2.5., the substitution between GtL and naphthenic products is limited and uncertain.

(378) On the other hand, with regard to Nynas' claim regarding Ergon's rapid growth in the EEA, Ergon notes that its EEA market shares have remained relatively stable in the past two years and are not expected to increase in the near future. Ergon claimed that it would increase supply to the EEA only if it found *"profitable business opportunities"*.[346]

(379) Consequently, the Commission considers that post-transaction Nynas is likely to capture most of the third party customers currently supplied by Shell Deutschland due to its increased competitiveness as explained in section 7.4.2.3.

(380) In the alternative closure scenario it is less clear who would supply Shell Deutschland's previous customers. Shell itself does not have plans to operate the Harburg refinery assets in the medium to long term. As explained in section 7.3.2.1.2., in the absence of the notified Transaction, Shell Deutschland had planned to continue production of [Shell's commercial strategy in the absence of the transaction]* base and process oils and TFO at the Harburg BOMP until [Shell's commercial strategy in the absence of the transaction]*, and to subsequently close it.

(381) The available evidence shows that Nynas will remain capacity constrained.[347] Under this scenario, in order to serve incremental sales, Nynas would continue to rely on additional costly import volumes or would have to forgo non-EEA sales that it currently finds profitable. Either of these two options would result in an opportunity cost that would reduce the incentive for Nynas to compete aggressively in the EEA.

(382) Ergon, on the other hand, has spare capacity at Vicksburg, and would continue to use its capacity to increase supplies to EEA customers. As explained in Recital (428) Ergon specified that in case of a price increase in the EEA, Ergon could supply an additional 30 kt/year to 50 kt/year of naphthenic base and process oil to the EEA. Of this volume, up to 55% could be TFO.[348] Therefore, it is likely that Ergon would capture a higher share of the market in the closure scenario compared to a merger scenario, narrowing the current market share gap with Nynas. This expansion by Ergon would take place without the competitive constraint from the Harburg refinery assets. Similarly, Nynas would be constrained from responding as its ability to expand production at competitive prices is limited.

(383) Consequently, whilst Ergon could increase its market share in the closure scenario, thus becoming a larger number two firm in the market, this would most likely be associated with a higher price level than the one that would prevail under the notified transaction.

(384) In other words, the higher market share that Nynas is likely to capture under the notified transaction is primarily due to Nynas becoming more competitive relative to the closure scenario, and is not associated with higher prices relative to that scenario.

(385) Therefore, given the specific features of this case, post-transaction market shares alone do not provide a reliable prediction of price effects.

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346 Minutes of the conference call with Ergon on 24 May 2013, page 4. [ID 5029].

347 Please refer to Recital (410).

348 Ergon's reply to questionnaire to TFO competitors Phase II – question 51.1 *"Please explain to what extent your company would start supplying TFOs from outside the EEA to the EEA if the price of TFOs in the EEA would increase by 5-10% with prices in other regions remaining constant"* [ID 4766].

7.4.2.4. Conclusion

(386) The notified transaction is likely to lead to higher market shares for the combined entity, i.e. Nynas and the Target, than closure. However, Nynas' higher market share does not necessarily indicate anti-competitive effects of the notified transaction, relative to the closure scenario, given the specific circumstances of this case.

7.4.3. High barriers to entry

7.4.3.1. Principles

(387) In order to assess the foreseeable impact of a merger on the relevant markets, the Commission analyses its possible anti-competitive effects and the relevant countervailing factors such as barriers to entry to the market. Barriers to entry are specific features of the market, which give incumbent firms advantages over potential competitors. When entry barriers are low, the merging parties are more likely to be constrained by new entrants. Conversely, when entry barriers are high, price increases by the merging firms would not be significantly constrained by new entrants.

(388) Pursuant to Paragraph 69 of the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, ("Horizontal Merger Guidelines"), the Commission examines whether entry or potential entry is likely to constrain the behaviour of incumbents post-merger. For entry to be likely, it must be sufficiently profitable taking into account the price effects of injecting additional output into the market and the potential responses of the incumbents. Entry is thus less likely if it were only economically viable on a large scale, thereby resulting in significantly depressed price levels. Furthermore, high risk and costs of failed entry may make entry less likely. The costs of failed entry will be higher, the higher the level of sunk cost associated with entry.

(389) In this case barriers to entry also need to be assessed to establish whether the analysis of market shares (in section 7.4.3.) and of the supply capacity (section 7.4.4.) in the case of the closure scenario, would be affected by potential entrants.

7.4.3.2. The view of Nynas

(390) The Notifying Party is of the opinion that no significant barriers to entry exist in the market for base and process oils.

(391) Nynas claims that any supplier of base and process oils can enter the EEA market, regardless of the location of its production site although Nynas acknowledges that access to a knowledgeable and experienced marketing and logistics team is a key competitive strength in this industry as customers are typically concerned about reliable and timely delivery. According to Nynas, access to shipping and storage is not difficult to obtain. Extensive shipping and storage capacity is available and can be chartered, thus eliminating the need for sunk costs.

(392) Nynas acknowledges that establishing a new operation (a "greenfield operation") would be very expensive and time consuming. Nynas estimated that the costs of setting up a naphthenic BOMP with a capacity of 500 kt per annum through a greenfield investment, that is an investment by a new entrant, would amount to USD [700-1.300]*.

7.4.3.3. The Commission's assessment

7.4.3.3.1. Access to inputs and production capacity

(393) The Parties are the only naphthenic base and process oil producers with their own refining capacity or access to refining capacity in the EEA.

(394) The paraffinic base oil producers cannot produce naphthenic base oils with their current production facilities. The cost of adapting a paraffinic facility to naphthenic production would be huge, and the time required very lengthy.[349] Therefore, it appears unlikely that paraffinic suppliers would have naphthenic production capacity available.

(395) A greenfield operation in this market is very unlikely given the high costs associated with such a project. That was also confirmed by Nynas. Even if a new naphthenic production facility were to be built in the EEA, the time needed to build the facility would significantly exceed two years.[350] In line with Paragraph 74 of the Horizontal Merger Guidelines, entry is normally only considered timely if it occurs within two years.

7.4.3.3.2. Access to distribution networks and logistics services

(396) Competitors claimed that for successful market entry, suppliers need to have depots in the regions they plan to supply, which is the EEA market in this case.[351]

(397) In this respect, competitors have identified a number of barriers to entry: (i) transport costs,[352] (ii) regulatory barriers, as imported products must be REACH[353] registered, which can take several months,[354] (iii) access to storage, as storage tanks are normally leased on a long-term basis and a certain number of tanks are necessary to guarantee a secure supply,[355] and (iv) special handling requirements, as it is difficult to find a terminal available for lease with readily installed specialty equipment, thus, storage facilities need to be modified, which implies costs.[356]

(398) Ergon estimated that a new entrant would require one to two years in order to build an effective network. Moreover, because of the cost-intensive nature of the operation, this would be very difficult to achieve for a small or medium-sized company.[357]

7.4.3.3.3. Recent and potential entrants

(399) Neither customers nor competitors reported being aware of any naphthenic base and process oil supplier but Ergon[358] that entered the EEA market during the last five years[359] or that plans to enter in the near future.[360] Major market participants have

349 Replies to questionnaire to competitors Phase I - question 20.
350 Ergon's reply to questionnaire to naphthenic competitors Phase II – question 98 [ID 4908].
351 Replies to questionnaire to competitors Phase I – question 35-38.
352 Minutes of conference call between the Commission and Calumet of 25 April 2013 [ID 5048].
353 Registration, Evaluation, Authorization and Restriction of Chemicals.
354 Minutes of conference call between the Commission and Calumet of 25 April 2013 [ID 5048].
355 Minutes of the meeting between the Commission and Ergon of 30 April 2013 [ID 5019].
356 Minutes of the conference call between the Commission and Calumet of 25 April 2013 [ID 5048].
357 Minutes of the meeting between the Commission and Ergon of 30 April 2013 [ID 4945].
358 Replies to questionnaire to competitors Phase I – question 52.
359 Replies to questionnaires to base oil customers and process oil customers Phase I – questions 45 and 43 respectively.
360 Replies to questionnaires to base oil customers and process oil customers Phase I – questions 46 and 44 respectively.

left the market over the last three decades. One of the competitors indicates that "*investments in such kind of production is rather unsure as Nynas is quite dominant in EU and hydrotreaters are very expensive. So for any market challenger, margins will be low and payback time for investment too long*".[361]

7.4.3.4. Conclusion regarding high barriers to entry

(400) The Commission therefore considers that there are high barriers to entry to the market as a producer for naphthenic base and process oils in the EEA. These high barriers to entry as a producer exist regardless of whether the naphthenic production facility is planned as a greenfield operation or as a conversion of an existing paraffinic refinery. In addition, the Commission considers that there are high barriers to entry to the market as a supplier due to the existing obstacles to access to distribution networks and logistics services.

(401) It follows that high entry barriers exist in the market for naphthenic base and process oils in the EEA, and therefore it is unlikely that any new entrant would enter the EEA market in the next years.

7.4.4. Impact of the notified transaction on the supply capacity

7.4.4.1. Less capacity in the absence of the notified transaction

7.4.4.1.1. The view of Nynas

(402) Nynas submitted that in the absence of the notified transaction the Harburg refinery assets' production capacity will leave the market, as there is no credible alternative buyer and Shell Deutschland would not continue to operate it in the medium to long term. Nynas also submitted that it has no viable alternative plans for significant capacity expansion and that it is not aware of any such plans by competitors.

(403) None of the alternative significant capacity expansion projects that Nynas considered before the notified transaction are viable at present. In particular, Nynas' plan to expand the capacity in its […]*refinery (the […]* project) although technically viable, is economically too costly. Nynas considered the [...]* project in 2007, that is to say, before Shell Deutschland decided to start the process of selling the Harburg refinery assets. The [...]* project was rejected by Nynas' Board of Directors in 2007 due to the high investment required and the poor return on investment, amongst other things. [Details of […] project]*.

(404) Nynas also claims that the [...]* project is not a realistic option for Nynas at present. The whole process would have to be started again from an engineering and regulatory perspective, and applications would have to be made for required permits. Most importantly, Nynas emphasises that the economic parameters of the [...]* project would have to be estimated again. It is not seen as a realistic alternative and is no longer part of any alternative strategic plan. Considering the current market situation, the expected rate of return would be even lower now than in 2007. In 2007 Nynas had a business plan showing expected future profitability which was considerably better than what it can show at present. In addition, in 2007, the possibility to obtain external financing was significantly better.

(405) The financing of the [...]* project would likely prove impossible in the current context. First, […]*. Second, Nynas has no reason to believe that its shareholders

[361] […]* reply to questionnaire to paraffinic competitors Phase II - question 4.3 [ID 4231].

would finance an investment today that they turned down in 2007. Third, it is Nynas' view that it would be impossible to find external financing to cover the expected financial requirements of the [...]* project. Nynas is indeed [internal financial reasons]*. Nynas currently has [internal financial reasons]*. This would, […]*. Nynas further notes that [internal financial reasons]*. Given Nynas' [internal financial reasons]*: for any additional [internal financial reasons]*.

(406) Therefore, Nynas believes that in the absence of the notified transaction the production capacity on the EEA market will be reduced.

7.4.4.1.2. The Commission's assessment

Shell Deutschland

(407) The Harburg refinery assets have a capacity of around [150-250]* ktpa and produce around [100-200]* ktpa[362] of naphthenic base and process oils.[363] A part of that is used internally by Shell to produce finished lubricants. In 2011 Shell used [20-50]* kt out of [100-200]* kt of its production of naphthenic base and process oils at Harburg to produce finished lubricants internally, which represented around [15-30]*% of its production that year. The Harburg refinery did not import any naphthenic base and process oils or TFO. It however exported a percentage of its production: in 2011 Shell Deutschland exported [15-30]*% of the Harburg refinery's production of naphthenic base and process oils and TFO to outside the EEA.[364]

(408) Absent the notified transaction, the Harburg refinery assets would leave the market and that would represent a reduction in capacity of around [150-250]* ktpa for the EEA market for naphthenic base and process oils.

(409) Shell has no other naphthenic base and process oil production capacity. [Shell's commercial strategy]*. Therefore, Shell would no longer be a competitive constraint once the Harburg refinery assets are closed.

Nynas

(410) Nynas, the only other EEA producer of naphthenic base and process oil, is capacity constrained, which is why it currently relies on external sources of supply to meet its customers demand. In particular, in 2011 Nynas produced [200-400]* kt of naphthenic base and process oil, including naphthenic TFO, at Nynäshamn, whilst it sourced around [200-400]* kt of base and process oil and TFO from outside the EEA. Out of these [200-400]* kt sourced from outside the EEA, approximately [20-30]*% were imported into the EEA, that is to say, around [50-150]* kt. Equally, approximately [20-30]*% of Nynas' base and process oil production and more than [40-50]*% of its TFO production in the EEA was exported to non-Union countries in 2011.[365]

(411) Nynas' capacity constraint is evidenced by a report prepared by forensic accountants in connection with Nynas' insurance claim for a fire which occurred at its Nynäshamn refinery in October 2011. The forensic accountants' report indicates that, prior to the fire, Nynäshamn operated [at capacity]*. The report notes that Nynas purchased naphthenic oil externally as part of its normal operations and that Nynas'

362 Kilotons per annum.
363 Form CO Paragraph 167 and Table 762.
364 Tables 6, 30 and 32 of the Form CO.
365 Form CO, Paragraph 707.

[Nynas' current supply structure]*. The report further notes that the [Nynas' current supply structure]* refinery appears to have been operating [at capacity]* […]*.[366]

(412) Additionally, an increase of production capacity at the Nynäshamn refinery appears unlikely. Nynas has been looking for an opportunity to secure and increase its capacity since [Supply situation absent the transaction]*.[367] Most of the alternatives considered comprised projects outside the EEA. The only alternative EEA scenario was the [...]* project.

(413) The [...]* project included a capacity expansion at least equal to capacity of the Harburg refinery assets. […]*.[368] The high investment costs seem to justify Nynas' claim that the [...]* project is not economically feasible.

(414) The [...]* project was rejected by Nynas' Board of directors in 2007, long before the Harburg refinery assets were for sale. The main reason behind that rejection was that the contemplated investments were considered too high in comparison to the expected profitability and that shareholders were reluctant to making substantial investments in Nynas' infrastructures.

(415) The [...]* project would still not be feasible at present, […]*. Considering the current market situation, the expected rate of return would be even lower today than in 2007, as Nynas expected profitability has decreased […]*.

(416) Nynas has plans to possibly implement a limited capacity increase, of around [5-10]*%, or […]* ktpa, in the Nynäshamn refinery by debottlenecking and improving the existing production facilities.[369] However, even if implemented, that limited capacity expansion would not be sufficient to replace the lost capacity of around [100-200]* ktpa, in the case of closure of the Harburg refinery assets.

(417) Therefore, it is unlikely that Nynas would significantly increase its EEA production capacity, in the absence of the notified transaction.

Ergon

(418) Ergon, the only other significant EEA supplier, could continue to supply the EEA market from the same source, the Vicksburg refinery in the United States, and therefore at the same cost at which it currently supplies the Union.

(419) Ergon acknowledges that it has made substantial investments in naphthenic base oil production, with the most recent being a USD 240 million expansion of the Vicksburg refinery in 2008. At present, Ergon's capacity is 23 000 barrels per day, or around 1200 ktpa.[370] Based on Nynas' estimates of Ergon's supply volumes,[371]

366 Nynas' response to the Statement of Objections of 8 July 2013, Annex 1 C Lewis Ltd, "2nd Interim Report", 15 May 2012, Paragraphs 4.2.3-5. [ID 5166]. The report was prepared by forensic accountant Mark Lewis on behalf of Crawford, Nynas' claims adjuster to determine the loss suffered by Nynas after the fire at the crude unit in Nynäshamn in October 2011.

367 Form CO, Annex 6.

368 Nynas' response to the Statement of Objections of 8 July 2013, Annex 1 C Lewis Ltd, "2nd Interim Report", 15 May 2012. [ID 5166].

369 Nynas' response to the Statement of Objections of 8 July 2013, paragraph 8.

370 Ergon's reply to questionnaire to TFO competitors Phase II – question 78.1 [ID 4766].

371 Form CO Table 30.

Ergon's capacity utilisation level was around [Nynas' estimate of Ergon's capacity use]*% in 2011[372]. Ergon could thus increase its production in Vicksburg in order to increase its EEA sales.

(420) The Commission has no other evidence and Ergon has not argued that it plans to increase capacity for naphthenic base and process oils in the EEA.[373]

Other players

(421) There are two more non-EEA suppliers active in the EEA market at present: Calumet, a United States-based company, and Petrochina. As explained in Recitals (435) et seq. none of these firms have plans to acquire or build facilities to produce naphthenic base and process oils in the EEA.

7.4.4.1.3. Conclusion

(422) The Commission considers that in the absence of the notified transaction there would be a relatively significant reduction of supply capacity on the EEA market for naphthenic base and process oils, which is likely to lead to an increase in prices. This conclusion is valid even in the absence of any expansion of the Harburg refinery assets by Nynas under the notified transaction, that is even if Nynas would not further expand the capacity of the Harburg Assets. The conclusion that prices are likely to stay lower under the notified transaction compared to the closure and exit scenario is further reinforced if the capacity expansion at the Harburg Refinery Assets by Nynas is taken into account, as is discussed in sub-section 7.4.4.3.

7.4.4.2. Alternative sources of supply in the absence of the notified transaction and implications for prices

7.4.4.2.1. The view of Nynas

(423) Nynas submits that should it not acquire the Target, it would remain capacity constrained and dependent on unreliable and uncertain external supply such as spot purchases and long-term third-party supplies, which represents [30-60]*% of its current supply.[374]

(424) In mid-2013 Nynas submitted an internal assessment of a viable business strategy in the absence of the notified transaction.[375] The assessment concluded that the most credible strategy in the absence of an increase in internal production capacity and sales would be a significant reduction in Nynas' organizationand. [Strategy absent the transaction]*.

7.4.4.2.2. The Commission's assessment

(425) The overall effects of the reduction of EEA production capacity depend on the availability and costs of alternative sources to supply incremental volumes (for example by increasing imports or reducing exports), in the absence of the notified transaction. The Commission considers that in the absence of the notified transaction additional imports would be needed in order to meet the supply shortfall due to the closure of the Harburg refinery assets. The supply shortfall and the additional imports would likely lead to a price increase.

372 Nynas' estimates.

373 Ergon's reply to questionnaire to competitors Phase I – question 52.

374 Nynas' response to the Commission's request for information of 10 July 2013, Paragraph 194.

375 Nynas' response the Commission's request for information of 10 July 2013, points 45-50 and Annex Q8.1.

Nynas

(426) As described in more detail in Recital (448), Nynas has in the past supplemented its EEA production by imports from the [Nynas' current supply agreements]* refinery and from the [Nynas' current supply agreements]* refinery where Nynas has long-term purchase agreements in place. Moreover, Nynas has purchased significant amounts of naphthenic base and process oils on the spot market, largely from the United States operations of [Nynas' current supply agreements]* and of [Nynas' current supply agreements]*. Nynas submits that production in the [Nynas' current supply agreements]* refinery and in the [Nynas' current supply agreements]* refinery are unreliable so that it is unclear to what extent supply from these refineries could be increased.

(427) As explained in more detail in Section 7.4.4.3.2., external purchases appear to be significantly more costly than production of similar products in Nynäshamn.

Ergon

(428) Ergon acknowledged that it currently has spare capacity in Vicksburg but is not currently increasing its production for commercial reasons. Ergon stated that it would expand production and export more to the EEA if it found profitable business opportunities.[376] Ergon specified that in case of a price increase in the EEA, Ergon can either increase capacity utilization or redirect supplies from other geographic areas to satisfy the demand in the EEA. Ergon stated that it is a reasonable assumption that Ergon could supply an additional 30 ktpa to 50 ktpa to the EEA. Of this volume, up to 55% could be TFO.[377]

(429) However, transport costs, import duties amounting to 3.7% and the need for additional storage facilities and distribution networks which have the effect of raising costs, constitute a barrier to expansion for Ergon. According to Ergon, the current premium of naphthenic prices in the EEA over prices in the United States, which has reduced since Ergon entered the EEA, does not offset these cost factors taken together.[378]

(430) As pointed out by Ergon, the premium of naphthenic pricing in the EEA over prices in North America could indeed offset the cost of transporting the product to the EEA, as well as import duties. 2011 and 2012 were, especially, record years in terms of gross margins. These two years were, however, far from typical according to Ergon.[379] The gross margins in 2010 and in 2013 are considerably lower than those in 2011 and 2012. There are at least two reasons why 2011 and 2012 were record years. The first reason, applicable to all base oils, is the relative strength of the market in general. The second reason, specific to Ergon as a United States producer, is the long supply chain from raw material input to delivery of finished products to EEA customers. This requires Ergon to have a larger inventory, which is an advantage in a rising crude market. Crude was generally rising in 2011 and 2012 and this accounted for a substantial amount of Ergon's profit generated in those years.

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376 Minutes of the conference call with Ergon on 24 May 2013, page 4. [ID 5029].

377 Ergon's reply to questionnaire to TFO competitors Phase II – question 51.1 *"Please explain to what extent your company would start supplying TFOs from outside the EEA to the EEA if the price of TFOs in the EEA would increase by 5-10% with prices in other regions remaining constant"* [ID 4766].

378 Ergon's comments on the Brattle report submitted to the Commission on 8 May 2013 [ID 4776].

379 Ergon's comments on the Brattle report submitted to the Commission on 8 May 2013 [ID 4776].

(431) Ergon is currently facing a difficult market in the EEA, with very low gross margins.[380] As a result, in the short term, Ergon does not expect to increase its shares in the EEA. Ergon pointed out that the difference between EEA and United States prices has been reduced since Ergon entered the EEA market. At current EEA prices it is difficult for Ergon to profitably increase sales in the EEA by sourcing products from Vicksburg.[381]

(432) Ergon notes that '*the Brattle Report is correct that the EEA is a strategic priority for Ergon and not a "temporary arbitrage opportunity, but the EEA accounts for only a small portion of Ergon's sales. EEA sales were not a primary driver for Ergon's 2008-2009 capacity expansion in Vicksburg. Indeed, Ergon's ability to use its spare capacity to increase sales in Europe is limited by the higher costs Ergon faces when importing naphthenic base and process oils into the EEA*'.[382]

(433) Based on Nynas' own computations in the Brattle report, the disadvantage of transport and import duties outweighs Ergon's production cost advantages. Overall, Ergon's variable cost for EEA sales of naphthenic products is about [Ergon's variable cost compared to Harburg]*% above that of the Harburg refinery assets. This estimate was largely confirmed by Ergon.[383]

(434) Therefore, although Ergon has access to spare capacity in the United States to increase supplies into the EEA, it is economically constrained from doing so at current price levels. As a result, it is likely that further expansion by Ergon in the EEA market would be associated with higher prices.

Other players

(435) The market investigation has confirmed that none of these companies have the ability to significantly increase supplies of naphthenic base and process oils in the foreseeable future.

(436) Calumet has indicated that it is capacity constrained. According to Calumet, it would be unable to achieve the complex balance of specifications required for the process oil market at any higher utilization rates than the current ones.[384]

(437) Calumet also indicates that it encounters major difficulties as regards handling requirements in the EEA: specialty products supplied by Calumet require special transportation, handling and storage facilities. It is not common to find a terminal available for lease with readily installed specialty equipment. Thus, storage facilities need to be modified and Calumet would have to bear the restructuring costs. As explained above, Calumet does not own terminals, and would have to rent or lease storage in the EEA.[385]

(438) Petrochina would face similar costs to those of Calumet. Petrochina's presence in the EEA is minimal. Therefore, it would also need to set up or significantly expand its storage facilities in the EEA, as well as its distribution networks and shipping services.

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380 Ergon's reply to the Request for Information dated May 8, 2013 (question 3) [ID 5020].

381 Ergon's comments on the Brattle report submitted to the Commission on 8 May 2013 [ID 4776] and Ergon's responses to the Commission's Request for Information dated 8 May 2013 [ID 4943].

382 Ergon's comments on the Brattle report submitted to the Commission on 8 May 2013 [ID 4776].

383 Ergon's comments on the Brattle report submitted to the Commission on 8 May 2013 [ID 4776].

384 Minutes of conference call between the Commission and Calumet of 25 April 2013 [ID 5048].

385 Minutes of conference call between the Commission and Calumet of 25 April 2013 [ID 5048].

(439) Furthermore, it is doubtful whether Petrochina has the ability to increase its supplies in the EEA. As pointed out by a competitor during the Phase II investigation: '*the only producers of naphthenics in the Far East are running at or near capacity utilization. Naphthenics are typically imported into the Far East*'.[386] Also, another competitor underlined that market participants also indicated that Far East producers, including Petrochina are believed to be capacity constrained.

(440) Nynas has also pointed out that, based on its market intelligence, Petrochina intends to expand its naphthenic base oil production capacity, further increasing its existing 780 kt capacity. However, this capacity increase '*will be of low quality and most likely consumed in the domestic Chinese market*'.[387]

(441) It is therefore highly unlikely that Calumet and Petrochina would have the ability to increase their supplies to the EEA in the foreseeable future.

7.4.4.2.3. Conclusion

(442) The Commission therefore considers that only Nynas and Ergon have the ability to increase supply in the EEA, on the basis of additional volumes from outside the EEA. Their incentive however to do so in the absence of the notified transaction depends on the prices of naphthenic base and process oils. Given the cost of additional imports relative to the cost of production at the Harburg refinery, in the absence of the notified transaction, prices would likely increase in order to meet the supply shortfall due to the closure of the Harburg refinery assets.

7.4.4.3. The notified transaction would lead to a capacity increase at the Harburg refinery and thereby lower prices.

7.4.4.3.1. The view of Nynas

(443) Nynas submitted that the notified transaction will increase the naphthenic base and proces oils production capacity at the Harburg refinery from approximately [100-200]* ktpa to [300-400]* ktpa.[388] This will increase Nynas' EEA naphthenic production capacity from about [400-500]* ktpa to [700-800]* ktpa, allowing Nynas to improve the supply conditions for its existing customers and competitively expand its current customer base, in the EEA as well as globally.[389]

(444) In particular, the improved capacity of supply reduces Nynas' reliance on more costly and less reliable sources of supply for its naphthenic products. Nynas claims that the capacity expansion at the Harburg refinery would allow it to substitute some of the expensive external purchases that it is currently making to satisfy its EEA demand, thus benefiting from a cost advantage. This in turn allows Nynas to offer more competitive prices.[390]

(445) Finally, the transaction would allow Nynas to achieve production and operational synergies through focusing each production site on the production of specific products, thus optimising production patterns between sites. Nynas claims that this

386 Ergon's reply to questionnaire to naphthenic competitors Phase II – question 54 [4908].

387 Annex 24-5 Market Plan 2011-2013, Form Co [ID 373].

388 In Form CO, Paragraph 167, Table 127 and Paragraph 27 capacity figures between [Crude oil requirements/ Feedstock usage]* and [Crude oil requirements/ Feedstock usage]* ktpa are provided. Throughout this Decision, the Commission will use a naphthenic capacity of Harburg of [Crude oil requirements/ Feedstock usage]* ktpa.

389 Nynas' response to the Statement of Objections of 8 July 2013, point 6.

390 Nynas' response to the Commission's request for information of 10 July 2013.

specialisation will allow it to increase the yield it obtains from crude oil. The acquisition and conversion of the Target will allow Nynas to reduce the amount of crude oil required to produce one tonne of naphthenic base oil from [Crude oil requirements/ Feedstock usage]*.[391] The notified transaction would further allow Nynas to shift [Crude oil requirements/ Feedstock usage]* feedstock to Harburg and Nynäshamn, where it can be used more efficiently to extract additional naphthenic base oils [Crude oil requirements/ Feedstock usage]*, thus yielding a markedly higher amount of naphthenic base oils. This accounts for the reduction of crude required to produce a tonne of naphthenic base oils from [Crude oil requirements/ Feedstock usage]*.

7.4.4.3.2. The Commission's assessment

7.4.4.3.2.1. Verifiability

(446) The Commission considers that the transaction would result in the capacity at the Harburg refinery, of around [300-400]* ktpa, staying in the market and therefore in a verifiable capacity increase of around [100-200]* ktpa in the EEA. This is likely to lead to verifiable cost savings for Nynas on significant volumes of sales.

(447) In the Form CO, Nynas has provided a capacity figure of [300-400]* kt after the conversion and in Nynas' Economic Response to the Article 6(1)(c) Decision, a capacity figure of [300-400]* ktpa was provided.392 Nynas' internal documents state that Nynas would transform the Harburg refinery assets and increase its naphthenic base and process oil production in the Harburg refinery to roughly [300-400]* ktpa.[393] The Commission considers that the naphthenic capacity after the conversion will be at least [300-400]* ktpa. This represents a capacity increase of around [100-200]* ktpa compared to the Harburg refinery assets' current naphthenic capacity.

(448) Nynas has sold [30-50]*kt of naphthenic base and process oils in the EMEA[394] in 2012 coming from import sources. [10-30]* kt of this volume have come from external third party sources and [10-30]* kt from Nynas' long term supply partners, that is to say, [Nynas' sales (volume)]* kt from the [Nynas' sales (volume)]*refinery and [Nynas' sales (volume)]* kt from [Nynas' sales (volume)]*.[395]

(449) Nynas has [Current supply agreements and anticipated transaction impact]* long term supply agreement with […]*. That agreement will expire in December. Current supply agreements and anticipated transaction impact]*.[396] [Current supply agreements and anticipated transaction impact]*.[397] Therefore, Nynas' variable cost of imports from […]* will likely be higher than production in the Nynäshamn refinery. However, Nynas considers that none of the oils produced in […]* will be

391 Nynas' response to Q6 of the Commission's request for information of 10 July 2013.

392 Nynas' Economic Response to the Article 6(1)(c) Decision of 24 April, p.9.

393 "NYN_000002190.pdf" Project Sardinia financial due diligence 29 April 201, page 8-9 [ID 1091] and "Attachment Q1.5 - Sardinia EVA Anders EY file_update_anco_20110406_v2_xls".

394 Europe, Middle East and Africa. The data submitted in Nynas' Annex Q 1.1 to Nynas' Additional Response of 29 July to RFI of 19 July 2013 confirms that indeed the vast majority of these imports have been sold in the EEA area.

395 Nynas' response to the Commission's request for information of 10 July 2013 question 2.

396 Nynas' response to the Commission's request for information of 19 July 2013 attachment Q.2.2, Supply Agreement - Section 2.2

397 Nynas' response the Commission's request for information of 19 July 2013 question 3 and attachments Q.3.1-Q.3.4

produced in [Current supply agreements and anticipated transaction impact]*.[398] Hence it appears unlikely that the merger would lead to significant variable cost savings regarding these products.

(450) Nynas also submits that its variable cost of imports from [Current supply agreements and anticipated transaction impact]* refinery is about [10-20]* higher than its variable cost of production at the Nynäshamn refinery.[399] Furthermore, the quantity supplied from the […]* refinery is unreliable [Current supply agreements and anticipated transaction impact]*.[400] However, Nynas has not shown that the product mix imported from [Current supply agreements and anticipated transaction impact]* refinery is comparable to that of the Nynäshamn refinery or the Harburg refinery, so that the average costs of these two sources could be compared in a meaningful way. Moreover, Nynas considers that its [distinct oil products]* can be produced [Current supply agreements and anticipated transaction impact]*.[401] Hence it appears to be more profitable to keep importing those products than to adjust the production at the Nynäshamn refinery, or eventually at both the Nynäshamn refinery and the Harburg refinery, to replace the production at [Current supply agreements and anticipated transaction impact]* refinery.

(451) Overall, Nynas has therefore not shown to the required standard of proof that a variable cost saving could be achieved by substituting imports from [Current supply agreement]* refinery with cheaper EEA production post-merger.

(452) As regards third party purchases, Nynas has provided a detailed analysis of [40-60]* kt of its third party purchases of naphthenic process and base oil made in 2011 and 2012.[402] Nynas has submitted a number of inspectorate reports which provide examples of […]*.[403] Each report is prepared by an independent inspector, jointly appointed by Nynas and the depot operator, who among others monitors the transfers of base oils, takes samples and certifies quality. Nynas has then compared the external purchase prices of a major part of its exports to the production prices of comparable Nynas products at the Nynashämn refinery in 2011 and 2012 in order to show that externally-sourced base oils (not from […]*) were consistently more expensive than the same base oils produced at Nynäshamn.[404] Nynas has also shown that the capacity expansion at the Harburg refinery would approximately match the product mix that Nynas currently purchases externally. This is shown by comparing the volume composition of the externally sourced base oils to the composition of base oil yields on […]* crude, which would be mainly distilled at the Harburg refinery. Nynas submits that the appropriate basis for comparing external purchases with internal production is viscosity because each distillate cut yields a particular viscosity range. Given that Nynas' external purchases relate to […]* naphthenic products, viscosity is the primary differentiator between different products. The evidence presented by Nynas shows that the production costs of comparable products

398 Nynas' response the Commission's request for information of 19 July 2013, Annex 4.1.
399 Nynas' response the Commission's request for information of 10 July 2013, Table 2.
400 Form CO 727-730 and Annex 54.
401 Nynas' response to Q7 to the Commission's request for information of 19 July 2013.
402 Nynas submission of 25.11.2013, file "01 - External Purchases.xlsx".
403 Nynas submission of 25.11.2013, (445) "00 COMP M.6360 - Description of efficiencies documentation.docx".
404 Nynas' Additional Response of 29 July to RFI of 19 July 2013, Table 1.

as set out in Table 3 are on average […]* lower than its purchase prices for these products.[405]

Table 3

Volume weighted average variable cost of base oils landed at Antwerp (USD/mt)

	2011	2012	2011 & 2012 combined
Nynäshamn[…]*	**[…]***	**[…]***	**[…]***
External	**[…]***	**[…]***	**[…]***
Cost reduction	**[20-30]*%**	**[20-30]*%**	**[20-30]*%**

Source: Aggregation based on Nynas data[406]

(453) The evidence submitted by Nynas therefore demonstrates that it could substitute its external purchases with cheaper EEA production as a consequence of the notified transaction. Nynas has calculated the cost savings by comparing the costs of similar products that are currently both imported and produced in the Nynäshamn refinery.

(454) The Commission also estimated the volume of base and process oil on which Nynas can likely save costs by switching to EEA production. In this regard, it is important to note that if the Harburg refinery assets are closed, the EEA demand previously satisfied by Shell Deutschland has to be satisfied otherwise. In 2012 Shell Deutschland sold [Shell's sales of naphthenic base, process oil and naphthenic TFO]* kt of naphthenic base and process oils produced in the Harburg refinery and used further volumes of naphthenic base oils as input for producing lubricants and TFO. In 2012 Shell Deutschland sold [Shell's sales of naphthenic base, process oil and naphthenic TFO]* kt of naphthenic TFO in the EEA consisting mainly of naphthenic base oils.[407] As set out in more detail in Section 7.4.2.3., the Commission considers that Nynas would capture a significant part of Shell Deutschland's former customers in the closure scenario. On this basis, the Commission considers that in the closure scenario, Nynas would have to significantly increase its external purchases in order to serve the EEA market. This volume increase would have to be met predominantly with additional external purchases. Therefore, the volumes which are affected by the variable cost reduction from producing naphthenic base and process oils in the Harburg refinery can be expected to be significantly larger than the current spot market purchases of Nynas. This would be consistent with Nynas' internal investment case for the notified transaction, whereby Nynas expected to increase its EEA production of naphthenic base and process oils for EEA sales by roughly [40-60]* kt.[408]

405 Nynas' Additional Response of 29 July to RFI of 19 July 2013, Table 2.

406 Nynas' Additional Response of 29 July to RFI of 19 July 2013, Table 2.

407 Nynas' response to RFI of 26 April 2013 [ID 4742].

408 Nynas' response to Q2 of RFI of 10 July 2013 and "Attachment Q1.5 - Sardinia EVA Anders EY file_update_anco_20110406_v2_xls.XLS".

(455) Nynas also provided a description of how uncertainty in supply affects Nynas' costs and its pricing decisions.[409] […]*.

(456) However, Nynas has failed to show to what extent the additional costs incurred in coping with the uncertainty of supply affect Nynas' pricing decisions. In that regard, it would be important to show that Nynas' variable costs would be affected by the need to increase its stocks. Therefore, the Commission considers that Nynas' has failed to verify to the required standard of proof, the alleged efficiencies stemming from avoiding higher supply risks

(457) As regards the alleged reduction of crude required to produce a tonne of naphthenic base oils from [Reduction of required crude/ Crude used]* to [Reduction of required crude/ Crude used]* or even [Reduction of required crude/ Crude used]*, Nynas has submitted several internal presentations that illustrate how crude oil can be redistributed across Nynas' EEA sites in order to reduce the crude input per tonne of naphthenic base and process oils.[410] In these presentations, the amount of [Reduction of required crude/ Crude used]* crude has been consistent. It is evident from those presentations that a reduction in crude also reduces the produced [Reduction of required crude/ Crude used]*. Nynas has not submitted a detailed analysis of how the change in crude input affects the variable costs of produced naphthenic base and process oils. Such an analysis would also have had to reflect the effect of a reduced output of bitumen or bitumen components. Moreover, Nynas has not proven to the required standard why the supply of [Reduction of required crude/ Crude used]* crude is a [Reduction of required crude/ Crude used]*. Therefore, the Commission considers that efficiencies on the basis of a more efficient use of crude are not verified to the required standard of proof.

(458) Based on the evidence described in this section, the Commission concludes that the transaction would result in a verifiable capacity increase of [300-400] ktpa. More precisely, the notified transaction not only prevents the loss of the current capacity of the Harburg refinery assets for naphthenic base and process oils of [150-250]* kt (see Recital (443)) but also results in an expansion of the capacity in the Harburg refinery by around [150-250]* ktpa in the EEA to a total level of [300-400]* ktpa. As a result, EEA production capacity will largely exceed EEA demand, and will be well above the capacity that would be available in the closure scenario. Furthermore, the capacity increase will lead to verifiable cost savings for Nynas. Importantly, Nynas has failed to verify that the notified transaction would generally lower Nynas' variable cost of EEA production of naphthenic base and process oils. The Commission however acknowledges that significant volumes that would be otherwise procured more expensively by spot transactions from third parties can be substituted through cheaper production in the EEA as a consequence of the notified transaction.

7.4.4.3.2.2. Merger-specificity

(459) Nynas cannot realise the cost savings described in Table 3 by means other than the notified transaction. Furthermore, in the absence of the notified transaction the situation would deteriorate even more, as existing capacity would be lost.

409 Nynas' response to Q5 of RFI of 10 July 2013.

410 Nynas' response to Q6 of RFI of 10 July 2013.

(460) As has been explained in Recitals (410)-(417), Nynas has no viable alternative plans for a significant capacity expansion that could lead to similar cost savings to those of the notified transaction.

(461) Therefore, the Commission concludes that the cost savings are merger specific.

7.4.4.3.2.3. Benefit to consumers

(462) According to Paragraph 79 of the Horizontal Merger Guidelines, consumers cannot be worse off as a result of the merger.

(463) In this case, in the absence of the notified transaction, the Harburg refinery assets' capacity would entirely disappear and EEA demand would have to be partly satisfied by more costly imports. In the context of the notified transaction, Nynas not only preserves the existing Harburg refinery assets' capacity, but also significantly expands it as set out in Recital (458) allowing it to replace costly imports.

(464) In the absence of the notified transaction, Nynas could only provide additional supply to the EEA market from third party import sources mainly.[411] In 2010-2012, Nynas externally purchased between [Nynas' external purchases]*kt and [Nynas' external purchases]*kt per year.[412] Of those volumes, between [Nynas' external purchases]*kt and [Nynas' external purchases]* kt were purchased for EMEA sales.[413] Since the Nynäshamn refinery operates at the technical "maximum", further increases in sales would have to be associated either with additional imports from [Nynas' external purchases]* and [Nynas' external purchases]* refineries, external purchases or with reduced non-EEA sales. According to Nynas, all of the naphthenic base and process oils which were externally purchased for EEA sales would likely be substituted by EEA production if the notified transaction is concluded.[414]

(465) As regards external purchases referred to in Table 3, the actual cost on the basis of invoices was roughly [20-30]*% above the variable production cost of comparable products in the Nynäshamn refinery (see Recital (452)). According to Nynas, diverting non-EEA sales to the EEA would be also very costly given the high prices achieved especially in the […]* region. After deducting the transport costs, the net-back, or ex-refinery, average prices for the Asia Pacific region were […]* in 2012 for Nynäshamn products and were therefore even higher than the mean variable costs of external purchases (Table 3) and significantly above the variable production costs in the Nynäshamn refinery.[415]

(466) Nynas has submitted internal documents showing that in the absence of an increase in internal production through the acquisition of the Harburg refinery assets, Nynas would plan a significant reduction in Nynas organization and [Strategy absent the transaction]*. [416]

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411 Although Nynas exports around [Nynas' exports]* of Nynäshamn's production to outside the EEA, the opportunity cost of the redirection of those exports to the EEA market is much higher for Nynas than sourcing additional volumes from external import sources. Nynas has submitted relevant calculations and explanations in its response to the Commission's request for information of 10 July 2013.

412 Nynas' response to the Statement of Objections of 8 July 2013, p. 48.

413 Nynas' response of 29 July to the Commission's RFI of 19 July 2013, Annex Q4.1.

414 Nynas' response of 29 July to Q4 of the Commission's RFI of 19 July 2013.

415 Nynas' response to Q3 of the RFI of 10 July. Furthermore, not respecting global supply agreements may have further consequences for Nynas' reputation as a reliable supplier.

416 Nynas Annex Q8.1 - 130616PlanB.pptx to Nynas' response to the RFI of 10 July.

(467) Therefore, the Commission concludes that Nynas would take into account in its pricing behaviour the higher costs of external purchases or the forgone profits of exports. This would in turn affect Nynas' incentives to expand its EEA sales above the current level. The existence of binding capacity constraints in the absence of the notified transaction would thus reduce Nynas' incentives to compete aggressively. This affects in particular Shell Deutschland customers that would have to choose a new supplier after Shell Deutschland ceases to be active in the EEA market for naphthenic base and process oils.

(468) It has also been demonstrated that Nynas would benefit from lower variable costs at the Harburg refinery relative to the variable costs of external sources that it would have to rely upon in the absence of the notified transaction. Variable costs for incremental supply volumes are important for pricing decisions, therefore Nynas' cost savings will be likely reflected in its prices. The Horizontal Merger Guidelines set out that reductions in variable or marginal costs are particularly relevant to the assessment of efficiencies.[417]

(469) Ergon's cost structure will not be affected by the notified transaction. Therefore, any constraint on prices exercised by Ergon in the closure scenario is also present if Nynas purchases the Harburg refinery assets. The only difference would be that following the notified transaction, Nynas would have access to more low-cost capacity.

(470) Nynas will have the ability and most likely the incentives to partly pass on the cost savings to consumers. This is likely to lead to lower prices relative to the levels that would prevail in the absence of the notified transaction.

(471) The capacity expansion is only beneficial for competition in the EEA if it leads to additional supply by Nynas on the EEA market. As shown in Table 4, if the notified transaction is concluded, Nynas internally plans to sell [300-400]* kt of naphthenic base and process oils in the EMEA region in 2018, of which [50-150]* kt will be produced in the Harburg refinery. In contrast, Nynas sold only [300-400]* kt of naphthenic base and process oils in 2012. These figures indicate that Nynas indeed plans to significantly expand its EEA sales and to increase its exports to regions outside the EEA by considerably less than the additional production in the Harburg refinery.

(472) Although it is likely that Nynas would expand its EEA sales also if the Harburg refinery assets closed and exited the market, the Commission expects that such an expansion would be significantly smaller in light of Nynas' technical capacity constraints and the resulting higher marginal costs of supply as set out in Recital (454).

[417] Horizontal Merger Guidelines, Paragraph 80.

Table 4

EMEA sales and sources

	2012	2018e
Nynashamn [EMEA Sales & Sources]*	**[EMEA Sales & Sources]***	
[EMEA Sales & Sources]*	**[EMEA Sales & Sources]***	**[EMEA Sales & Sources]***
[EMEA Sales & Sources]*	**[EMEA Sales & Sources]***	**[EMEA Sales & Sources]***
Harburg	**[EMEA Sales & Sources]***	**[EMEA Sales & Sources]***
Total	**[EMEA Sales & Sources]***	**[EMEA Sales & Sources]***

Source: Nynas[418]

(473) The Commission therefore considers that consumers would most likely benefit from the cost savings linked to the notified transaction.

7.4.4.3.3. Conclusion

(474) The Commission concludes that the notified transaction is most likely to lead to an increase of supply capacity on the EEA market for naphthenic base and process oils. The capacity increase is also most likely to lead to a cost reduction for Nynas that is merger specific, verifiable and would likely benefit consumers.

7.4.4.4. Conclusion

7.4.5. Conclusion on naphthenic base and process oils

(475) The Commission concludes that the notified transaction not only preserves the existing production capacity of the Harburg refinery assets but is also likely to add more capacity through verifiable expansion. Shell Deutschland would most likely disappear from the naphthenic market independently of the notified transaction. Nynas can use the additional capacity to replace high variable cost imports with its own production in the Harburg refinery which entails lower variable cost. Therefore it has sufficient incentives to use the additional capacity. As a result of the proposed transaction, it is most likely that more capacity will be available on the EEA market at lower variable costs. This will likely have a positive effect on EEA prices relative to the scenario absent the notified transaction.

(476) The Commission therefore concludes that the notified transaction does not lead to a significant impediment to effective competition on the market for naphthenic base and process oils in the EEA.

[418] Nynas' response of 29 July to the Commission's RFI of 19 July 2013, Annex Q1.5, Sheet “Scenarios”.

7.5. Horizontal non-coordinated effects of the notified transaction compared to the effects of a closure of the Harburg refinery assets on the competitive structure of the EEA-market for TFO

7.5.1. Analysis of market shares

7.5.1.1. Principles

(477) Market shares provide useful "first indications" of the market structure and of the competitive importance of both the Parties and their competitors.[419]

(478) The larger the market share, the more likely a firm is to possess market power.

7.5.1.2. The view of Nynas

(479) According to Nynas, the notified transaction will not directly and immediately result in any accretion of Nynas' market share because no part of Shell Deutschland's market share will be transferred to Nynas. First, Nynas states that Shell Deutschland will not leave the market following the notified transaction. Shell Deutschland will remain active in the market for TFO, [Shell's future commercial strategy]* through the Tolling Agreements with Nynas [Shell's future commercial strategy]*. In addition, Nynas argues that Shell Deutschland will not transfer any brands, know-how, trade secrets or customer contracts or lists.

(480) According to Nynas, "*competition for Shell's current customers/contracts would be open in the event of an exit by Shell*" […] "*even if Shell were to decide not to serve certain customers or end-applications or were to be unable to do so, it is highly unlikely that the customers concerned will automatically switch to Nynas. Rather, these customers will be "up for grabs" and all suppliers already active on the market or which may enter the market as a result of Shell leaving it would be able to compete for their business. All these actual and potential suppliers would thus have an equal opportunity to capture these customers/contracts.*" In addition, Nynas states that "*in the event of a market exit by Shell, it is very unlikely that these dual-sourcing customers would automatically switch to Nynas, in particular in cases where they are already also supplied by Nynas."* [420] Moreover, in its Response to the SO, Nynas stated that "*customers will choose the best price offer for their supply, especially if this also gives them the possibility to source from two different suppliers"*. […] "*it is flawed to assume that, in the event of Nynas' acquisition of Harburg, customers would switch to Nynas, especially to the extent that customers expect prices to rise"*[421].

[419] Horizontal Merger Guidelines, Paragraph 14.

[420] Supplemental reply to the Article 6(1)(c) Decision of 3 May 2013 [ID 4747].

[421] Response to the SO, paragraph 204.

(481) Nynas states that the TFO segment is highly competitive as evidenced […]*. According to Nynas, *"Ergon's share of EEA TFO sales grew from [10-20]*% in 2009 to [20-30]*% in 2011, while Nynas' share of EEA sales fell from [50-60]*% to [40-50]*% in the same period."* (…) *In 2012 and 2013, Ergon continued to win volumes from Nynas in Europe. The market is dynamic, with Ergon exercising strong competitive pressure on Nynas and with other players such as Repsol, Apar and Rosneft steadily gaining ground."*[422]

(482) Nynas' estimates that after the notified transaction, the growth of its market share in the EEA in TFO will remain limited and over the period from 2012 to 2015 it will remain constant at around [40-50]*%.[423]

7.5.1.3. The Commission's assessment

(483) The explanations in section 7.4.2. on naphthenic base and process oils are also valid for TFO. The analysis of market shares does not provide a reliable indication of the effects of the notified transaction on the competitive structure of the market.

(484) As explained in section 7.3., the effects of the notified transaction are to be compared with the likely effects of closure of the Harburg refinery assets.

(485) When assessing the effects of the notified transaction on market shares, the Commission considers it appropriate to use the standard assumption that the post-merger combined share of the merging parties is the sum of their pre-merger market shares.[424] Following that assumption, post-transaction Nynas would have a combined market share in the EEA of [50-60]*% in terms of volume in 2012 with an increment of [5-10]*%.[425]

422 Supplemental reply to the 6(1)(c) Decision of 3 May 2013[ID 4747].
423 Form CO Paragraph 505.
424 Horizontal Merger Guidelines, Paragraph 15.
425 Nynas' response to RFI of 26 April 2013 [ID 4742].

Table 5

TFO volume (ktons) and market share (%)								
	2009		2010		2011		2012	
	kt	%	kt	%	kt	%	kt	%
Nynas	[…]*	[50-60]*	[…]*	[50-60]*	[…]*	[40-50]*	[…]*	[40-50]*
Shell Harburg refinery	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[5-10]*
Ergon	[…]*	[10-20]*	[…]*	[10-20]*	[…]*	[20-30]*	[…]*	[20-30]*
Repsol	[…]*	[5-10]*	[…]*	[5-10]*	[…]*	[10-20]*	[…]*	[5-10]*
Apar	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*
Rosneft (Angarsk)	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*
Savita	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*
Others	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[0-5]*	[…]*	[5-10]*
Total	[…]*	100	[…]*	100	[…]*	100	[…]*	100

Source: Nynas

Source: Nynas

(486) Ergon accounts for a market share of [20-30]*% in terms of volume in 2012 according to Nynas. Based on Ergon's actual sales figures and the Parties' estimated market size, Ergon's market share is lower than Nynas' estimate on the TFO markets.[426] Nynas has also overestimated Repsol's TFO sales and its market share.[427] However, even according to the data provided by the Parties, the combined entity would have high market shares.

(487) Shell Deutschland has not sold its list of TFO customers to Nynas, as it plans to convince those customers to substitute naphthenic TFO with GtL alternatives produced by Shell in Qatar. As was explained in section 6.2.2.5., substitution between GtL and naphthenic products is limited and uncertain.

(488) On the other hand, regarding Nynas' claim of Ergon's rapid growth in the EEA, Ergon notes that its EEA market shares have remained relatively stable in the past two years and are not expected to increase in the near future. Ergon claimed that it would increase supply to the EEA only if it found "*profitable business opportunities*".[428]

426 Minutes of the meeting between the Commission and Ergon of 30th April 2013 [ID 4945].

427 Minutes of the conference call between Repsol and the case team on 06.06.2013 [ID 5015].

428 Minutes of the conference call with Ergon on 24 May 2013, page 4. [ID 5029].

(489) Consequently, the Commission considers that, post transaction, Nynas is likely to capture most of Shell Deutschland's TFO market share due to its increased competitiveness as explained in section 7.4.2.3.

(490) In the alternative closure and exit scenario it is less clear who would supply Shell Deutschland's previous customers. Shell itself does not have plans to operate the Harburg refinery assets in the medium to long term. As explained in section 7.3.2.1.2, in the absence of the notified transaction, Shell Deutschland had planned to continue production of […]* base and process oils and TFO at the Harburg BOMP until […]*, with a subsequent closure.

(491) Nynas will remain capacity constrained under the closure scenario.[429] In order to serve incremental sales, Nynas would continue to have to rely on additional costly import volumes or would have to forgo non-EEA sales that it currently finds profitable. Either of these two options would result in an opportunity cost that would reduce the incentive to compete aggressively in the EEA.

(492) Ergon, on the other hand, has spare capacity at Vicksburg, and would continue to use its capacity to increase supplies to EEA customers. As explained in Recital (428) Ergon specified that in case of a price increase in the EEA, Ergon could supply an additional 30 kt/year to 50 kt/year to the EEA. Of this volume, up to 55% could be TFO.[430]

(493) Therefore, it is likely that Ergon would capture a higher share of the market in the closure scenario compared to in the context of the notified transaction. However, this would take place without the competitive constraint from the Harburg refinery assets. Similarly, Nynas would be constrained from competing aggressively as its ability to expand production at competitive prices would be limited.

(494) Consequently, Ergon could likely increase its market share in the closure scenario at a higher price level than it could.

(495) Conversely, the higher market share that Nynas is likely to capture in the context of the notified transaction is primarily due to Nynas becoming more competitive relative to the closure scenario, and is not associated with higher prices relative to that scenario.

(496) Therefore, given the specific features of this case, post-merger market shares do not provide a reliable prediction for price effects.

7.5.1.4. Conclusion

(497) The notified transaction is likely to lead to higher market shares for the combined entity than closure of the Harburg refinery assets. However, Nynas' higher market share does not indicate anti-competitive effects of the notified transaction, relative to the scenario, given the specific circumstances of this case.

429 Recital (410).

430 Ergon's reply to questionnaire to TFO competitors Phase II – question 51.1 *"Please explain to what extent your company would start supplying TFOs from outside the EEA to the EEA if the price of TFOs in the EEA would increase by 5-10% with prices in other regions remaining constant"* [ID 4766].

7.5.2. High barriers to entry

7.5.2.1. View of Nynas

(498) Concerning barriers to entry, Nynas admits that the same barriers to entry to the market for base and process oils would apply to the TFO market, as TFO is produced from base oils. Hence, to enter the market for TFO, a base oil facility is needed.

7.5.2.2. The Commission's assessment

(499) Entry barriers and costs linked to a BOMP facility have already been analysed in Section 7.4.3. As in that section, the Commission considers that there are high barriers to entry to the market as a producer for TFO in the EEA.

(500) Ergon also submits to the Commission that it is virtually impossible to build a plant or convert a plant to produce TFO only. A production facility, whether naphthenic or paraffinic, must produce a full range of viscosity offerings in order to be economically viable. Consequently, any production facility must also produce base and process oils.[431] Calumet also points to the need to produce other products: "*When producing TFO you also produce other products/cuts in the barrel. The entire barrel economics would need to be attractive in order for there to be valid economies of scale*".[432]

(501) Therefore, it would not make economic sense to build a facility dedicated to the production of TFO, unless the production of base and process oils is also foreseen.

(502) Also, according to Ergon, "*it would be very difficult for a new entrant to begin producing and marketing naphthenic TFO in the EEA. Feedstock (crude) selection is very important, and it would take much in-house expertise in order to do this properly. The capital expenditures requirement for a greenfield naphthenic plant would be very high. Today's margins would not support such a project in our opinion.* Because *of the unique properties of naphthenic crudes, distillates, and products, the refinery must be specifically configured for the choice of feeds and finished products. This makes even the conversion of an existing facility a very difficult and expensive undertaking. There is also a high level of technical and customer support required for marketing TFO in general. This also limits the number of market entrants"*.[433]

7.5.2.3. Conclusion

(503) There are high barriers to entry to the market as a producer for TFO in the EEA. In addition, there are high barriers to entry to the market as a supplier due to the existing obstacles to access to distribution networks and logistics services. Therefore any new entry that could mitigate the price increase impact of a closure is unlikely in the near future.

7.5.3. Impact of the notified transaction on the supply capacity

(504) As the capacity to produce and supply TFO is linked to base oil production, the arguments elaborated in section 7.4.4.3. are equally valid for the TFO market. Therefore, the notified transaction would have a positive impact on the supply capacity on the EEA market for TFO compared to the closure scenario.

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431 Ergon's reply to questionnaire to TFO competitors Phase II - question 112 [ID 4766].

432 Calumet's reply to questionnaire to TFO competitors Phase II - question 114 [ID 5050].

433 Ergon's reply to questionnaire to TFO competitors Phase II - question 108 [ID 4766].

7.5.4. Conclusion on the markets for TFO

(505) The Commission therefore concludes that the notified transaction does not lead to a significant impediment to effective competition on the market for TFO in the EEA.

7.6. Coordinated effects in the markets for naphthenic base and process oils and TFO

7.6.1. Principle

(506) A concentration is to be declared incompatible with the internal market if it significantly impedes effective competition[434]. That would be the case if the proposed concentration changed the nature of competition in such a way that firms that previously were not coordinating their behaviour, are now significantly more likely to coordinate and raise prices or otherwise harm effective competition, or if it makes coordination easier, more stable or more effective for firms which were coordinating prior to the proposed concentration[435].

7.6.2. The view of Nynas

(507) Nynas argues that the notified transaction will not alter the ability of firms to reach a common understanding, enhance producers' ability to monitor their competitors, or affect outsiders' ability to undermine coordinated attempts to raise prices.

7.6.3. The Commission view

(508) The Commission considers that the notified transaction will likely not give rise to coordinated effects.

(509) The notified transaction will not lead to a significant change in the market structure, notably as the operation does not change the number of undertakings active on the markets for naphthenic base and process oils and TFO. In the absence of the notified transaction, namely the closure of the Harburg refinery assets, there would be two undertakings, Nynas and Ergon, active on the markets.

(510) Furthermore, in the absence of the notified transaction the market structure remains asymmetric with Nynas having a considerably higher share than Ergon.

(511) Finally, naphthenic base and process oil for industrial applications are differentiated products along a number of dimensions, the most important being the quality of the products and the certification process required by customers for each end-application.

7.6.4. Conclusion

(512) The notified transaction does not lead to a significant impediment of effective competition in the market for naphthenic base and process oil or the market for TFO as a result of coordinated effects.

7.7. Non-horizontal effects in the upstream market for naphthenic base oil and the downstream market for TFO

7.7.1. The view of Nynas

(513) With regard to the relationship between base oil and TFO production, Nynas claims that all base oils that have a low viscosity flashpoint over 140 and well refined low

434 Article 2(3) of Regulation (EC) No 139/2004.

435 See paragraph 22(b) of the Horizontal Merger Guidelines.

sulphur are suitable for TFO production, that is to say, Group I, Group II, Group III as well as naphthenic oils are used for TFO production. All these base oil groups, in accordance with the API classification, can be classified as high grade TFO and can thus be used by TFO producers to obtain comparable results in terms of performance and quality.

(514) Nynas further claims that the supply of base oil for use in TFO has the characteristics of a global market like the TFO market itself, and there is excess capacity both with respect to base oil and TFO which constrains any potential risk of vertical foreclosure.

(515) More specifically, regarding input foreclosure, Nynas claims that it markets a range of standard base oils, some of which are also suitable for use as a blending component in TFO.

7.7.2. The Commission Competitive Assessment

(516) Nynas' sells a range of standard base oils, some of which are also suitable for use as a blending component in TFO. However, these base oils are also sold for customers active in various end-application segments. Both Nynas and the Target sell only [Base oil sales by Nynas and Target]*.[436]

(517) Furthermore, most TFO producers are vertically integrated companies having their own base oil production (for example, Ergon, Repsol, Rosneft, PetroChina, Calumet and Petro-Canada Corporation). They only purchase a very limited proportion of their base oil requirements from external sources, that is to say, not more than 5%, according to Nynas. These players are consequently not dependent on significant external base oil supply.

(518) As regards the downstream market of TFO production, Nynas blends TFO [Nynas' TFO production]*. All the paraffinic base oils and minor volumes of naphthenic base oil, around [0-5]*-[5-10]* % used for TFO production come from external sources.

(519) Upstream, depending on the product market definition, the Parties' combined sales market share in the EEA would be around [70-80]*%, that is to say, [50-60]*% for Nynas and [10-20]*% for the Target, in terms of volume if the market were to include naphthenic base oils only (see Table 5).

(520) Downstream, the Parties' combined sales market share would be [50-60]*% EEA–wide, that is to say, [40-50]*% for Nynas and [5-10]*% for the target, if TFO were to comprise both naphthenic and paraffinic oils (see Table 5).

(521) Vertical relationships with paraffinic base oil suppliers will not change following the notified transaction as Nynas will not have any new internal access to paraffinic Group II/III base oils and the Target does not use any base oil from third party sources to produce TFO.

[436] Nynas submits that it only sells [Nynas' TFO sales]*. The [Nynas' TFO sales]*.

Input foreclosure

(522) Post-transaction, Nynas would have a significant degree of market power in naphthenic base oil. Therefore, it would have the ability to influence the conditions of competition in the market for naphthenic base oil and therefore, possibly, influence prices and supply conditions in the downstream market. However, the Parties do not supply third party TFO producers in the EEA. Thus, the merged entity has no ability to foreclose downstream competitors active in the EEA and no effect on competition will arise as a result of the notified transaction. Therefore, input foreclosure appears unlikely.

Customer foreclosure

(523) Although the merged entity would have a significant degree of market power in the downstream market, with only [5-10]* of its needs of naphthenic base oils purchased from third parties, it cannot be said that it is an important customer of base oils. In addition, base oils can also be used in other applications, not only in TFO. Thus, the merged entity has no ability to foreclose upstream competitors. Even if the combined entity would have the incentive to foreclose rivals upstream, since it lacks such ability, customer foreclosure also appears unlikely.

7.7.3. Conclusion

(524) The Commission considers that the notified transaction is not likely to lead to a significant impediment to effective competition as a result of the vertical link between the Parties' activities in the markets for naphthenic base oil and TFO.

8. CONCLUSION

(525) In the absence of the notified transaction, the Harburg refinery assets will most likely exit the market, which would be much worse for the competitive structure of the relevant markets than the reasonably foreseeable effects of the concentration.

(526) The Commission concludes, therefore, that the concentration will not significantly impede effective competition and must be declared compatible with the internal market and the EEA Agreement in accordance with Articles 2(2) and 8(1) of Regulation (EC) No 139/2004 and Article 57 of the EEA Agreement.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Nynas AB acquires sole control of part of Shell Deutschland Oil GmbH within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004 is hereby declared compatible with the internal market and the EEA Agreement.

Article 2

This Decision is addressed to:

Nynas AB

Lindetorpsvägen 7

SE-121 29

Stockholm

Sweden

Done at Brussels, 02/09/2013

For the Commission
(signed)
Joaquín ALMUNIA
Vice-President