

Official Journal

of the European Union

ISSN 1725-2555

L 92

Volume 47

30 March 2004

English edition

Legislation

Contents

I Acts whose publication is obligatory

.....

II Acts whose publication is not obligatory

Commission

2004/269/EC:

- ★ **Commission Decision of 18 January 2000 declaring a concentration to be compatible with the common market and the EEA Agreement (Case COMP/M.1630 — Air Liquide/BOC) (notified under document number C(2000) 62) ⁽¹⁾** 1

2004/270/EC:

- ★ **Commission Decision of 30 October 2001 declaring a concentration to be compatible with the common market and the functioning of the EEA Agreement (Case COMP/M.2420 — Mitsui/CVRD/Caemi) (notified under document number C(2001) 3363) ⁽¹⁾** 50

2004/271/EC:

- ★ **Commission Decision of 11 June 2003 declaring a concentration to be compatible with the common market and the EEA Agreement (Case COMP/M.2947 — Verbund/EnergieAllianz) (notified under document number C(2003) 1814) ⁽¹⁾** 91

Price: EUR 22

⁽¹⁾ Text with EEA relevance

EN

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.

The titles of all other acts are printed in bold type and preceded by an asterisk.

II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION DECISION

of 18 January 2000

declaring a concentration to be compatible with the common market and the EEA Agreement

(Case COMP/M.1630 — Air Liquide/BOC)

(notified under document number C(2000) 62)

(Only the English text is authentic)

(Text with EEA relevance)

(2004/269/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Whereas:

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57(2)(a) thereof,

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings ⁽¹⁾, as last amended by Regulation (EC) No 1310/97 ⁽²⁾, and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 16 September 1999 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 ⁽³⁾,

(1) On 16 August 1999, the Commission received a notification pursuant to Article 4 of Regulation (EEC) No 4064/89 (the merger Regulation) of a proposed concentration whereby the undertaking Air Liquide SA (Air Liquide) acquires control within the meaning of Article 3(1)(b) of the merger Regulation of parts of the undertaking The BOC Group plc (BOC) by way of a public bid to be implemented jointly with the undertaking Air Products and Chemicals Inc. (Air Products) and the subsequent division of the businesses and assets of BOC.

(2) On 16 September 1999 the Commission decided in accordance with Article 6(1)(c) of the merger Regulation and Article 57 of the EEA Agreement to initiate proceedings in this case.

(3) The Advisory Committee discussed the draft of this Decision on 5 January 2000.

⁽¹⁾ OJ L 395, 30.12.1989, p. 1; corrected version in OJ L 257, 21.9.1990, p. 13.

⁽²⁾ OJ L 180, 9.7.1997, p. 1.

⁽³⁾ OJ C 79, 30.3.2004.

(4) Air Liquide is an international group active in the field of industrial gases and related businesses, cogeneration

I. THE PARTIES

of electricity and steam, engineering, welding and cutting equipment and consumables, diving and medical equipment and services related to those products. The company supplies industrial gases to various industries including iron, steel, refining, chemicals, glass, electronics, paper pulp, metallurgy, food processing, health care and aerospace industries. Air Liquide is the world's largest producer and distributor of industrial gases in terms of turnover.

- (5) BOC is involved in the production and distribution of industrial gases and related equipment, distribution services and vacuum technology. The company produces and markets the main atmospheric gases (nitrogen, oxygen and argon), hydrogen, carbon dioxide, helium, acetylene, liquefied petroleum gas and speciality gases. In terms of turnover, BOC is the world's second largest producer and distributor of industrial gases.

II. THE OPERATION AND THE CONCENTRATION

A. THE NOTIFIED ACQUISITION OF PARTS OF BOC

- (6) On 13 July 1999, Air Liquide and Air Products announced a joint pre-conditional recommended cash offer under rule 2.5 of the United Kingdom Takeover Code for all shares in BOC through Bidco, a corporate vehicle established for the purpose of the acquisition. Upon obtaining regulatory approval, including that of the European Commission, the companies are obliged to proceed to post an offer to the shareholders.
- (7) Air Liquide and Air Products have agreed to divide the businesses and assets of BOC after completion of the bid (Agreement of 2 July 1999, as amended on 7 July 1999 (the Agreement)). In accordance with the agreed plan for that division, Air Liquide will acquire BOC's operations within the EEA (in the United Kingdom and Ireland) as well as certain operations outside the EEA. Air Products will acquire the remaining BOC operations. With respect to BOC's intellectual property, consisting of patented and non-patented technology including software, Air Liquide and Air Products intend to make arrangements to give both undertakings equal access to that intellectual property (section 9 of the Agreement).
- (8) The present notification concerns only those businesses and assets of BOC that Air Liquide proposes to acquire,

in particular the assets located in the United Kingdom and Ireland.

B. PREVIOUS ACQUISITIONS

- (9) In January 1999, Air Liquide acquired the industrial gases businesses of BOC in France, Belgium, the Netherlands and Germany. Those acquisitions were notified to the Bundeskartellamt⁽⁴⁾ (German Federal Cartel Authority) and the Conseil de la concurrence⁽⁵⁾ (Belgian Competition Service). Those competition authorities cleared the acquisition. The acquisition was also notified to the Nederlandse Mededingingsautoriteit⁽⁶⁾ (Dutch Competition Authority), which issued a 'no jurisdiction'-decision.
- (10) Given that the transactions referred to in paragraph 9 all took place within a two-year period between the same undertakings, they will be treated as one and the same concentration under the present procedure pursuant to the second subparagraph of Article 5(2) of the merger Regulation.

III. COMMUNITY DIMENSION

- (11) Air Liquide and BOC have a combined aggregate worldwide turnover of more than EUR 5 000 million⁽⁷⁾ (EUR 6 146 million for Air Liquide⁽⁸⁾ in 1998 and approximately EUR 1 949 million for BOC⁽⁹⁾ in 1998). The aggregate Community wide turnover of each party exceeds EUR 250 million (EUR [...])^(*) million for Air Liquide⁽¹⁰⁾ in 1998 and EUR [...])^(*) million for BOC in 1998) and neither of the undertakings concerned achieves more than two-thirds of its aggregate Community-wide turnover in one and the same Member State. The notified concentration therefore has a Community dimension.

(*) 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.

⁽⁴⁾ Case B3-168/98 of 16.12.1998.

⁽⁵⁾ Case 98/0050 of 12.1.1999.

⁽⁶⁾ Case 1182/4b.84 of 29.12.1998.

⁽⁷⁾ Turnover calculated in accordance with Article 5(1) of the merger Regulation and the Commission Notice on the calculation of turnover (OJ C 66, 2.3.1998, p. 25). To the extent that figures include turnover for the period before 1 January 1999, they are calculated on the basis of average ECU exchange rates and translated into EUR on a one-for-one basis.

⁽⁸⁾ The turnover figure for Air Liquide includes the turnover of the business acquired from BOC in 1999 in France, Germany, Belgium and the Netherlands (EUR [...])^(*) million).

⁽⁹⁾ The turnover figure for BOC includes turnover for the gases businesses to be acquired by Air Liquide.

⁽¹⁰⁾ See footnote 8.

IV. ASSESSMENT UNDER ARTICLE 2 OF THE MERGER REGULATION

A. RELEVANT PRODUCT MARKETS

1. INDUSTRIAL GASES
- (12) The businesses of Air Liquide and BOC mainly overlap in the production and distribution of industrial gases. Industrial gases are all gases used in manufacturing processes, research, healthcare and related applications. The parties produce and distribute atmospheric gases (air gases) and non-atmospheric gases (gases produced from sources other than air).
- (13) Atmospheric gases are nitrogen (around 78 % of the air), oxygen (around 21 % of the air) and argon (around 0,9 % of the air). The rare gases Krypton, Neon, Xenon together account for around one thousandth of the air. The production of air gases is mainly based on cryogenic air separation technology, which involves a multi-step and relatively complex process. Air is liquefied at very low temperatures and then separated into its components, which are removed at different levels in distillation columns. Other air separation processes include pressure swing adsorption (PSA) and vacuum pressure swing adsorption (VPSA). Both processes produce either oxygen or nitrogen. Membrane separation is used mainly for the production of nitrogen.
- (14) Hydrogen is abundant in hydrocarbons (petroleum and its by-products) and is mainly produced by steam reformation of natural gas, or naphtha or by other chemical means (usually hydrocracking). Hydrogen is also manufactured by oil and chemical companies. Carbon dioxide is mainly produced from natural wells or from the combustion of hydrocarbons. Thus,

industrial gases companies often buy carbon dioxide from chemical and petrochemical companies. Acetylene is a gaseous hydrocarbon generally produced from the reaction of calcium carbide with water or extracted from chemical sources.

- (15) Helium is obtained from natural gas with a helium content of 0,3 % or more (helium rich natural gas). The production process includes the extraction of crude helium (which contains approximately 65 % helium and 35 % nitrogen) and the purification (refining) in order to obtain pure helium (99,995 % or higher purity). The notifying party considers that a separate market exists for the wholesale of helium. The Commission's investigations have confirmed that there is a wholesale market for the supply of refined helium to retailers for resale.
- (16) The parties to the concentration also sell so-called speciality gases, which comprise mainly refrigeration, electronic and lighting gases. Speciality gases contain various chemical molecules required by the electronics industry to manufacture semiconductors to be used in the different steps of the manufacturing process (so-called electronic speciality gases — ESGs): for example Silane (SiH₄) is used for deposition of a layer of pure silicon or silicon oxide on the surface of the wafer, Arsine (ASH₃) and Phosphine (PH₃) for doping (addition of dopants on the surface of the wafer in order to change semiconductor properties), Nitrogen trifluoride (NF₃), Hexafluoroethane (C₂F₆) and Carbontetrafluoride (CF₄) for etching (in order to remove materials on the surface of the wafer to create the integrated circuit pattern), Tungstenhexafluoride (WF₆) for metal deposition and Hexafluoroethane and Nitrogen trifluoride as cleaning agents.
- (17) The principal uses of industrial gases are set out in table 1.

Table 1

Description of primary industrial gases and their use		
Nitrogen	Oxygen	Argon
Purging of all types	Steel making	Welding
Oil and gas operations	Non-ferrous melting	Steel making
Heat treatments	Waste water treatment	Light tubes
Glass making	Gas welding, cutting	Metals
Insert packaging	Breathing gases	Electronics components
Silo atmospheres	Rocket fuel oxidant	
Food transports	Brick making	Helium

Description of primary industrial gases and their use		
Steel making	Odour control	
Electronic components	Tea fermentation	Welding
Tissue freezing	Glass making	Balloons
Artificial insemination	Pulp and paper	Leak detection
Food freezing	Ozone	MRI
Shrink fitting	Coal gasification	Cryogenic cooling
Molding deflashing	Electronic components	Breathing gases
Scrap reclamation		
Die cooling	Carbon Dioxide	Hydrogen
Steelworks equipment cooling		
Solvent recovery	Food freezing	Furnace atmospheres
Air pollution abatement	Beverages	Glass making
Chemical manufacture	Oil wells	Chemicals manufacture
Blow mold cooling	Plant growth	Power station equipment cooling
Mine safety	Fire extinguishers	Rocket fuel
	Waste treatment	Margarine manufacture
	Mold setting	Electronic components
	Metals fabrication	
	Tobacco expansion	

Source: NatWest Securities, 'Industrial Gases 2000'.

(18) The industry generally shares the view that each gas constitutes a separate product market. Certain gases can, in principle, be substituted by others for specific uses, for example, carbon dioxide and argon for welding. However, customers generally do not consider substitution to be a realistic option. The replies to the Commission inquiry received indicate that for most applications, price differences and the degree of integration of a particular gas with the customers' specific application processes largely exclude substitution between gases in practice.

(19) Therefore, for the purpose of this case, the Commission considers that oxygen, nitrogen, argon, hydrogen, carbon dioxide, acetylene, wholesale helium and electronic speciality gases constitute separate product markets.

2. SUPPLY METHODS

(20) Industrial gases are supplied in different forms (gaseous or liquid) and via different distribution channels (tonnage, bulk and cylinders).

(21) Tonnage sales take place where demand for air gases involves large quantities of oxygen and nitrogen. Customers are mainly industrial users (for instance in the petrochemical/chemical, steel, refining and glass industries).

(22) Supplies take place through dedicated production plants installed on the customer's site ('on-site' air separation units) or by means of pipeline links. In the first case, air separation units are built on or close to the site of the customer and are dedicated to the requirements of that customer⁽¹¹⁾. The products are delivered in gaseous form directly from the supplying plant through a pipe connecting the plant to the industrial site of the customer. The supplier owns the on-site plants and operates them on the basis of a long-term contract (up to 15 years). It provides ongoing maintenance and support. In geographical areas where the density of customers makes it economically viable to link air separation units to each other, a pipeline network may be built (e.g. Northern France, Belgium and the Netherlands). Each gas (oxygen or nitrogen) is delivered through a specific pipe. According to the notifying

⁽¹¹⁾ In certain cases, other customers may also be served from this air separation unit.

party, these methods of supply are without alternative for volumes between 100 tonnes per day, or 3 000 m³/hour, and more than 2 000 tonnes per day (tpd), or 60 000 m³/h.

and possible safety and other charges differ depending on which form of delivery is used.

(23) On-site air separation plants (mostly non-cryogenic, sometimes also cryogenic) are also used to satisfy demand for oxygen or nitrogen from 20 to 100 tpd, that is to say in a range that could also be supplied in bulk. Smaller on-site units often produce either nitrogen or oxygen, larger units produce both together.

(24) The quantities of gas that may be supplied in bulk are not as large as in the tonnage business. Except for hydrogen, which is mainly produced and transported in gaseous form, the gases delivered in bulk are generally produced in liquid form. Liquefaction plants can also be constructed on the same site as tonnage plants, thus avoiding investment in a pipeline between the two. The liquid gases are then transported by road or rail tanker from the supplier's plant to the site of the customer, where they are stored, before being used in liquid form or transformed into gaseous form. Each gas is transported and stored in specific dedicated equipment (air gases, in particular, require transport in low temperature cryogenic trailers).

(25) Delivery in cylinders is used when the quantities requested by the customers are small, ranging from one m³/month to 1 000 m³/month (above this quantity, the customer's demand would best be served in bulk). All gases are produced and filled in cylinders in gaseous form, except carbon dioxide, which is delivered in liquid form. Cylinders may be filled at, and distributed from, the supplier's production plant or, alternatively, liquid gases may be transported in tankers to cylinder filling centres in order to be transformed into compressed gas. From there, cylinders in various sizes holding gas under pressure are transported either directly to the customer, or to depots from which the supply to retail customers is carried out. The more important cylinder customers will usually be served directly by the industrial gases company, whereas smaller customers will be supplied by the depot holder. Although the volumes of cylinder gases are limited, their importance in terms of revenue is considerable because of the significantly higher prices and related charges that go with cylinder sales.

(26) The industry generally views these three different distribution methods as separate product markets, and the Commission has taken the same view in previous cases. Prices for gases, cost of transportation and rent

(27) The Commission therefore considers that the tonnage, bulk and cylinder supply of oxygen and nitrogen, the bulk and cylinder supply of argon (including argon mixtures), hydrogen, carbon dioxide and acetylene, the wholesale supply of helium and the supply of electronic speciality gases constitute the relevant product markets. It should be noted, however, that those markets may nonetheless be inter-related. In particular, a strong position on the tonnage market will often confer competitive advantages on the bulk market and vice versa.

B. RELEVANT GEOGRAPHIC MARKETS

1. TONNAGE

(28) The notifying party argues that the relevant market should be qualified as worldwide. The Commission notes that the notifying party's position is inconsistent with its assertions throughout the procedure as well as its own internal assessment. Throughout the procedure, the notifying party has stressed that none of BOC's businesses and operations in the United States and other parts of the world, which the notifying party plans to acquire, have any effect on competition within the EEA. Those statements clearly contradict the notion of a world market. Furthermore, the Commission has reviewed an internal document in which the notifying party analysed the competition law aspects of the planned acquisition. That document assesses the planned transaction's impact in a reference area not wider than Europe. No mention is made of a wider reference area, for example a world market⁽¹²⁾. The Commission concludes that the position taken by the notifying party at the oral hearing contradicts its usual assessment of the relevant geographic market.

(29) At the oral hearing, the notifying party submitted that industrial gases companies are technically able to construct on-site separation plants anywhere in the

⁽¹²⁾ Air Liquide document of 2 June 1999 (submitted to the Federal Trade Commission as part of the HSR filing). The relevant text reads: 'Consequences of the transaction: Tonnage — on a national basis, no overlap of parties' activities; on a European basis, combined share would exceed 40 %'. The text goes on to assess the transaction's impact 'in the EU territory'.

world. The notifying party infers that the market should be seen as worldwide. However, the mere fact that a supplier has the technological ability to provide certain goods worldwide is not in itself sufficient to justify that conclusion. Rather, in a market in which long-term supply contracts are put out to tender, the analysis should focus on whether suppliers do actually compete for such contracts in the same geographic area, and whether suppliers compete under homogenous conditions in different geographic areas.

- (30) The Commission's investigation has confirmed that a distinct group of industrial gases companies, which are established within the EEA, are competing for tonnage supply contracts within the EEA on a regular basis, namely AGA, Air Liquide, Air Products, BOC, Linde, Messer, Praxair and, to a limited extent, smaller companies such as SIAD and SOL. In contrast, a number of companies established in other regions of the world are not active in the EEA. Firstly, the notifying party stated that the following companies have the capability (technology and know-how) to construct air separation units: Hitachi, Kobe Steel, PSI, Cryogenmash, Kaifeng, Sechuan Air Sep, Hang Yang and Cosmodyne. The Commission has found no indications that tonnage customers in the EEA have requested offers from or are supplied by those companies. Secondly, some major industrial gas suppliers, such as Nippon Sanso and Airgas, do not actively compete for tonnage contracts in the EEA. It cannot be argued that technological and regulatory barriers would, in theory, not prevent non-European companies from becoming active in Europe. The advantage conferred by an established presence and existing customer preferences renders this highly unlikely.

- (31) Not only is the notifying party correct in asserting that the 'bidding' for tonnage contracts takes place on a worldwide basis. Industrial gases companies compete for such contracts on the basis of an established presence in the EEA. Industrial gases companies normally establish or acquire a local subsidiary or joint venture in a region in which they intend to become active. Such local subsidiaries are responsible for penetrating a regional market, compiling and submitting offers and providing ongoing customer relations and technical support once a contract has been concluded. Several industrial gases companies have confirmed that they compete for tonnage contracts in a given region only if they have established a local presence in that region. AGA has stated that it does not make offers outside the areas in which it has an established market presence (Europe, the Midwest of the United States and Brazil); the company does not contemplate stand-alone activities. Linde has indicated that it cannot compete for on-site contracts in

the long term without local presence through a subsidiary. Messer has confirmed that it usually invests in on-site projects through a local subsidiary or joint venture.

- (32) Praxair and Air Products, the only non-European industrial gases companies active in Europe, have established European headquarters from which they conduct most of their tonnage business in Europe. Praxair has stated that it has a local team of engineers in the EEA (located in Oevel, Belgium) which is responsible for obtaining on-site contracts, designing of on-site projects and carrying out such contracts. Global plant designs are usually adapted to the EEA market in order to include as many local components as possible. Plant maintenance, major repairs in case of plant breakdown and plant upgrade during the contract term are carried out by this European representation. Staff from outside Europe are rarely involved in the negotiation of contracts and maintenance of ongoing customer relations. Air Products has confirmed that it operates its European tonnage business in a similar fashion.
- (33) Customers have also confirmed that assessment. None of the customers contacted by the Commission has a tonnage contract with any industrial gases company other than those companies established in Europe. Only one customer has indicated that it contacts other companies as well as the above when awarding a tonnage contract. The Commission concludes that from the perspective of European tonnage customers, only suppliers with an established presence in the EEA are eligible.
- (34) Furthermore, the Commission's investigation has shown that while the conditions of competition in the tonnage market are homogenous within the EEA, those conditions are appreciably different in other areas of the world. The EEA must therefore be distinguished from other regions of the world.
- (35) Firstly, price competition for tonnage contracts is determined by objective factors that differ in different regions of the world. Tonnage contracts establish long-term supply relationships of up to 15 years between a supplier and a customer. Each tonnage contract requires the supplier to make a high capital investment, sometimes in excess of EUR 200 million. The expected return on the capital invested is a decisive criterion for how an industrial gases company can compete on price in a given region. Each supplier will determine the expected return on capital in relation to the perceived risk in a given region. Due to the long-term nature of the contracts and the high investment involved, currency risks, but also, more generally, the economic and political framework in a given region or country, are particularly important. Industrial gases companies establish thresholds for the expected minimum return on investment. Those

thresholds differ for the various geographic regions in which the gases companies compete for tonnage contracts. In regions or countries with a higher perceived risk, companies will usually add a premium to the expected minimum return. In addition, smaller industrial gases companies are often forced to finance the initial investment in part by seeking loans locally through their local subsidiaries. In this case, the price they can offer also depends on the different financing conditions in different regions and countries. All those elements together result in regional differences in price setting. The notifying party has stressed that 'Europe is an attractive, risk-free zone' whilst acknowledging that the relevant risks vary enormously in other parts of the world. The variation of currency risks is obvious. Competitors have confirmed this assessment.

requirements. World markets have also been accepted for large engineered or high-tech products which are, or can be, transported to customers around the world ⁽¹⁴⁾. However, the present product market does not concern the supply of such equipment. The tonnage supply of industrial gases on the basis of long-term contracts should be distinguished from the sale of air separation plants. The latter are one-off engineering projects that are based on a different relationship with the customer.

- (38) The Commission therefore concludes that the geographic reference market for the tonnage supply of industrial gases is the EEA.

- (36) Secondly, the industry generally distinguishes between developing markets and mature markets. With respect to the tonnage market, the notifying party stated in its notification that 'one must distinguish between mature markets which are highly industrialised and structured, such as the European Union, and developing markets, where industrial development and industrial gas usages and applications are still in the process of expansion, for example, in south-east Asia'. That distinction is also made in the parties' internal documents which the Commission has reviewed. At the oral hearing, BOC stated that it is able to achieve significantly higher returns in developing markets. Furthermore, conditions of demand also differ in different world regions. The notifying party stated at the hearing that the rate of self production is 11 % in the United States, 21 % in Europe and 78 % in Asia.

2. BULK AND CYLINDER GASES

- (39) The investigations in this Case and the parallel Case COMP/M.1641 — Linde/AGA, have confirmed that, except for certain high purity and high value gases (including helium and electronics speciality gases) and, to a lesser extent, carbon dioxide, industrial gases cannot normally be economically distributed to customers located more than approximately 200 kilometres from the production facility. For an individual production facility, the catchment area is, therefore, defined as a circle with that radius centred on the facility. However, in the larger Member States those catchment areas are normally connected in such a way as to overlap and cover the whole Member State without saps. Furthermore, suppliers often enter into swap arrangements with each other, in order to reduce transportation costs. The notifying party has submitted lists of its swap agreements, which show that it has concluded such agreements for bulk and cylinder gases in all EEA countries in which it is active. The competitive relationship, between at least the large suppliers in the bulk and cylinder markets, is therefore not limited to regional competition but is nationwide. The geographic markets for bulk and cylinder gases are limited to the individual Member States. There are different distribution systems in the different Member States. The market structure in neighbouring Member States is completely different. For instance, in the various markets for bulk and cylinder gases in France,

- (37) Finally, the Commission has not, to date, qualified a market with characteristics similar to those of the tonnage market as worldwide. In earlier decisions, the Commission has found the markets for certain commodities traded mainly at commodity exchanges to be worldwide ⁽¹³⁾. However, the industrial gases in question are supplied in a different manner, namely through tailor-made on-site plants under varying conditions and in accordance with customer-specific

⁽¹³⁾ Platinum — Decision of 24 April 1997 in Case No IV/M.619 — Gencor/Lonrho, OJ L 11, 14.1.1997, p. 30; primary aluminium — Decision of 28 May 1998 in Case No IV/M.1161 — Alcoa/Alumax; silicon — Decision of 26 January 1999 in Case No IV/M.1330 — Pechiney/Samancor; for other minerals see Decision of 7 December 1995 in Case No IV/M.660 — RTZ/CRA.

⁽¹⁴⁾ Large commercial jet aircraft — Decision of 30 July 1997 in Case No IV/M.877 — Boeing/McDonnell Douglas, OJ L 336, 8.12.1997, p. 16; magnet train systems — Decision of 9 March 1998 in Case No IV/M.987 — Transrapid; electronic connectors — Decision of 8 October 1998 in Case No IV/M.1314 — Framatome/Berg Electronics; pulp dryers — Decision of 8 February 1999 in Case No IV/M.1379 — Valmet/Rauma.

Air Liquide has market shares in the order of [...] to [...]*, whilst its market shares in Germany are essentially around [...]*. Furthermore, data submitted by the notifying party show significant price differences between different Member States. This has been confirmed by third parties' data. The Commission therefore concludes that the markets for bulk and cylinder gases are generally not wider than national in scope (except for certain high purity and high value gases).

3. HELIUM

- (40) Helium is extracted from natural gas, refined and liquefied at a limited number of sites which are located in the United States (Kansas, Oklahoma, Texas and Wyoming), Algeria (Bethouia), Poland (Odolanov) and western Russia (Orenburg). Refined helium is transported from the production sites to resellers and to retail customers, using special transportation equipment (cryogenic transport containers). The EEA is mainly supplied with helium from sources located within Europe (Poland) or close to Europe (Algeria, western Russia).
- (41) Helium is supplied to the EEA from all of the above sources, however, the sources located near Europe (Algeria, Poland, and Russia) supply other world regions to only a very limited extent. The Commission estimates that approximately 75 % of the helium demand in the EEA is currently supplied from the sources located near Europe. The imports from the United States vary over time, given that they sometimes occur under large single wholesale contracts. If, as the notifying party argues, a second source for refined helium in Algeria becomes operational in the medium term, it can be expected that imports from the United States will be reduced considerably. No helium is supplied to the United States from Algeria, Poland and Russia.
- (42) While liquid helium can, technically, be transported over long distances, a number of factors impede such long distance transportation (beyond mere transport costs, such as freight and freight forwarding costs, import/export costs and container rental). Helium is a very volatile product. Very low temperatures (below -269°C) have to be maintained during the entire transportation period in order to keep the gas liquid. The greater the time involved in shipment, the more helium gas is produced as the liquid helium warms. This inevitably means that more product losses occur over longer transport distances. An internal study submitted by one industrial gases company states that a container from Algeria or Poland can carry up to 40 % more liquid helium than a container from the United States, due to the shorter transportation time. Apart from the cost of the product lost, additional cooling costs have to be incurred in order to minimise heat leaks as the transport distance increases. Such costs relate, in particular, to liquid nitrogen/helium used to fill liquid container shields in order to keep the product cool. Moreover, if containers have warmed due to a longer transportation time they have to be cooled down before being reused (if the containers are rented, cool-down charges are incurred).
- (43) The most important cost factor for the transport of helium is the number of cryogenic containers needed and the corresponding investment. The notifying party has stated that the round trip of a helium container from the United States to Europe takes 40 days, from Algeria 16 days and from eastern Europe 18 days. As the travel time increases, the number of round trips for which a container is used each year decreases. On the basis of those figures, the utilisation rate of a container used for United States imports is [...] times lower than for Algeria and [...] times lower than for Eastern Europe. A larger number of containers is therefore needed for transportation from the United States and the fixed costs increase considerably in relation to the value of the product transported.
- (44) On the demand side, wholesale customers (in particular smaller industrial gases companies) view the availability of liquid helium from sources located close to the market (that is to say the area where demand takes place) as critical. Apart from the disadvantages resulting from long-distance transportation, the need to maximise security of supply and minimise the risk of disruption must be taken into account. Helium is a key product which industrial gases companies, even smaller ones, consider to be an essential element of their portfolio. On the supply side, even suppliers that have access to refined helium in the United States none the less seek to supply European customers with helium sourced in Algeria, Poland and Russia, insofar as is possible, even if they have to purchase that helium from competitors. They import helium produced in-house in the United States only insofar as they cannot meet demand from sources located closer. Furthermore, if wholesalers were able to compete under homogenous conditions throughout the world, most of the EEA helium demand would be supplied from the United States helium sources, which account for more than 80 % of the world capacity. That is not the case.
- (45) The investigation has revealed nothing to indicate that market prices for refined helium are set at the world level. In particular, there are no trade flows from Algeria, Poland or Russia to the United States (which represents approximately 60 % of the global helium consumption) and limited trade flows from Algeria to other parts of the world. Outside Europe, therefore,

helium from those sources does not (or does so to only a limited extent) compete with helium from the United States. Data submitted by the main wholesalers indicate that the helium wholesale prices in the EEA have, on average, been more than 12 % higher than the average world prices from 1996 to 1999.

- (46) Certain characteristics which have led the Commission to accept world markets in previous cases are not present in this case. World markets for commodities, such as certain metals and minerals, have normally been found to exist where prices are set on commodity or metal exchanges or are linked to the trading on such exchanges⁽¹⁵⁾. As indicated, no similar price setting mechanism exists for refined helium. Prices for helium are set under individual wholesale contracts and not as global market prices.
- (47) While these elements suggest that there is a reference market that comprises the wholesale of refined helium to the EEA, the definite market delineation can be left open since the notified operation also raises competition concerns if the wholesale market is considered to be worldwide.

4. ELECTRONIC SPECIALITY GASES

- (48) The notifying party claims that the relevant geographic market for speciality gases supplied in cylinders to the electronics industry is at least EEA-wide, if not worldwide in scope. Electronic speciality gases are produced by chemical companies (and in some instances also by industrial gases companies), purchased, processed and packaged by industrial gases companies and, finally, sold to customers in the electronics industry (in particular producers of semiconductors). The notifying party argues that its activities in this field, namely the 'transfilling' of electronic speciality gases and the supply of those products to the end customers, are merely those of a distributor.
- (49) According to the Commission's inquiries, the supply of base gases by their producers to the industrial gases companies should be distinguished from the supply of

processed gases, related services and associated products by industrial gases companies to the end-customers. The main industrial gases companies, such as Air Products, Praxair, Air Liquide and BOC, have one 'transfill centre' in the EEA from which they serve their customers within the EEA. Customers are usually not supplied from transfill centres outside the EEA. 'Transfilling' describes the production (that is to say purification, mixing and filling) of electronic speciality gases according to detailed customer specifications in highly specialised processes. Each individual gas specification undergoes a certification process that can last up to two years. Certifications relate to the specific production site (transfill centre) from which the final gas mix is sourced. Furthermore, electronic speciality gases have to be delivered and handled in specialised containers (for instance in order to maintain purity levels or handle toxic gases). A review of Air Liquide's and BOC's marketing publications confirms that such specialised packaging forms a constituent part of their product offerings. That service is also performed at the level of 'transfill' centres at EEA level. The value added in the production and distribution of electronic speciality gases is therefore generated at EEA level where gases companies operate their 'transfill' activities.

- (50) The importance of having a presence within the EEA, by establishing and operating European production capacity, is illustrated by the fact that, until recently, Nippon Sanso, a significant supplier of electronic speciality gases in the United States, has had virtually no activities within the EEA. The company has only recently been able to enter the European market by setting up a European joint venture with Messer.
- (51) Although the ability to deal with a semiconductor company globally may be an advantage, the market investigation conducted by the Commission has shown that purchase decisions are currently still made by end customers at a more local level. The notifying party submits that although the supplies of electronic speciality gases to the semiconductor industry are often discussed at the customer's corporate level, the actual purchase orders for electronic speciality gases are decided, managed and issued at the local site, taking account of specific factors.
- (52) The Commission therefore concludes that the market for electronic speciality gases is the EEA.

⁽¹⁵⁾ Platinum — Decision of 24 April 1997 in Case No IV/M.619 — Gencor/Lonrho (OJ L 11, 14.1.1997, p. 30) primary aluminium — Decision of 28 May 1998 in Case No IV/M.1161 — Alcoa/Alumax; for other minerals see Decision of 7 December 1995 in Case No IV/M.660 — RTZ/CRA.

C. COMPETITIVE ASSESSMENT

1. TONNAGE MARKETS FOR AIR GASES

(a) *Market structure*

Air Liquide/BOC would have by far the highest market shares in the European tonnage markets for air gases.

- (53) The market shares of the parties and competitors in the European tonnage market are set out in table 2 ⁽¹⁶⁾:

Table 2

European tonnage market for standard air gases

Gas	Air Liquide	BOC	Combined	Air Products	AGA	Linde	Messer	Praxair	Others
Oxygen	[...]*	[...]*	[...]*	5-10 %	5-10 %	15-20 %	10-15 %	< 5 %	< 5 %
Nitrogen	[...]*	[...]*	[...]*	10-15 %	< 5 %	15-20 %	5-10 %	5-10 %	5-10 %

- (54) The proposed concentration would create by far the largest tonnage supplier of standard air gases in Europe. The combined entity would hold almost [...]* of the market for tonnage oxygen and nitrogen. Furthermore, all competitors are significantly weaker. In the oxygen market, the next largest supplier, Linde, does not reach [...]* of Air Liquide/BOC's sales. In the nitrogen market, the remaining supply is even more dispersed, with no competitor reaching [...]* of Air Liquide/BOC's sales.

- (55) Air Liquide/BOC's combined strength becomes even more apparent if the number of on-site supply contracts won is taken as a criterion for their market position ⁽¹⁷⁾ as set out in table 3:

Table 3

On-site contracts won (last five years)

	Percentage
Air Liquide	[...]*
BOC	[...]*
Combined	[...]*
AGA	< 20
Air Products	< 20
Linde	< 20
Messer	< 20
Praxair	< 20
Total	100

⁽¹⁶⁾ Figures for 1998. The market share calculation is based on turnover data (value sales) provided by the suppliers of tonnage gases. Due to the nature of tonnage contracts, value data represent the market position of suppliers more accurately than volume data. For instance, given that take-or-pay arrangements or non-volume-related facility fees are often used, the actual strength of a supplier in relation to its customers and competitors is better reflected by the revenue earned than by the quantities of gases supplied. The parties' combined market share would, in any case, not differ substantially if the calculation were based on volume figures (oxygen — [...]*; nitrogen — [...]*).

⁽¹⁷⁾ The table lists on-site supply contracts for oxygen and nitrogen won during the last five years in the EEA, based on data provided by the parties and by competitors. For the purpose of this comparison, contracts for more than 100 tonnes per day were counted (in line with the distinction proposed by the notifying party, p. 20 of the notification). If smaller volume contracts were to be included, the parties' position would be even stronger. Air Liquide, in particular, is the leading European supplier of small on-site nitrogen facilities.

- (56) It should be noted that the figures in table 3 cover only contracts for the on-site supply of gases. Pipeline supply contracts have not been systematically included. Given that Air Liquide is by far the leading European pipeline supplier, table 3 probably understates the number of contracts it has won.
- (57) In its notification, Air Liquide submits that 'a producer's share of tonnage sales is simply irrelevant' for analysing the structure of the market because it considers the tonnage market to be a 'bidding market'. Instead, the notifying party suggests relying on the number of players as a measure for assessing competition. In the present context, the following considerations are sufficient. Firstly, unless there is specific evidence that the pattern of the past no longer reflects the present situation, it is reasonable to assume that a supplier's market share is indicative of its strength. Secondly, the number of contracts awarded confirms the market share analysis.

As the incumbent supplier with by far the largest number of supply relationships, the combined entity would have an established market position and would enjoy a clear lead over its competitors

- (58) During the procedure, the notifying party has stressed that the 'contestability' of the tonnage market would ensure a competition. However, the notion that the contest for each tonnage contract starts 'at zero', and that even suppliers with no sales at all can compete on equal terms, cannot be accepted. The investigation has shown that the dynamics of competition for tonnage contracts are such that the incumbent supplier is in the best position to compete for a renewed contract. An established market position does therefore reflect a supplier's market power. The Commission notes that if the combined position of Air Liquide and BOC is measured by counting the number of contracts recently won (in order to assess the extent to which they are 'incumbents'), their joint position is even stronger than in terms of sales turnover (see table 3). Judging from the number of contracts won, no competitor enjoys a remotely similar position.
- (59) The incumbent contract holder's advantage is based on the following factors.
- (60) The supply of tonnage gases typically involves a close working relationship between the customer and its present supplier. The incumbent supplier knows when the current supply contract will expire and is therefore best placed to offer a renewal at an early stage. By

virtue of its ongoing working relationship with the customer, the incumbent will also usually be the first to learn of that customer's intention to extend or modify an existing supply agreement. When customers plan a new contract or a change to an existing contract, they will, in most cases, seek advice from their current supplier in defining the terms of the new supply arrangement (for example a new on-site plant, a capacity extension etc.). Incumbent suppliers are thus often involved at the project planning stage, and will consequently almost always be included amongst the industrial gases companies from which an offer is requested. Since they have detailed knowledge of the customer, they have an advantage in responding to such a request and in the subsequent negotiations. All those elements lead to the conclusion that a customer will not change its supplier unless a competitor submits an offer which is advantageous, rather than merely equivalent.

- (61) If an on-site contract comes up for renewal, the incumbent supplier will usually be able to offer more advantageous financial terms (discounts etc.) for the follow-on contract because, in most cases, its initial investment in the on-site plant will have been fully written off. Even where that is not the case, the incumbent supplier can normally propose more favourable conditions by reusing equipment already installed in its existing facility ⁽¹⁸⁾. The incumbent is also best placed to make the most economical offer if the customer's demand evolves in such a way as to necessitate a change to the on-site contract before expiry of the contractual term. For instance, if additional capacity is required, the incumbent can offer either to extend the capacity of the existing plant or, alternatively, to build a single new plant for the aggregate capacity. Any competitor could only offer to build a second additional plant on the same site, an obviously less economical solution. Even where a customer's demand is so high that it requires a second plant on the same site, it will normally prefer to use the same supplier in order to reduce its administrative costs and operate the two plants in a coordinated, and therefore more economical, way.
- (62) Most customers contacted by the Commission have confirmed the incumbent's advantage. Competitors have also confirmed that they are more likely to gain contract extensions or renewals from existing customers. The

⁽¹⁸⁾ For instance certain utilities such as pipes etc. Other competitors have to charge the cost of such equipment, the incumbent does not. Customer files reviewed during the investigation illustrate how such savings lead to a procurement decision in favour of the incumbent.

same conclusion can be drawn from the bidding histories submitted by industrial gases companies. For instance, the list of renewals/extensions of existing contracts won by BOC illustrates the importance of the incumbent's relationship with its customers.

- (63) Finally, a BOC document assessing the position of BOC Process Systems in the on-site market confirms that analysis. The following statements are made in that document ⁽¹⁹⁾: 'Mature strongholds can be difficult to break into using traditional commercial approaches where incumbency is strong. (...) Much of the potential growth in developed countries will be difficult to access for BOC because of incumbency exclusion. (...) Leveraging of existing customers will generate "natural" growth.'

The proposed concentration would remove an important competitor

- (64) By acquiring BOC, Air Liquide would remove the third largest competitor in terms of market share from the EEA tonnage market. The elimination of BOC as a competitive force would result in significant deterioration of the market structure.
- (65) It can be concluded from BOC's own data that the company has been competing actively for tonnage supply contracts across the EEA, namely, in addition to the United Kingdom, other key industrial regions in Belgium, the Netherlands, Italy, France, Germany and Spain. It is to be noted that, in the past, BOC has mainly submitted offers for very large on-site plants (some with a planned capacity of up to 120 000 m³/h). The number of competitors able to plan and carry out such large projects is particularly limited. The proposed concentration would remove one of those few competitors.
- (66) By removing one of the leading on-site suppliers, the proposed concentration would reduce the potential for competition in the European tonnage market. The presence of credible competitors is particularly important in a market where very large projects are awarded, contracts cover long terms, the number of eligible suppliers is already limited and customers rely on the contract award procedures as the only means of ensuring reasonably competitive terms. BOC is one of the leading tonnage suppliers worldwide and in Europe, with strengths in all relevant areas. BOC is considered to have competitive process technology (cryogenic air separation technology as well as vacuum/pressure swing adsorption technology) and is a leader in some

technologies (for instance with respect to small and medium sized oxygen plant technology, that is to say the line of ICO generators). Given that on-site supply can be extremely capital intensive, BOC is one of the few suppliers capable of financing the investment associated with large projects. Industry analysts consider BOC to have strong capabilities with respect to large on-site plant project execution ⁽²⁰⁾. To summarise, BOC can be considered to be one of the industrial gases companies with strong competitive potential. The removal of its competitive potential, in an already concentrated market, would further reduce customer choice.

The planned transaction would combine an entrenched position in the United Kingdom with an entrenched position in France and strong positions in other key regions in Europe

- (67) According to figures provided by the notifying party, which have been confirmed by the Commission's inquiries, BOC provides [...] of tonnage oxygen and the same proportion of tonnage nitrogen in the United Kingdom ⁽²¹⁾.
- (68) According to its own estimates, Air Liquide is currently providing by far the largest proportion of tonnage gases in France ([...] of oxygen and [...]) of nitrogen). Its position in Belgium is similarly strong. Air Liquide has a less strong, but still significant, presence in other countries, in particular in Italy and Spain.
- (b) *Specific strengths*
- (69) The Commission accepts that, in addition to market share, other parameters can also be used in assessing a tonnage supplier's market power. The investigation has shown that, with reference to each of those additional aspects the combined entity would be the strongest supplier. Some of the combined entity's strengths would be derived from Air Liquide's already strong position, and increased by adding BOC's position. Others would result from the combination of important tonnage suppliers in Europe, creating a supplier that would be superior to any competitor. If all those elements are considered together, the notified operation would create a market structure in which the strongest supplier, in

⁽¹⁹⁾ 'BOC process systems: Global situation analysis'; document submitted to the Federal Trade Commission as part of the HSR filing.

⁽²⁰⁾ NatWest Securities, 'Industrial Gases 2000', February 1997, p. 73.

⁽²¹⁾ There is no tonnage supply in Ireland.

terms of the parties' combined market position, would also be the strongest with respect to other key competitive parameters. Confronted by the combined entity's comprehensive strength, the remaining industrial gases suppliers would be at a severe disadvantage in competing for tonnage contracts.

Air Liquide/BOC would have an established infrastructure throughout the EEA

- (70) In their respective home countries (France and the United Kingdom/Ireland), Air Liquide and BOC have production facilities for industrial gases and extensive infrastructures for the distribution of those gases in bulk and cylinders (see recitals 165 and 177). Those networks give both companies superior production capacities and superior access to bulk and cylinder customers. The planned transaction would combine these networks.
- (71) Air Liquide also has an established production and distribution infrastructure in a number of other European countries (the Benelux countries, Denmark, Germany, Greece, Italy, Portugal, Spain and Sweden). That pan-European infrastructure comprises stand-alone production plants (liquid gases plants), dedicated plants (plants dedicated to one or several customers) with excess production capacity for the bulk or cylinder markets, small on-site production plants and cylinder-filling facilities. Table 4 sets out Air Liquide's European production and distribution network in countries outside France ⁽²²⁾. In each of the countries listed in table 4, Air Liquide has established cylinder-filling facilities in line with the size of the market concerned (the only exception being Finland where only dedicated plants exist). In the majority of countries, the cylinder-filling network covers the full range of gases, including a number of facilities capable of filling high-value gases with a higher transportation radius (argon, argon mixtures and other gases including speciality gases).
- (72) Local production and distribution infrastructures do confer competitive advantages. A local production capacity for liquid gases facilitates the provision of back-up for small and medium-sized tonnage plants. Where such back-up can be provided out of captive production, the supplier does not have to enter into arrangements for the purchase of merchant liquid on the market or otherwise have to guarantee penalty payments to the customer. Each of those alternatives would impose an additional cost, putting the tonnage supplier at a competitive disadvantage. A local distribution infrastructure allows a tonnage supplier to

create a dedicated on-site plant required for a tonnage contract with capacity exceeding the demand of the tonnage customer. The extra capacity (so-called 'piggy back' production) is then liquefied and sold on the bulk or cylinder markets. The cost advantage for the tonnage supply results from economies of scale in the investment (as well as the additional income from bulk and cylinder sales). Those cost advantages can only be achieved where a 'route to the market' is ensured via a company's own distribution network. Finally, a local infrastructure facilitates the maintenance and support of on-site plants as well as other aspects of customer service.

- (73) In its reply to the statement of objections, the notifying party disputes the importance of a local production and distribution infrastructure for back-up and excess liquid sales. However, at the beginning of the procedure, the notifying party stressed the importance of a local infrastructure, allowing liquid back-up and 'piggy back' production, for establishing a tonnage business. In a study submitted later during the procedure, the notifying party stated that liquid back-up deliveries were relevant only for customers whose requirements amount to 200 to 500 tpd or less. In its reply to the statement of objections, the notifying party seems to suggest that even for customers above 200 tpd, back-up deliveries in bulk may become inappropriate. The Commission finds that that claim is not credible.
- (74) The Commission maintains that a dense network of liquid gas production facilities is advantageous in providing back-up for on-site plants. Where liquid plants are located close to on-site plants, a lower number of tanker trailers are needed to supply a given quantity of liquid gases. This renders emergency back-up more feasible, even for larger quantities, and less costly. The notifying party has, in any case, confirmed in its notification that a back-up and service infrastructure is important for smaller on-site plants. The supply through such plants is highly profitable and fast growing.
- (75) It is recognised that back-up can also be provided by co-producing liquid gases at the on-site plant and storing them in a tank, a method that is open to any competitor. However, in its reply to the statement of objections, the notifying party presented an alternative way of ensuring back-up that is favourable for a supplier with a large market presence. When production capacity is increased or old plants are renewed, it may be possible to keep old plants or their parts in order to provide spare capacity. This back-up method is suitable for large quantities. For instance, Air Liquide's [...] tpd

⁽²²⁾ Only in countries to which bulk deliveries could be carried out from French production sites (Belgium, the Netherlands, Luxembourg and to a lesser degree Germany) has a less important local production capability been put in place.

tonnage plant in Antwerp is backed-up by an old [...] tpd plant which is kept in reserve. This back-up method favours strong incumbent suppliers, such as the combined entity, which already have a large number of tonnage plants in place.

- (76) According to the notifying party, the Commission also overestimates the importance of simultaneous (piggy back) production of liquid gases for sale on the bulk market. In particular, the notifying party has indicated that the number of its tonnage contracts which include such simultaneous production has decreased. That development may be explained by Air Liquide's large existing bulk capacity in an extended production infrastructure. Competitors (AGA, Linde, Praxair) attribute more importance to simultaneous production in tonnage plants than the notifying party. Although it appears that under current market conditions the importance of simultaneous liquid production may be decreasing, the co-production of tonnage and liquid gases still offers a significant cost advantage. According to the notifying party, the cost of operating a combined tonnage and liquid plant is [...] lower than the combination of a stand-alone tonnage plant and a stand-alone liquefier.
- (77) By creating a single supplier with a superior production and distribution infrastructure, the proposed concentration would afford Air Liquide/BOC a structural advantage in competing for tonnage contracts. On the basis of data provided by the other competitors, it can be concluded that none of their production and distribution infrastructures would have a similar geographic coverage. None of Air Liquide/BOC's competitors would therefore enjoy the same advantage.

The combined entity could build on the position of the leading European operator of pipelines

- (78) Industrial gases companies pursue, to a varying degree, a strategy of linking their own production sites with their customers' sites through pipelines. Such an approach is used, in particular, in regions where clusters of volume users of industrial gases are located, such as steel producers, chemical companies, paper or glass manufacturers and others (so-called 'industrial basins'). Two kinds of pipelines can be distinguished, namely 'local distribution pipelines' and 'interconnecting pipelines'. Local distribution pipelines are the primary structure. They connect an industrial gases company's air separation plant(s) with the sites of gases users (customers) within an 'industrial basin'. Such local distribution pipelines usually have a high transfer capacity sufficient to satisfy the demand of multiple customers⁽²³⁾. Their overall length is limited by the geographic dimensions of the industrial region concerned. Interconnecting pipelines constitute a secondary structure. Such pipelines link local pipeline networks in different industrial regions, sometimes over significant distances, creating a larger regional network. Interconnecting pipelines sometimes (but not always) have a lower transfer capacity than local distribution pipelines⁽²⁴⁾.
- (79) The main industrial gases companies' European pipeline networks can be summarised as set out in table 5:

Table 5
Pipelines (km)

		Air Liquide	BOC	Combined	AGA	Air Products	Linde	Messer	Praxair
Local distribution pipelines	Oxygen	[...]*	[...]*	[...]*	0	< 200	< 200	< 550	< 50
	Nitrogen	[...]*	[...]*	[...]*					
Interconnecting pipelines	Oxygen	[...]*							
	Nitrogen	[...]*							
Total		[...]*	[...]*	[...]*	0	< 200	< 200	< 550	< 50

⁽²³⁾ Some of Air Liquide's local distribution pipelines have a capacity of up to [...] tpd for oxygen and [...] tpd for nitrogen. Few pipelines have a capacity below [...] tpd.

⁽²⁴⁾ In Air Liquide's large pipeline network in Northern France/Belgium, the transfer capacity of interconnecting pipelines ranges from [...] to [...] tpd for oxygen whereas nitrogen pipelines are limited to [...] tpd.

(80) In continental Europe, Air Liquide controls an extensive network of local distribution pipelines in important 'industrial basins': the Antwerp region, the Liège region, the Mons-Charleroi region (all in Belgium/The Netherlands), the Dunkerque region, the Fos-sur-Mer region, the Metz region, the Le Havre region (all in France), the Limeto region and the Padova region (all in Italy). No other industrial gases company has access to pipelines in more than one or two confined regions (Air Products — Gent/Terneuzen; Messer — Ruhrgebiet; Linde — Leuna/Buna and Ruhrgebiet; Praxair — Spain). Some competitors' networks are negligible in comparison to Air Liquide's. Furthermore, Air Liquide is the only company to control extensive interconnecting pipelines (northern France/Belgium). In the United Kingdom, BOC controls pipeline grids in important industrial regions (Sheffield, Scunthorpe, Teeside, Grangemouth, Margham and Southampton). No competitor has access to pipeline grids similar to those of Air Liquide.

(81) The control of a pipeline network affords the owner structural advantages which are not available to competitors. Firstly, economies of scale can be achieved by constructing larger air separation units that feed a regional pipeline network than would be possible if individual units had to be built for each customer. Indeed, Air Liquide and BOC have been able to feed their pipeline grids from very large air separation units (ASUs) with oxygen capacities sometimes above [...] tpd, in Air Liquide's case even up to [...] tpd. Return on capital, and production and operating costs are therefore more advantageous. Secondly, the ability to construct larger plants allows the development of a large production capacity in a given region. This also improves the cost base for the production of bulk (liquid) gases that constitute a further source of income. Thirdly, the additional capital investment in connecting a new customer to an existing pipeline is limited compared to the construction of a dedicated plant on the customer site (the only alternative open to competitors). Pipeline coverage of an industrial region with multiple gases users is therefore a considerable advantage in competing for potential customers. Fourthly, the control of interconnecting pipelines allows partial back-up in the event of plant breakdown, even if the interconnecting pipelines' capacity is insufficient to fully supply a local group of customers. In view of the cost of liquid back-up, this advantage can be considerable. Interconnecting pipelines also allow the balancing of the production of the various plants feeding a pipeline system, thereby facilitating a more even capacity utilisation.

(82) In its reply to the statement of objections, the notifying party states that the Commission has misunderstood the role of pipelines in the tonnage market. The notifying party states that production capacity, not pipeline length, is the key factor in terms of tonnage activity.

However, as set out in recital 81, the specific strength of a pipeline operator arises precisely from the fact that it can build up a superior capacity on the basis of a pipeline network. Air Liquide's position in the industrial triangle Rotterdam-Mons/Charleroi-Liège demonstrates this advantage. Air Liquide's air separation units, linked by its regional pipeline system, account for [...] of the entire industry capacity in this region (this rises to [...] if Air Liquide's air separation unit in Dunkerque, which is also linked to the pipeline system, is added). Air Liquide's capacity exceeds that of all competitors together, even though Air Products, Praxair and Linde have made significant investments in that region. The notifying party further argues that industrial gas pipelines are not distribution pipelines. However, local distribution pipelines, the primary pipeline structure, serve precisely to distribute industrial gases to customers.

(83) BOC's internal analysis also contradicts the notifying party's statements. A BOC document which analyses the position of BOC Process Systems on the on-site market ranks Air Liquide as the only industrial gases company whose 'pipeline grid strength' is 'very high' ⁽²⁵⁾. The document also states that pipeline operators 'attempt to lock in business via pipeline grids' and that 'pipeline grids remain powerful profit drivers'.

(84) A pipeline connection can have benefits for a customer, such as the ability to meet demand peaks and easier back-up. Under competitive conditions, the pipeline operator's lower costs would, in theory, be passed on to customers, leading to lower prices. However, there is risk that the creation of strong and exclusive control over pipeline networks will, in the long term, create a situation in which competitors can and will no longer compete for customers. This will ultimately be to the disadvantage of customers, as the incumbent pipeline supplier is no longer forced by competition to pass on lower costs.

(85) Firstly, the strong structural advantages which result from Air Liquide/BOC's control of a large pipeline network could be used as leverage against competitors to the extent that the latter could be excluded from winning tonnage contracts in the regions concerned (foreclosure). Any competitor without access to the pipeline network would have to offer the customer a

⁽²⁵⁾ 'BOC process systems: Global situation analysis'; document submitted to the Federal Trade Commission as part of the HSR filing.

new dedicated on-site plant. Because of the substantially lower investment and cost related to a pipeline link, the incumbent pipeline supplier can undercut any such offer. It is economically rational for the incumbent to do so in order to prevent any other supplier from gaining a foothold in the controlled area. Furthermore, a situation will be created in which the pipeline supplier is no longer forced by competition to pass on a large part of its efficiency gains to its customers. It is constrained only by substantially more expensive on-site offers. Cost savings will therefore be passed on only insofar as is necessary to meet such offers.

pipelines, would allow them to concentrate on other areas. No other supplier would be able to compete in a similar way.

The combined entity could use its dominant positions in the bulk markets in France, the United Kingdom and Ireland as leverage

(86) Secondly, once customers have taken the initial decision in favour of a pipeline contract, they risk becoming 'locked in'. The strong position of an incumbent pipeline supplier will remove a large degree of choice from customers seeking to renew a contract or extend capacity. While each customer could, in principle, seek offers from alternative suppliers, pipeline customers have indicated that, in reality, their choice becomes limited. For shorter renewal periods and limited capacity slight, alternative suppliers may simply find that their chances of success are too reduced to warrant making an offer. The customer's only choice is often therefore to fall back on its existing supplier. The customer's negotiating position is further weakened by the fact that any cost transparency is lost. An individual customer is no longer in a position to monitor a dedicated on-site plant, because it is supplied through a complex system jointly with other companies ⁽²⁶⁾.

(87) The Commission concludes that the combined entity would be able to rely on Air Liquide's considerable pipeline coverage, as one element of its market power. In this respect, the combined entity would be superior to its competitors, having exclusive control of distribution pipelines [...] times longer than all of its competitors' pipelines taken together. It would derive that position mainly from Air Liquide's existing pipeline network, although the proposed concentration would add pipeline grids in industrial regions in the United Kingdom. The structural advantage, which Air Liquide/BOC would enjoy in the areas covered by their

(88) For the description of Air Liquide's and BOC's dominant positions in the markets for bulk and cylinder gases in France and the United Kingdom/Ireland, reference can be made to recitals 152 to 183. Recitals 89 to 91 describe how those dominant positions could be used as leverage in competing for tonnage customers.

(89) An industrial gases supplier which has an established bulk supply relationship with a customer is normally best placed to judge the customer's demand. At the borderline between the tonnage and bulk markets, demand can be fulfilled by both on-site and liquid supply. The parties are increasingly supplying customers with a demand of 20 to 100 tpd through small on-site plants (for nitrogen, Air Liquide has almost [...] such contracts in France and BOC more than [...] in the United Kingdom; for oxygen, PSA, VPSA and even cryogenic plants can also be built around or below 100 tpd). Where this is the case, or where a customer's demand grows, the incumbent supplier can use its existing bulk contract as leverage in seeking a tonnage contract. If it is foreseeable that a customer's demand will justify tonnage supply at the end of the current bulk contract, the incumbent will almost always be the first to be able to propose a tonnage solution because of its knowledge of the customer's needs. In making and negotiating its offer, it will be able to build on the established relationship with the customer. If a customer's demand moves into the tonnage range during the term of a bulk contract, the incumbent will, by definition, be the only supplier able to offer tonnage supply.

(90) The possibility of 'moving' certain bulk customers to tonnage supply gives the incumbent supplier a logistical flexibility that represents an overall cost advantage. For instance, when acquiring a new tonnage customer, the incumbent may be able to build a larger on-site plant in order to gain excess capacity for the bulk market. By linking a new customer to a pipeline, the incumbent may improve the capacity utilisation of that pipeline grid. On the other hand, if the incumbent has limited liquid gases production capacity in a given region, for

⁽²⁶⁾ Anecdotal evidence gathered during the investigation illustrates how a pipeline customer's position can deteriorate. For instance, in the case of one pipeline contract reviewed, various anti-competitive clauses, such as an exclusivity clause, a duration of more than 15 years and a so-called 'English clause' (obligation on the customer to submit competing offers to the incumbent supplier) were added during extensions of a long-term contractual relationship.

instance in a growing market, moving a bulk customer to tonnage would relieve the situation.

has concentrated its worldwide plant engineering capability in the process systems line of business.

(91) In theory it could be argued that other industrial gases companies may also be able to build on existing bulk supply contracts in order to obtain tonnage orders. However, since they have very strong (dominant) positions as bulk suppliers in their respective home markets, Air Liquide and BOC are particularly well placed to use bulk customer relationships as leverage in seeking tonnage contracts. In a more balanced market, many customers, in particular large companies, may have more than one bulk supplier, or they may change bulk suppliers more frequently. A company that dominates a national bulk market is likely to be the only choice for many customers. By combining strong positions in several important bulk markets, the notified transaction would combine the advantages enjoyed by Air Liquide and BOC as a result of their dominance.

(94) Air Liquide and BOC have comprehensive state-of-the-art plant construction technology and, importantly, engineering know-how. Both companies are leaders, for instance, in the production of high purity gases for the electronics industry. Air Products has confirmed that BOC is very competitive with respect to smaller plants in the 150 to 350 tpd range. Even though cryogenic production technology used for large on-site plants may not change fundamentally in the near future, the ability to make and implement continuous improvements is an important asset. Air Liquide would acquire unlimited access to all of BOC's process-technology and plant engineering know-how. The Commission has to assume that Air Liquide would also acquire BOC's related R & D centre, which is located in the United States (in addition to the BOC Edwards research centre in the United Kingdom).

The proposed transaction would combine two competitors with leading technology and project execution capability

(92) There is consensus in the industry that technology is an important factor, allowing a supplier to differentiate itself from competitors. In the tonnage sector, production technology (process technology) is a key competitive parameter. The supply of industrial gases using large on-site facilities is highly capital-intensive and advanced process technology can offer a supplier a cost advantage, for instance in terms of power consumption, reduced emissions and capital expenditure. The notifying party confirmed the importance of process technology in its reply to the statement of objections.

(95) The capability to plan, manage and execute large on-site projects is at least as important as a broad portfolio of technologies. Air Liquide and BOC belong to the group of four industrial gases companies considered by industry analysts to be leading in this respect. For instance, [...] of the world's largest oxygen plants (over [...] tpd capacity) are built by Air Liquide.

(93) The strong R & D potential of Air Liquide and BOC is illustrated by their R & D expenditure and facilities. In 1998, Air Liquide had a total R & D budget of EUR [...] million. It employed [...] researchers in [...] research centres, made [...] inventions and filed [...] patent applications. Air Liquide has [...] industrial partnership agreements and [...] international cooperation agreements with universities. Air Liquide's engineering division ([...] staff worldwide) designs and builds gases plants. In 1998, BOC's total R & D expenditure was EUR [...] million. It employs more than [...] researchers in [...] main and a number of smaller research centres, covering process systems as well as key industries such as the electronics industry (BOC Edwards). It has also a large number of ongoing R & D cooperation agreements with third parties. BOC

(96) Both companies also have leading non-cryogenic production technology, in particular, in advanced VPSA generator technology. Air Liquide is the world's leading provider of small membrane generators which are capable of producing nitrogen with a 99,9 % level of purity. Those technologies make it possible to extend the on-site business into the area of smaller-volume users (below 100 tpd), a strategy pursued successfully by Air Liquide in the past (almost [...] small on-site contracts).

(97) The combined entity would be a leader in other areas, for instance the co-generation of gases, electricity and steam (so-called 'expanded offer'). It would also be best placed amongst its competitors to serve customers in key industries, such as the electronics industry where high volume contracts can be won. Air Liquide has focused [...] of its R & D on this sector, and leads the industry in offering a comprehensive 'total gases and chemicals management', including logistics, detection, monitoring, recycling and customer process integration. BOC has gained considerable exposure to the electronics sector through its BOC Edwards subsidiary. Both companies offer the electronics industry a

comprehensive product range covering the on-site production of high purity standard gases, speciality gases and customer process equipment.

strengths (strong regional supply positions, control of pipeline networks, and dominance in national bulk markets).

The combined strong global presence of Air Liquide/BOC would offer further advantages with respect to multinational customers

- (98) Air Liquide pursues a strategy of accompanying its large tonnage customers (leading industrial companies) in the supply of gases throughout the world. Air Liquide's 1998 Annual Report sets out that strategy: 'Air Liquide pursues its global expansion to accompany and serve its customers throughout the world.' Such partnerships are 'made possible by Air Liquide's global presence.' BOC, having operations in more than 50 countries, is generally considered to have the most comprehensive global coverage of all the industrial gases companies. Its global orientation has resulted in the recent reorganisation of its operations in four global 'lines of business'.
- (99) Customers' replies indicate that global presence is not a prerequisite in order to compete for tonnage supply contracts, because most customers seek the best supply solution in a given regional market. However, global presence may give an industrial gases company a competitive advantage with respect to multinational customers. Having established a business relationship with a customer and proved its reliability in one region, the industrial gases company will have a reference when competing for a tonnage supply contract in another region. A gases company with global coverage is also better placed to offer a customer concessions (for example discounts) in one country in exchange for a new contract in another. In particular, according to market participants, the ability to operate on a global basis represents an advantage in dealing with customer companies in the electronics industry. Industrial gases companies with limited global exposure, such as Linde, Messer and AGA, are at a disadvantage in competing for such customers.

(c) Position of competitors

The merged entity's power would be a disincentive for any vigorous activity by the remaining competitors

- (100) Air Liquide/BOC would be the strongest tonnage supplier in all relevant respects. Some of its strengths are of a general nature (technology, project execution capability and multi-country infrastructure). In addition, the combined entity would have particular regional

- (101) None of the remaining competitors share Air Liquide/BOC's overall strengths. Because the competitors lag behind in those general areas, they would also have less incentive to attempt to make substantial inroads into Air Liquide/BOC's regional strongholds, where they would face particularly strong resistance. The combination of regional strengths with general strengths in one entity could therefore lead to the *de facto* partitioning of the EEA market into a single large western European area controlled entirely by Air Liquide/BOC, on the one hand, and the rest of the EEA, on the other.
- (102) Multi-market contacts between Air Liquide/BOC and its competitors serve to further discourage competition. Each of the remaining competitors competes against Air Liquide/BOC in national bulk and/or cylinder markets in which Air Liquide/BOC are also strong (see, for instance, table 9). Each competitor would therefore have an incentive to defer aggressive competition in order to avoid exposing itself to counter-action by Air Liquide/BOC.

Most remaining tonnage suppliers are considered by market participants to be 'second tier' competitors

- (103) For a general assessment of the competitive strength of the remaining tonnage suppliers, it is useful to consider the views of the industrial gases companies themselves. In an internal study prepared by Air Products, which does not only relate to the tonnage market ⁽²⁷⁾, a distinction is made between 'first tier' and 'second tier' industrial gases companies. Air Liquide, BOC, Air Products and Praxair belong to the first group; Linde, AGA and Messer to the second. It should be noted that in that analysis, Linde, AGA and Messer lag behind with respect to 'large, on-site plant project execution capabilities', amongst other things. Industry analysts share this assessment ⁽²⁸⁾.
- (104) None of the remaining competitors share Air Liquide/BOC's specific strengths in the tonnage market (Europe-wide infrastructure, control of a large pipeline network, strong regional positions, and strong position in national bulk markets) to a similar extent.

⁽²⁷⁾ 'Industrial Gas Industry Overview', May 1999, submitted to the United States Federal Trade Commission as part of Air Product's HSR filing.

⁽²⁸⁾ NatWest Securities, 'Industrial Gases 2000', February 1997, p. 73.

The links created between Air Liquide and Air Products by the joint acquisition and division of BOC would further reduce the incentive to compete

- (105) Air Products has a limited market share in Europe (5 to 10 % for oxygen and 10 to 15 % for nitrogen), although it can be considered as one of the leading companies in terms of production technology and on-site plant project execution ⁽²⁹⁾.
- (106) The links between Air Liquide and Air Products that would be created by the joint acquisition and division of BOC make it likely that Air Products would not pursue aggressive competition against Air Liquide/BOC (see recitals 223 to 243).

The Linde/AGA merger, if completed, would not reduce the anti-competitive effects of the proposed concentration

- (107) In terms of market share, Linde is the next most important competitor (15 to 20 % for oxygen and 15 to 20 % for nitrogen). If it acquires AGA, its market share will increase to 25 to 30 % for oxygen and 15 to 20 % for nitrogen. However, the gap between its market share and that of Air Liquide/BOC will still be considerable, namely [...] for oxygen and [...] for nitrogen.
- (108) Linde is generally considered to be one of the leading companies with regard to production technology (process technology) for cryogenic air separation plants. Linde has significant in-house engineering capability. However, in some areas it lacks technology. For instance, it has no competitive membrane air separation technology for nitrogen production, a profitable and growing sector. The merger with AGA will add nothing to Linde's technological competence because AGA does not have any genuine plant engineering expertise. In fact, AGA currently uses Linde technology under licence.
- (109) In its reply to the statement of objections, the notifying party stressed Linde's plant construction capability and plant sale activities, in particular with respect to large cryogenic air separation units. Linde AG is a diversified corporation which operates its industrial gases business as one of four business divisions (Werksgruppen). On-site air separation units are not constructed by Linde's industrial gases department (Werksgruppe

Technische Gase), which, since November 1999, is a separate subsidiary of Linde AG, but by Linde's engineering and construction department (Werksgruppe Anlagenbau). Linde's Werksgruppe Anlagenbau also carries out engineering projects in a range of sectors unrelated to technical gases. It has, in the past, provided cryogenic air separation units to the Werksgruppe Technische Gase as well as to other industrial gases companies. In that respect Linde's Werksgruppe Anlagenbau acts like any other engineering company. Linde stated at the oral hearing that it sees no reason why its plant sale activities should strengthen its gases supply activities.

- (110) It would appear, therefore, that Linde's plant construction and plant sale activities do nothing more than ensure that its cryogenic technology is generally available to other industrial gases companies. By acting as an equipment supplier to other industrial gases companies, Linde will not enhance its own chances of winning tonnage supply contracts directly. The supply of equipment, through engineering contracts, and the supply of gases, under long-term supply relationships, belong to different product markets in which different competitive strengths are required. For instance, Linde does not have access to any large pipeline network. This limits its chances of winning new tonnage customers in key industrial regions where other competitors have pipeline networks and constitutes a strategic disadvantage.
- (111) In competing for tonnage supply contracts, the capability to plan, execute and manage large on-site projects is at least as important as technological expertise. Industry analysts consider that Linde falls behind the 'first tier' industrial gases companies in that respect ⁽³⁰⁾. The fact that Linde has won and implemented a comparatively small number of large on-site contracts during the last five years (see table 3) appears to confirm that assessment ⁽³¹⁾. In the past it preferred to license its technology to other industrial gases companies, or to build plants as a subcontractor for other companies. That suggests that Linde has adopted a rather cautious policy with respect to directly implementing projects.
- (112) In assessing the competitive force that Linde/AGA would exercise, the fact that Linde/AGA would have certain regional strengths should be taken into account. Like Air Liquide/BOC, although on a smaller scale, Linde/AGA would have a strong position in certain

⁽²⁹⁾ See footnote 28.

⁽³⁰⁾ See footnote 29.

⁽³¹⁾ Linde has, however, won a larger number of small on-site contracts (under 100 tpd).

'home' territories (Austria, Scandinavia and certain regions within Germany). There is a risk that Linde/AGA would concentrate on those regions where it enjoys specific competitive advantages and lower risk, thereby reducing the overall level of competition.

(d) **Position of customers and award of contracts**

Highly concentrated supply faces a much less concentrated demand

Messer and Praxair are unlikely to present effective competition

- (113) Neither Messer nor Praxair share Air Liquide/BOC's specific strengths to the same extent.
- (114) Messer falls significantly behind in terms of market share (10 to 15 % for oxygen and 5 to 10 % for nitrogen) and number of contracts won (see table 3). Although it has plant construction expertise, Messer faces strategic disadvantages compared to Air Liquide/BOC. The fact that it is considerably smaller than the industry leaders Air Liquide/BOC and other major players (for example Air Products) is an additional disadvantage, particularly in competing for large projects which require large financial investments. Having increased its level of debt significantly in recent years, Messer may lack the financial strength to invest in on-site supply projects on a significant scale in the future. Messer also lacks global exposure.
- (115) Praxair's position in Europe is limited (market share less than 5 % for oxygen and 5 to 10 % for nitrogen). The company's strengths are mainly in the American markets.
- (116) In assessing future competition by Praxair in the EEA tonnage market, it is necessary to assess Praxair's economic incentives to compete vigorously. Praxair stated at the oral hearing that, in spite of its technological capabilities, it has not been able to acquire a significant market share in Europe. The company perceives its chances of winning contracts as small against the competition of large incumbent suppliers. It stated that it is not likely to make major investments in order to expand its European presence in the future. It appears that although Praxair has technological capability it considers it to be economically rational to give preference to investments in other regions of the world in which it perceives a higher potential for growth. On that basis, it is not likely that Praxair would challenge the parties' combined position in the EEA tonnage market to such an extent as to remove their dominance.
- (117) Customers in the European tonnage market already face a highly concentrated supply structure. Few (not more than seven) suppliers of tonnage gases are currently present in the market. Their number could be reduced to five. Of those, some are clearly less qualified than others.
- (118) The proposed concentration would further reduce customer choice. The elimination of BOC as an independent competitive force would further narrow the supply structure, not only because of the reduction in the number of competitors but, more importantly, because one of the few leading tonnage suppliers would be removed. BOC is one of the few 'first-tier' industrial gases companies with leading technology, strong investment capability and project execution expertise.
- (119) The demand side, on the other hand, is less concentrated. A range of industries require oxygen and nitrogen in tonnage form, for instance the steel, metal (ferrous and non-ferrous), chemical, petrochemical, refining, electronics and glass industries. In each of those industries a significant number of (potential) customers exist. More than 100 different customers have made requests for large on-site plant offers (above 100 tpd capacity) during the last few years in Europe. If the demand for smaller (but still significant) on-site plants at the borderline between bulk and tonnage supply (20 to 100 tpd capacity) were to be included, the number of customers would be even higher.
- (120) In the steel and chemical/petrochemical industries large customers exist. The notifying party argues that some of those customer companies are larger than Air Liquide. It is not clear, however, how the size of a customer can increase its bargaining power. Purchaser power is not a function of the size of a company but of the respective degrees of concentration of supply and demand. No single customer accounts for an important share of the tonnage supply in the EEA and the degree of concentration on the purchaser side is significantly lower than on the supply side.

Not all customers concentrate their procurement at headquarter level or can exercise bargaining power by using the volumes purchased as leverage

- (121) In its notification, Air Liquide states that tonnage customers are essentially a few large worldwide companies (steel, chemicals and refining) and generally have centralised purchasing functions. It also states that the customers' gas requirements are for high volumes and that those customers are therefore able to exercise very strong bargaining power vis-à-vis gas suppliers.
- (122) However, the Commission's inquiries have not confirmed that tonnage customers are limited to a few large multinational companies. Moreover, even companies which have centralised procurement have expressed the view that they face an uphill battle in matching the power of their gases suppliers.
- (123) In some industries the cost of industrial gases constitutes a higher proportion of the customers' production costs than in others. For instance, the quantities of oxygen and argon supplied to a steel mill will be very large and will also be a significant part of the steel mill's variable costs. However, the quantities of oxygen and nitrogen supplied to the production site of a chemical company may still be large in absolute terms, but constitute only a relatively small part of the customer's costs. According to the notifying party, oxygen and nitrogen typically represent approximately 3 % of the cost of the products they are necessary to produce. In most cases, the customer's operations are dependent on the supply of a fixed quantity of gases and the cost of any interruption of the supply may be very high. Those elements indicate that demand tends to be price-inelastic. Therefore, the mere fact that the purchase of large quantities does not mean that customers will be able to exercise bargaining power vis-à-vis gas suppliers.
- (124) The introduction of the 'expanded offer' or 'utility island' concept which mainly involves the co-generation of electricity and steam will result in lower costs for both the industrial gases supplier and the customer, but will also reduce the customer's bargaining power. By not only supplying gases, but also co-generating electricity and steam, the industrial gases company can satisfy its own need for electricity (in order to run the on-site plant), as well as the customer's need for steam (typically required by chemical companies). Air Liquide pioneered this method and has so far had the greatest success in implementing it. The nature of such a

comprehensive utility supply has more in common with a joint venture than a traditional supply agreement. While the customer may benefit from the outsourcing of utilities, it will find it more difficult to sever the symbiotic relationship with the industrial gases company once the contract expires. The customer's bargaining power will eventually be diminished.

The existing contract award procedures are insufficient to constrain the parties' strength

- (125) In its notification, Air Liquide submits that the tonnage market is a 'bidding market' and that presence of any co-bidder (even just one) is therefore sufficient to ensure a competitive outcome. However, the notifying party's definition of a 'bidding market' is not clear. If this term is meant to characterise a formal bidding process, the usual award procedure in the tonnage market clearly falls short of such a process. In a typical bidding situation, for instance in the area of public procurement, invitations to bid are published in such a way that all competitors are informed. Competitors are able to submit bids on the basis of the same information under the same conditions, and the award decision is taken after evaluation of those bids.
- (126) The Commission's investigation has shown that a more differentiated view of the award procedure for large on-site contracts should be taken. No standardised tender procedure exists. The elements set out in recitals 127, 128 and 129 have been raised as typical by customers and competitors.
- (127) Planning of an on-site plant and design of the terms of reference. Air Liquide itself has stated that industrial gases companies (the potential suppliers) are often involved in a dialogue with their (potential) customers at the project design stage. A customer company will often seek the advice of industrial gases companies in planning a tonnage solution. This will often be the case when large, customised onsite plants are needed, given the complexity of such projects in terms of technology as well as project planning and management ⁽³²⁾. In such cases most customers rely on the advice of a competent industrial gases company in order to identify and specify the best technical solution for the required capacity, purity and flow rate, the alternatives and

⁽³²⁾ Where smaller on-site plants, based on standard technology (PSA, VPSA, small cryogenic), are needed, the customer may be more able to specify the terms of reference without advice from an industrial gases company. In particular, large multinational companies may be able to draw on their experience with other such plants at different sites, particularly if those plants are not customised to meet specific needs.

parameters for the plant design, appropriate back-up solutions, environmental considerations etc. This initial dialogue can last for a prolonged period of time, up to 18 months, during which meetings are held at expert/engineer level and detailed technical discussions take place. The process results in a customized solution for the specific customer site. At least one potential supplier will therefore make a significant input in defining the terms of reference for a large on-site plant. This process comes close to joint project development.

(128) Requests for offers. Customers have confirmed that calls for tender for on-site supply are not normally published. Most customers contact one or several industrial gases companies (mainly in writing, but also orally) and request an offer. The terms of reference vary from a broad description to full details.

(129) Decision-making and additional negotiations. Once offers have been received, additional negotiations will often take place with the incumbent supplier (on the basis of the terms of other offers submitted) or with other competitors that have responded (on the basis of the incumbent's and other offers). On that basis, the customer will take the procurement decision.

(130) On the basis of those elements, the Commission's assessment of whether the contract award procedures could constrain the parties' market power is set out in recitals 131 to 144 :

(131) It must first be noted that the tendering procedures used by tonnage customers are with few exceptions not objective tendering procedures, with objective and clearly laid down criteria to award a contract (e.g. lowest price), but simply negotiation procedures which are conducted to a varying degree with different suppliers.

(132) In most negotiation procedures competitors have the possibility of modifying their offers and offering different conditions during the course of the negotiations. The examples provided by the notifying party confirm this view. According to the notifying party, this allows customers to play off suppliers against each other in order to obtain a better deal. However, various elements of the negotiation procedure limit that possibility.

(133) Firstly, it will often be the incumbent whom the customer will select for advice on the specifications of the new plant and the terms of reference, since the incumbent has an established working relationship with that customer⁽³³⁾. Therefore, the usual award process often involves the incumbent at an earlier stage than competitors. The proposed on-site solution is often one which the incumbent has co-designed and which corresponds to its capabilities.

(134) The incumbent is able to make the most economical offer by benefiting from its existing supply relationship and the initial investment made. That is the case both where an on-site arrangement comes up for renewal and where extensions or modifications to existing agreements are required (for details recitals 58 to 61). This bias against outside competitors may limit the incentive for other suppliers to compete as fiercely as they would do in a bidding process in which they could bid on equal terms (or to bid at all), as confirmed by responses from some customers⁽³⁴⁾.

(135) Indeed, most customers contacted replied that the incumbent enjoys an advantage in bidding for an on-site supply contract, in particular where extensions have to be made to an existing supply arrangement.

(136) In some situations, the bias towards the incumbent may be so pronounced that a customer will find it difficult to obtain competing offers. This tends to be the case if the contract to be awarded is not attractive enough and the chances of success are too limited to warrant the investment in making an offer. Such a situation arises where a customer seeks to add limited capacity to an existing supply arrangement (for instance, the customer has one on-site supply contract with the incumbent for 1 200 tpd oxygen and needs additional supply of 350 tpd). Where a customer has a pipeline supply contract, the chances of outside competitors are also reduced (for details see recitals 85 and 86). In such situations, competitors may simply find it unattractive to bid

⁽³³⁾ In principle, it is conceivable that a customer seeks alternative advice on the project design from several potential suppliers. However, it can be assumed that only very large companies would resort to such a strategy. During the investigation, no case was found in which that approach was used.

⁽³⁴⁾ There may, of course, be exceptions, such as large 'prestige' projects, which several gases companies will be eager to win. This assessment reflects the general tendency.

- against the odds and the customer will have little choice but to fall back on its current supplier. Individual customers have confirmed this concern.
- (137) Secondly, while calls for tender for large on-site projects may become known to all suppliers capable of making an offer, that is not always the case with respect to the larger number of medium-sized or smaller contract opportunities. In those cases, only a limited number of competitors are able to make an offer because customers typically do not publish calls for tender and often do not contact the entire spectrum of potential suppliers. However, the incumbent is normally requested to make an offer.
- (138) Thirdly, suppliers need a significant amount of information about the customers, their operations and requirements in order to prepare their offers. The notifying party has stressed that tonnage contracts are normally tailored to the customer's specific needs. That knowledge puts the supplier in a good position to assess the options open to the customer (for example, replacement, refurbishment or deferral of the contract) and the customer's costs associated with each option. In the course of the negotiations that follow, the supplier can gather further information. The possession of such information enables the supplier to evaluate the risk that a given project will be abandoned, deferred or scaled down or that the customer will switch to an entirely new plant instead of extending the existing arrangement. That knowledge enables a supplier to adjust its price accordingly. Customers can therefore have bargaining power only for marginal projects.
- (139) This degree of transparency of the customers' options and the suppliers' ability to adjust to the customers' behaviour distinguishes the prevailing negotiation procedure in the tonnage market from classical bidding procedures. The latter are designed to avoid this kind of transparency in order to strengthen the customers' position and ensure effective competition between suppliers on a level playing field.
- (140) Fourthly, the history of the tonnage market suggests that it is not easy for customers to switch between suppliers. There is no evidence that the parties' market shares have been subject to wide variations. The existence of strong regional positions also contradicts the notifying party's view. Both Air Liquide and BOC have consistently held very large parts of the tonnage supply in their 'home' territories (see recitals 67 and 68). If the outcome of each contract award procedure was entirely open, one would expect the parties' market positions to be much less stable. This has not been the case.
- (141) The notifying party has quoted several Commission decisions in merger cases in support of its opinion that the use of tendering procedures would reduce the competition concerns normally arising from high market shares.
- (142) In its reply to the statement of objections the notifying party refers to the Commission's Decision of 12 December 1996 in Case No IV/M.692 — Electrowatt/Landis. However, the relevant statements in that decision related to small markets which were characterised by the entry of new competitors and by a degree of technological innovation (electronic components) that would make market share variations likely. None of those elements are present here.
- (143) In the same context, the notifying party quotes the Commission's Decision of 23 October 1998 in Case No IV/M.1298 — Kodak/Imation. However, in that decision, the existence of tendering procedures was only one of several factors taken into account in determining whether the operation would create a single or collective dominant position. A more relevant factor was that any increase in prices was likely to accelerate the customers' switch to a different technology, in particular to digital systems. In the present case, there are no competing technologies that could constrain the parties in a similar way.
- (144) The Commission concludes that the prevailing contract award procedures are not in themselves sufficient to ensure that each potential supplier can bid on equal terms and receive equal treatment during the procedure. The result of such procedures depends on different factors such as the strength of the suppliers in the market. Where one supplier, such as the combined entity after the proposed concentration, has a much stronger position than others, such a procedure allows the dominant supplier to benefit from its position in order to adapt its offer to those of its competitors and, therefore, further weaken their position. The increased imbalance in favour of the combined entity Air Liquide/BOC would further diminish the effectiveness of the existing award procedures. On the basis of those considerations, the Commission considers the prevailing award procedures to be insufficient to constrain the parties' market power.
- Customers have limited cost transparency and will not normally resort to self-production**
- (145) The notifying party argues that customers always have the option of investing in the purchase of an air separation plant and operating it themselves. Purchasing

gases and purchasing air separation plants are therefore two equal and substitutable ways for the customer to satisfy its needs. According to the notifying party, most customers have, at one time or another, owned and operated air separation plants. The customers are therefore in an excellent position to calculate costs of production, to benchmark gas prices and to insist on and obtain the lowest possible gas prices.

- (146) The Commission's investigation has not confirmed those statements. When asked whether they consider self-production to be a viable alternative, most customers replied negatively. There are plausible reasons for this. Firstly, companies in most customer industries pursue a policy of outsourcing non-core tasks. To make a major capital investment for the production of one raw material would go against that trend ⁽³⁵⁾. Secondly, few customers have the expertise and personnel to operate and maintain large air separation units, in particular as the relevant technology is constantly evolving. Customers are not normally able to operate on-site plants as economically as industrial gases companies because they do not benefit from the sale of excess liquid production. Thirdly, customers would not be able to control the subsequent implications of their initial investment decision. Each time the customer required a capacity extension, a purity upgrade or any other modification to the existing plant, it would have to make additional investments. In view of those factors, a customer's threat to switch to self-production, if made during contract negotiations, is hardly credible.

- (147) In particular, there is no justification for stating that plant purchase and tonnage supply of gases are 'equal and substitutable' ways for a customer to satisfy its needs. In its reply to the statement of objections, the notifying party describes how, in a tonnage contract, the risk associated with the large investment is shared ('underwritten') by the customer and the supplier. If a customer opted to purchase a plant, it would have to bear that risk alone.

- (148) The data submitted by the notifying party contradict its statement that customers are generally likely to purchase air separation units and switch to self-production. Of [...] * offers submitted by Air Liquide in Europe during the last five years, self-production was considered by the customers in only [...] * cases. Furthermore, out of [...] * requests for plant sale offers, the customers decided to actually acquire a plant in only [...] * cases whereas they concluded a conventional gases supply contract in [...] * cases. In the light of those data, anecdotal examples of

self-production cannot be considered to be representative. A BOC market analysis states that captive production may be decreasing by up to 2 % per year and the acquisition of captive plants by industrial gases companies may account for one third of the market growth ⁽³⁶⁾. Air Liquide's 1998 Annual Report confirms that development by stating: 'The iron and steel industry provides a good illustration of the current trend in outsourcing oxygen production.' Overall, the tendency is for self-production to decrease rather than increase.

- (149) Most customers replied that they did not have self-production of industrial gases so far, that they had no detailed knowledge of their supplier's cost structure and that they were not or were only partly able to recalculate the price offered by a tonnage supplier. It may be that customers establish benchmarks of industrial gas prices in contract negotiations, but their ability to verify the supplier's costs in each individual case remains limited. Where a customer has operated an air separation unit in the past, the knowledge derived is probably of limited value given that the relevant technology evolves and each large on-site plant is a customised solution.

(e) *Conclusion on the tonnage market*

- (150) The proposed concentration would change the structure of the EEA tonnage market. It would significantly increase Air Liquide's market share, creating by far the largest tonnage supplier and enhancing its lead over its competitors. The competitive potential of a large and competent industrial gases company would be removed. The new entity would have a stronger regional presence throughout Europe that could be used as leverage in competing for new contracts. It would be able to rely on additional strengths not available to its competitors. The notified operation would combine the know how and technology of two leading competitors, as well as their R & D capabilities. Because of its size, the new entity would be better positioned to compete in a capital intensive market that requires large investments. The fact that it would be much larger than most of its competitors would discourage vigorous competition.

⁽³⁵⁾ That view is shared by industry analysts, see for instance NatWest Securities, 'Industrial Gases 2000', February 1997, p. 79.

⁽³⁶⁾ 'BOC process systems: Global situation analysis'; document submitted to the Federal Trade Commission as part of the HSR filing.

(151) The Commission therefore concludes that the proposed concentration would create a dominant position on the market for the tonnage supply of oxygen and nitrogen in the EEA.

2. BULK AND CYLINDER MARKETS

(152) The proposed concentration would raise significant competition concerns because it would combine dominant positions in different national markets, resulting in:

- the increased ability of the combined entity to eliminate or reduce actual and potential competition from third parties, and
- the elimination of actual and potential competition between the parties.

(153) In addition, the proposed concentration would create significant disincentives for Air Products, as the main competitor of Air Liquide/BOC, to compete vigorously with Air Liquide/BOC in these markets.

(a) *Dominant position of BOC in the United Kingdom and Ireland*

BOC has, for most gases, by far the highest market shares in the bulk and cylinder markets in the United Kingdom and Ireland

(154) The market shares of BOC and its main competitors on the markets for bulk and cylinder gases in the United Kingdom and Ireland are set out in tables 6 and 7 respectively ⁽³⁷⁾.

Table 6

United Kingdom

	BOC	Air Products	Messer	Linde	Others
Bulk					
Oxygen	[...]*	25-30 %	< 5 %	< 5 %	
Nitrogen	[...]*	35-40 %	< 5 %	< 5 %	
Argon	[...]*	15-20 %	< 5 %	< 5 %	
CO ₂	[...]*	< 5 %	50-55 %		35-40 % (Hydrogas)
Hydrogen	[...]*	55-60 %	< 5 %		
Cylinders					
Oxygen	[...]*	10-15 %	< 5 %	< 5 %	
Nitrogen	[...]*	25-30 %	5-10 %	5-10 %	< 5 %
Argon/Argon mixtures	[...]*	20-25 %	< 5 %	5-10 %	
Acetylene	[...]*	15-20 %	< 5 %	< 5 %	< 5 % (AGA)
CO ₂	[...]*	5-10 %	35-40 %	< 5 %	
Hydrogen	[...]*	30-35 %	< 5 %	5-10 %	

⁽³⁷⁾ Figures for 1998, based on the companies' turnover for the products in question.

Table 7

Ireland

	BOC	Air Products
Bulk		
Oxygen	[...]*	< 5 %
Nitrogen	[...]*	< 5 %
Argon	[...]*	40-45 %
CO ₂	[...]*	
Hydrogen	[...]*	25-30 %
Cylinders		
Oxygen	[...]*	15-20 %
Nitrogen	[...]*	25-30 %
Argon/Argon mixtures	[...]*	25-30 %
Acetylene	[...]*	10-15 %
CO ₂	[...]*	< 5 %
Hydrogen	[...]*	15-20 %

(155) In Ireland, BOC has high market shares for all gases. In the United Kingdom, BOC has high market shares in particular for the atmospheric bulk gases (oxygen, nitrogen and argon) and all cylinder gases.

(156) BOC has a limited number of competitors. In the United Kingdom, only three other large industrial gases companies are present, two of which have limited market shares (Messer and Linde). In Ireland, competition is limited to Air Products. Air Products, as the only significant competitor in both countries, occupies a much weaker position in terms of market share in most segments. The gap between BOC and Air Products in Ireland is pronounced for every relevant gas except argon, which is a low-volume and high-value gas. Air Product's market share is equal to that of BOC only with respect to bulk hydrogen in the United Kingdom, a product that is traded.

(157) In its reply to the Commission's statement of objections, the notifying party argues that BOC's market shares for bulk and cylinder atmospheric gases and for acetylene have undergone a continued decline during the last years.

(158) While the Commission acknowledges that BOC may have experienced some losses of market share in the past, it finds the arguments presented are not sufficient

to rebut its finding of dominance in the bulk and cylinder markets in the United Kingdom and Ireland.

(159) Firstly, in the past BOC held very high market shares in the bulk and cylinder markets in the United Kingdom and Ireland, amounting to near monopoly positions in some markets in the United Kingdom and in most markets in Ireland. Even in a market dominated by one supplier that has captured a very large part of the supply, market share can be lost to some degree over an extended period of time. That fact alone does not rule out continuing dominance.

(160) Secondly, despite the loss of market share following the entry of some newcomers into the market, BOC's market share has consistently remained high. In the United Kingdom, BOC's share of the market for bulk oxygen, nitrogen and argon as well as oxygen, nitrogen, argon/argon mixtures, acetylene, carbon dioxide and hydrogen supplied in cylinders has been consistently high ([...]*). BOC's share of the market for bulk and cylinder gases in Ireland has consistently been even higher ([...]*). There have been no large market share variations in the past that would suggest that BOC's high market shares might decrease substantially in the foreseeable future.

(161) The supplemental market share data presented by BOC at a late stage in the procedure is inconsistent with the data provided in the notification which, according to the notifying party, represented best estimates based on actual BOC data. The Commission does not have sufficient knowledge of the basis for calculating those market shares and the methodology used. In any case, even if the assessment were based on the market share estimates provided at a later stage, they would not refute the Commission's finding of dominance in the markets concerned.

(162) The notifying party also challenges the Commission's findings on dominance on the United Kingdom bulk market by reference to declining prices. It submits that, since 1985, the price for bulk oxygen, nitrogen and argon in the United Kingdom has continuously declined. The notifying party has not provided any further information as to the basis for the figures underlying that conclusion.

(163) However, the notifying party stated in its reply to the statement of objections that technical developments have brought about a reduction in the investment required for air separation units (about [...]* in 15 years) and a reduction in the average power consumption (about [...]* in 15 years), so that the cost of production of liquid oxygen and liquid nitrogen has

decreased (by [...] in 15 years, also due to a decrease in the cost of power). Such a decrease in production and energy costs has also been reported in industry analyses concerning this sector. The Commission therefore considers that the price development largely reflects the reduction in production and energy costs. Although transport costs may have increased, the Commission notes, however, that the transport costs for the largest incumbent supplier, BOC, must be lower than for any competitor. BOC can rely on the densest production and distribution network in the United Kingdom and Ireland. It therefore has to cover less distance between production sites and filling stations and between filling stations and customers. Calculations submitted by the notifying party confirm that assessment ⁽³⁸⁾.

- (164) The Commission therefore finds that the consistently high market shares held by BOC in the bulk and cylinder markets for atmospheric gases and acetylene in the United Kingdom and Ireland, in particular when compared with the competitors' much lower market shares, are in themselves indicative of dominance in these markets.

BOC has the most extensive production and distribution network in the United Kingdom/Ireland

- (165) BOC has the most extensive infrastructure for the production and distribution of atmospheric gases in the United Kingdom and Ireland. The company has [...] merchant air separation units in Great Britain and [...] in Ireland. Each of these production facilities also serve as a distribution point for bulk gases, but BOC has [...] additional bulk gas distribution facilities in Great Britain. BOC also has an acetylene plant in Great Britain. BOC therefore has the densest and most well balanced network of bulk gases production and distribution locations. Furthermore, BOC has an extended cylinder distribution infrastructure in Ireland ([...] cylinder filling facilities compared to one for its competitors). It should also be noted that BOC has been able to place a significant number of small nitrogen on-site plants (more than [...]) with customers that would otherwise require liquid nitrogen supply. On the basis of data provided by competitors, the Commission concludes that no competitor has a similarly extensive production and distribution infrastructure in Great Britain and Ireland. Therefore, BOC's overall logistical position is such that it allows the company to maintain, if not to reinforce, its dominance.

BOC has a very strong presence in the tonnage sector in the United Kingdom

- (166) BOC controls by far the largest part of the supply of atmospheric gases in large quantities in the United Kingdom (tonnage supply) ⁽³⁹⁾. According to figures provided by the notifying party, which have been confirmed by the Commission's inquiries, BOC provides [...] of tonnage oxygen and the same proportion of tonnage nitrogen. Its strong position in the tonnage segment is reinforced by its control of the most extensive pipeline grids in the United Kingdom.
- (167) BOC's strong position in the tonnage segment entails additional advantages in the bulk market because each time BOC wins a tonnage contract it can, in principle, decide to use the new on-site plant for the simultaneous production of liquid gases (so-called 'piggy back' production). BOC can thus constantly renew its production capacity. Furthermore, liquid gases produced simultaneously with tonnage gases have lower production costs because of the economies of scale achieved in a larger plant. In its reply to the statement of objections and at the oral hearing, the notifying party disputed such an advantage and considered that 'piggy back' production does not reflect the present tendencies in bulk production. That view is not, however, supported by all competitors, some of which claim that over-sizing an on-site plant still affords an additional advantage to a gas supplier in the bulk market.

- (168) The control of pipeline networks confers additional structural advantages, which are not available to other competitors, not only in the tonnage market, but also in the market for bulk gases. The Commission investigation has confirmed that there is, in principle, no obstacle to the use of a pipeline for supplying the quantities of gases normally provided in bulk. Thus, unlike competitors without access to pipeline networks, BOC can substitute high-cost bulk supply by granting suitable customers access to its pipelines. This is confirmed by examples submitted by BOC.

(b) Dominant position of Air Liquide in France

Air Liquide has by far the highest market shares in the French bulk and cylinder markets

- (169) The market shares of Air Liquide and its competitors in the bulk and cylinder markets in France are set out in table 8:

⁽³⁸⁾ Annex A.11 to the reply to the statement of objections.

⁽³⁹⁾ There is no tonnage supply in Ireland.

Table 8

France

	Air Liquide	AGA	Air Products	Praxair	Messer	Linde	Others
Bulk							
Oxygen	[...]*	15-20 %	10-15 %	5-10 %	< 5 %	< 5 %	
Nitrogen	[...]*	5-10 %	10-15 %	< 5 %	5-10 %	< 5 %	10-15 %
Argon	[...]*	10-15 %	5-10 %	5-10 %	5-10 %	5-10 %	
Carbon dioxide	[...]*	< 5 %			25-30 %		< 5 %
Hydrogen	[...]*		15-20 %		< 5 %		
Cylinders							
Oxygen	[...]*	20-25 %	< 5 %		< 5 %	< 5 %	
Nitrogen	[...]*	15-20 %	5-10 %		5-10 %	< 5 %	
Argon/Argon mixtures	[...]*	15-20 %	5-10 %		5-10 %	< 5 %	
Acetylene	[...]*	10-15 %		< 5 %	< 5 %	< 5 %	10-15 %
Carbon dioxide	[...]*	10-15 %	< 5 %		10-15 %	< 5 %	
Hydrogen	[...]*	10-15 %	< 5 %			5-10 %	

(170) Table 8 shows that Air Liquide holds by far the highest shares in all markets. Competition is fragmented, with no competitor reaching [...] of Air Liquide's market share in any segment and most being significantly weaker in the remaining markets. AGA, as the strongest competitor, exceeds 20 % only with respect to oxygen in cylinders (where Air Liquide has a market share of [...]).

(171) In its reply to the Commission's statement of objections and at the oral hearing, the notifying party submitted that the Commission's analysis did not take account of its declining market shares for bulk and cylinder gases in France over the past 20 years. Secondly, it argued that prices for bulk oxygen, nitrogen and argon/argon mixtures have decreased and costs of bulk production increased.

(172) With regard to the cylinder market, the data provided by the notifying party following the hearing suggests that the market shares for cylinder oxygen and acetylene have declined only slightly during the last 10 years and have remained relatively constant during the last three years, whereas the market share for argon shows even

seems to be increasing. Prices for these cylinder gases have increased relatively constantly over the last 10 years by [...].

(173) The evidence put forward by the notifying party to challenge the Commission's findings on dominance in the bulk and cylinder markets in France is not convincing.

(174) Firstly, with regard to market shares, Air Liquide enjoyed a near monopoly position in the French bulk and cylinder markets in the past (for instance [...] for liquid oxygen and nitrogen together in 1975). Despite some market share losses, Air Liquide's market shares have constantly remained high (approximately [...]) for both bulk and cylinder gases. There have been no sudden large losses of market share in the past that would suggest that Air Liquide's high market shares might be reduced substantially in the foreseeable future.

(175) Secondly, with respect to costs, the basis on which the alleged increases have been calculated is not clear. The notifying party stated in its reply to the statement of objections that technical developments, during the past 15 years, have contributed to considerable cost savings

of [...] in the production of liquid oxygen and nitrogen. The Commission therefore considers that the price development largely reflects the reduction in production and energy costs. Even if transport costs for a supplier such as Air Liquide with a dense infrastructure and distribution network in France have risen, these costs would be lower than those of a competitor with a less dense infrastructure and distribution network.

- (176) The Commission concludes that the repartition of market shares described in recitals 169 to 175 is in itself indicative of dominance by Air Liquide in the bulk and cylinder markets in France.

Air Liquide has the most extensive production and distribution network in France

- (177) Air Liquide operates [...] air separation units producing liquid oxygen and nitrogen and [...] air separation units producing liquid argon in France. Air Liquide also operates [...] hydrogen and carbon dioxide plants and [...] acetylene plants in France. In terms of cylinder distribution infrastructure, Air Liquide has [...] cylinder filling facilities, of which [...] are capable of filling standard air gases, [...] acetylene, [...] carbon dioxide, [...] hydrogen and at least [...] speciality gases. Air Liquide has a comprehensive network of more than [...] resellers covering all regions.

- (178) On the basis of data provided by competitors, the Commission concludes that no competitor has a similarly extensive production and distribution infrastructure in France. In its reply to the Commission's statement of objections Air Liquide argues that its production capacity of Air Liquide of bulk oxygen and nitrogen currently barely exceeds that of all its competitors taken together. The Commission is not convinced by this argument. Although the figures provided by the notifying party suggest that in 1983 the overall production capacity of the competitors of bulk oxygen and nitrogen was considerably lower than that of Air Liquide, there has been no further increase in the production capacity of the competitors in relation to the production capacity of Air Liquide over the last five years.

- (179) In addition, Air Liquide has [...] small on-site facilities for the production of nitrogen and can be considered to have a unique position in this segment. Overall, Air Liquide has superior access to customers in France, a factor that reinforces its dominance.

Air Liquide has a very strong presence in the tonnage sector in France

- (180) According to its own estimates, Air Liquide is currently providing by far the largest proportion of tonnage gases in France ([...] of oxygen and [...] of nitrogen). Furthermore, Air Liquide operates unique networks of pipelines in key industrial regions of France, Belgium and the Netherlands ⁽⁴⁰⁾.

- (181) In its reply to the statement of objections and at the oral hearing the notifying party disputed such an advantage and considered that 'piggy back' production does not reflect the present tendencies in bulk production. This view is not, however, supported by all competitors, some of which claim that 'piggy back' production still affords an additional advantage to a gas supplier in the bulk market. Indeed, Air Liquide has confirmed that [...] of its plants in Europe ([...] out of [...]) have over-capacity for liquid oxygen and nitrogen to be sold in the bulk market. The notifying party estimates that the proportion of Air Liquide's and BOC's total bulk sales supplied by on-site plants with over-capacity has remained constant over the last five years: [...] (1998), [...] (1997) and [...] (1994 to 1996).

- (182) The Commission concludes that a very strong position in the adjacent tonnage segment further strengthens Air Liquide's position in the bulk market.

(c) Strengthening of dominant positions

(aa) Combination of dominant positions

The proposed concentration would combine dominant positions in three national markets

- (183) In France and the United Kingdom/Ireland, the proposed transaction would bring together two incumbent suppliers which, prior to the transaction:

- provide the full range of industrial gases products,
- have very high market shares in the markets for bulk and cylinder gases,

⁽⁴⁰⁾ Oxygen pipelines — [...] km; nitrogen pipelines — [...] km.

- have extensive national production capacities and distribution networks as well as the best cost basis,
- have a well-established customer base and preferential access to customers, and
- have historically established, strong positions in their respective 'home' markets (and adjacent countries), amounting to dominance.

(184) If the proposed concentration were allowed to go ahead as notified, the result would be dominance by one single supplier in the second and third largest industrial gases markets in Europe (France and the United Kingdom). The combined entity would be dominant in an area that accounts for approximately [...] of the European demand for industrial gases ⁽⁴¹⁾.

The proposed concentration would combine the parties' dominant position with strong positions in other countries

(185) In addition to its dominance in an extended geographic area covering large markets in western Europe, the combined entity would have access to markets in a number of other countries in which its actual and potential competitors are active, resulting in multi-market contacts. The combined entity would have high market shares notably in Belgium, Denmark, Greece, Italy, Portugal, Spain and Sweden. In Germany, the largest European industrial gases market, the combined entity's market position would be less strong, but still significant.

(186) The market shares of Air Liquide/BOC in some other countries are set out in table 9:

Table 9

Air Liquide/BOC market shares in other countries

	Belgium	Denmark	Germany	Greece	Italy	Portugal	Spain	Sweden
Bulk								
Oxygen	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Nitrogen	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Argon	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Carbon dioxide	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Hydrogen	[...]*	[...]*	[...]*		[...]*		[...]*	
Cylinders								
Oxygen	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Nitrogen								
Argon/Argon mixtures	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Acetylene								
Carbon dioxide	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Hydrogen								

⁽⁴¹⁾ Overall, the combined entity would supply approximately [...] of the European demand for industrial gases.

- (187) Air Liquide has a production and distribution infrastructure for industrial gases in each of the countries in table 9, even those where its market share does not indicate dominance. For further details see table 4.
- (188) In its reply to the statement of objections the notifying party contests the relevance of the market shares for bulk and cylinders in other European countries for the assessment of its position on the bulk and cylinder markets in France, the United Kingdom and Ireland. The Commission finds, however, that the market shares presented in table 9 give an indication of the position of Air Liquide and BOC in various European bulk and cylinder markets, and are thus useful for the overall assessment of the present transaction.

(bb) Increased ability to eliminate or substantially reduce actual and potential competition from third parties

By combining their respective dominant positions, Air Liquide/BOC would become even less vulnerable to competition in France, the United Kingdom and Ireland

- (189) The proposed transaction would bring a much larger area under the control of one player rather than two, thus giving the combined entity additional leverage against rivals in France, the United Kingdom and Ireland.
- (190) Firstly, the two dominant incumbents would no longer be actual and potential competitors. The combination of their businesses would strengthen the parties' technological and financial resources in their respective home markets. Those factors alone act as a deterrent to foreign competitors and would increase barriers to entry.
- (191) Secondly, each of the parties would benefit from the anti-competitive effects of the strategies pursued in the territory of the other. Before the transaction, for instance, if BOC had countered entry into the United Kingdom market by a competitor (for instance, Linde), it would have reduced its profitability and therefore become more vulnerable to (actual or potential) competition by other parties (for instance, Messer or Praxair). Thus, before the transaction, any entry into the United Kingdom market would have improved the competitive structure of that market. After the transaction, a third party establishing a presence in the United Kingdom would have a substantially smaller impact on the market structure.

- (192) Thirdly, the proposed transaction would increase the ability of the combined entity to increase competitors' risks and costs in entering the bulk and cylinder markets in France, the United Kingdom and Ireland. Any entrant into another incumbent's stronghold normally incurs substantial sunk costs in investing in infrastructure which are not necessarily recoverable due to the incumbent's strong incentive to engage in marginal or sub-marginal price competition in order to prevent the entrant from establishing a foothold. Before the transaction, entrants to the United Kingdom, for example, would have faced the financial risk of entering into the United Kingdom market only. After the transaction, most entrants would face a more powerful incumbent in the United Kingdom and their investments in France could consequently face greater risks. The same applies for new entrants in France and their possible investments in the United Kingdom. Indeed, after the proposed concentration, the combined entity would be capable of singling out entrants for concerted counter-action in either France, the United Kingdom or Ireland.

- (193) Fourthly, the proposed transaction would give the combined entity increased potential for retaliation in its competitors' home markets. Before the transaction, at least BOC's ability to counter market entry in the United Kingdom or Ireland by retaliating in the entrant's home market, was limited by the fact that it lacked a suitable production and distribution infrastructure in many Continental European markets. After the transaction, the combined entity would have an increased capability of countering entry into the United Kingdom bulk and cylinder markets using Air Liquide's strong position and established infrastructure in continental Europe. For instance, the combined entity, unlike BOC previously, would be in a position to use its presence in Germany in order to deter the recent entrants, Linde and Messer, from pursuing aggressive competition in the United Kingdom.

The combination of dominant positions would enable the merged entity to use a secure captive home market as leverage against its competitors

- (194) By combining dominant positions in an extended area, the combined entity would be in a unique position to compete for customers within that area. Because the area controlled by the combined entity would include two large markets (France and the United Kingdom), it is more likely that multinational customers would have businesses, and therefore industrial gases demand, in both markets. If, for example, a United Kingdom customer had demand for industrial gases at another of its plants in France, the combined entity would be able

to offer discounted rates, or make other types of concessions in the United Kingdom market in exchange for that customer's business in France. The combined entity would thus be in a position to use its position in the United Kingdom as leverage in order to strengthen its position in France, and vice versa. While such practices may not always be unlawful, the possibility of engaging in such conduct raises competition concerns where a supplier is dominant. By creating a situation in which the combined entity Air Liquide/BOC could compete on the basis of dominant positions in two countries, the proposed transaction would enable it to use a dominant position in one country in order to strengthen a dominant position in another.

atmospheric gases in Belgium and the Netherlands, having established a tonnage plant at Terneuzen, which produced liquid oxygen, nitrogen and argon for the bulk market and a cylinder filling plant at Herenthout, capable of filling a wide range of industrial gases. Both facilities supplied customers in Belgium and the Netherlands using BOC-owned delivery vehicles. Both facilities also supplied BOC's cylinder gases business in Germany, based at Bopfinger. In Belgium, a country in which Air Liquide has a strong position, BOC evolved into a significant entrant for certain gases (bulk argon — [...]; bulk carbon dioxide — less than [...]*; cylinder oxygen — less than [...]*; cylinder argon — [...]*) until the operations were sold to Air Liquide late last year.

(195) The combined entity would be well placed to use its strongholds in its home markets as a base to attack other markets, either its competitors' home markets or smaller geographic markets in which a number of industrial gases companies are competing. It would be able to increase its market shares in those markets by undercutting its competitors, because of its strengthened financial position resulting from profits generated on its strong home markets, namely the difficult-to-enter French, United Kingdom and Irish markets. At present, the two parties individually are more constrained from engaging in such conduct than they would be after the transaction. In theory, either BOC or Air Liquide could use its respective home markets as a base to compete in other countries. However, that possibility is currently limited by the moderating effect of potential competition by the other party (reciprocal moderation). For instance, BOC is currently constrained in using its control of the United Kingdom and Irish markets in order to extract higher prices from customers because it would face the risk of Air Liquide entering its home countries. Air Liquide is better placed than other competitors to enter the United Kingdom market. The proposed transaction would remove the existing constraints, and the combined entity would have more freedom in this respect.

(cc) Elimination of actual and potential competition between Air Liquide and BOC

By acquiring BOC's bulk and cylinder operations in continental Europe, Air Liquide would eliminate BOC as an actual and potential competitor in its home market

(196) Prior to the proposed concentration as notified, BOC had entered the bulk and cylinder markets for certain

(197) The geographic reference market for certain high-value gases such as bulk argon and, possibly, cylinder argon, which can be transported over larger distances than standard air gases, appears not to be limited to Belgium but to cover an area comprising some parts of Northern France. The fact that Air Liquide imports liquid argon from France would support that view. The acquisition of BOC's Continental European operations therefore strengthens Air Liquide's dominant position in France not only by removing an actual competitor, but also by adding that competitor's market share to Air Liquide's own dominant position.

(198) Insofar as Belgium is a market distinct from France, namely for those gases that can be transported less economically over large distances, Air Liquide would strengthen its dominant position in France by eliminating potential competition in the French market and actual competition in an adjacent market. Firstly, BOC must be seen to be a potential competitor in France, having demonstrated that it can establish a bulk and cylinder gases business in continental Europe. Secondly, the elimination of BOC's position in continental Europe would relieve Air Liquide of the competitive pressure arising from BOC's presence in a market adjacent to its home base. Thirdly, by removing a competitor in the Belgium market and acquiring that competitor's additional market share, Air Liquide would become an even stronger player in Belgium, where it has already captured a large part of the market. Air Liquide would thus be able to counter other potential entrants into its home market more effectively in a neighbouring country from which entry into the French market could easily be attempted, for instance by supplying the industrial regions of Northern France.

(199) In its reply to the Commission's statement of objections the notifying party argues that BOC's operations in Belgium and the Netherlands were limited in scope and that their acquisition by Air Liquide did not therefore lead to any relevant change of the competitive

conditions on the French bulk and cylinder markets. However, upon examination of the business data for those operations, that argument must be rejected. BOC's tonnage business was secured by long-term contracts continuing until at least [...] and [...] respectively. BOC's bulk business has been benefiting from strong volume growth in liquid sales. Profitability has improved each year ⁽⁴²⁾ and in the financial year 1998/1999 an operating profit was achieved. The business generates substantial cash flows. BOC's cylinder business has grown at healthy annual rates and has reduced its operating losses continuously over the past years ⁽⁴³⁾. When comparing the financial data provided by BOC with data provided by competitors for market entries attempted under similar circumstances, the turnover and profitability evolution is in line with what is to be expected during the start-up period. It is therefore legitimate to argue that BOC's businesses in these markets were viable. BOC has stated that it planned to dispose of its Continental European businesses following a review of its global operations.

- (200) The present transaction would strengthen Air Liquide's dominant position in France because it would eliminate BOC as an actual and potential competitor in France. It is this permanent and structural change in the market, and not a business decision by one competitor, that raises the competition concern.

The proposed concentration would eliminate Air Liquide as the most credible potential competitor in the United Kingdom and Ireland

- (201) Air Liquide represents one of the strongest potential entrants in BOC's national home markets. Competitors have stressed that Air Liquide would have been best placed amongst all industrial gases companies to make inroads into the United Kingdom market ⁽⁴⁴⁾. Once the parties have merged, this competitive pressure would be lost. This would be true irrespective of whether or not Air Liquide was already active in BOC's home market.

- (202) In its reply to the statement of objections, the notifying party admits that a dominant supplier can be restrained in the exercise of its market power by potential competition from other undertakings which could realistically enter the market. The notifying party disputes that any potential entrant has had any such

effect in the United Kingdom. However, individual customers have indicated a different view.

- (203) Air Liquide argues that its qualification as a potential competitor is purely theoretical because it has never tried to penetrate the United Kingdom market and is less likely to do so now that others have entered the market. However, a project study submitted to the Commission shows that Air Liquide has contemplated supplying bulk and cylinder gases in the United Kingdom when consulted by a customer ⁽⁴⁵⁾. Moreover, Air Liquide concedes that Messer has been able to overcome the entry barriers to the United Kingdom bulk and cylinder markets, without however offering reasons why Air Liquide should not realistically be able to enter the United Kingdom market itself. Indeed, Air Liquide has the most successful history in entering other European markets of all industrial gases companies. By stating at the oral hearing that its absence from the United Kingdom is a business decision, Air Liquide has acknowledged that no objective factors would have prevented it from entering the United Kingdom market.

- (204) Finally, the notifying party stated at the oral hearing that, as a similarly large industrial gases company, Praxair should be considered an equally credible potential competitor in the United Kingdom. However, the notifying party has not explained why a company that has most of its operations on the American continent and a limited presence in Europe should be as credible an entrant as Air Liquide, the strongest industrial gases supplier in Europe.

The examples of Linde and Messer have shown that competitors based in continental Europe can enter the United Kingdom market

- (205) Green-field market entry is possible in the cylinder and bulk markets and has been accomplished in the United Kingdom. In principle, a number of ways to enter a foreign market exist:

- exporting industrial gases to the target country,
- establishing an own production capacity in the target country, for instance by acquiring customers for large on-site production plants,

⁽⁴²⁾ During the financial years 1994/1995 to 1998/1999 (tonnage and bulk business accounted for together).

⁽⁴³⁾ During the financial years 1994/1995 to 1998/1999.

⁽⁴⁴⁾ [...].

⁽⁴⁵⁾ Note for Air Liquide's Comité des Projets Europe of 28 January 1997 concerning a call for tender by an electronics company for bulk gases (nitrogen, oxygen and argon), cylinder gases (helium and hydrogen) and equipment in which Air Liquide participated.

- initially establishing a distribution infrastructure and sourcing industrial gases on the merchant market before setting up an own production capacity,
- acquiring a small local supplier and expanding the acquired supplier's distribution network and customer base.

Messer has market shares of less than 5 % for oxygen, less than 5 % for nitrogen and less than 5 % for argon.

Air Liquide, as the number one in Europe and the world, is the most credible potential entrant to the United Kingdom market

- (206) Market entry can be effected without importing the full range of industrial gases where such importation would not be not possible or economically viable. In this case, a market entrant will normally proceed as follows. Initially, the entrant will set up one or several cylinder depots and distribution points. Standard atmospheric gases will be purchased from, and filled into cylinders by local suppliers. High value gases, such as acetylene, gases mixtures, pure and speciality gases and liquid argon will be imported. Competitors have confirmed that such imports have taken place in order to sustain market entry in the United Kingdom. As a second step, once a certain number of customers have been acquired, the entrant will set up a facility to fill standard gases (oxygen, nitrogen, argon, argon mixtures and carbon dioxide) into cylinders. The liquid gases required will be purchased on the merchant market. High value gases will either continue to be imported or be purchased from local suppliers. On the basis of this extended distribution structure, the entrant will, as a third step construct an air separation unit of a limited size (for example 15 to 40 million m³/year for oxygen/nitrogen) and additional transfill facilities in the target country. This will enable the entrant to acquire and supply bulk customers.
- (207) Alternatively, an industrial gases company can enter a foreign market by acquiring a small local supplier, adding other products and expanding its infrastructure and customer base. Once this initial step has been taken, the entrant is in a position to establish or extend its own production and distribution capacity by proceeding as described in paragraph 206.
- (208) The examples of Linde and Messer confirm that it is possible to enter the cylinder and bulk markets in the United Kingdom and acquire limited market shares. Linde entered the United Kingdom market in 1992, and has since gained market shares in the cylinder segment of less than 5 % of oxygen, 5 to 10 % for nitrogen, less than 5 % for acetylene, 5 to 10 % for argon and argon mixtures and 5 to 10 % for hydrogen. Messer entered the United Kingdom market by acquiring a small supplier of carbon dioxide and extending the acquired distribution infrastructure. The company subsequently built a stand-alone air separation plant at Eggsborough (initially jointly with AGA). In the cylinder gases segment, it has gained market shares of 5 to 10 % for nitrogen, less than 5 % for argon/argon mixtures and 35 to 40 % for carbon dioxide. In the bulk segment,
- (209) In the markets for cylinder and bulk gases, the main barriers to entry consist of the capital investment and operating expenses involved in establishing and sustaining a production and distribution infrastructure, in the acquisition of a sufficient customer base to justify that expenditure, and in the financing of operative losses during a start-up period until the newly established business becomes profitable.
- (210) Investment and operating costs vary depending on which method of market entry is chosen. If a new entrant chooses to bid for on-site tonnage contracts, with the intention of over-sizing the production facility and selling excess capacity to bulk or cylinder customers, a substantial up-front investment is required. In most cases, the cost incurred will be recovered over the duration of the contract, given that on-site supply contracts typically run for a period of 10 to 15 years. However, only a limited number of large industrial gases companies have the financial resources (and more generally, the project management capability) to launch such large projects. If the entrant chooses to first establish a cylinder distribution infrastructure and subsequently extend its business into the bulk market, the initial capital investment (establishment of a cylinder depot and a filling facility) will be in the range of EUR 2 to 3 million. However, the construction of an air separation unit and related further transfill centres will require a substantially higher investment, in the order of EUR 50 to 60 million. In addition, operating costs and transport costs for gases that have to be imported will be incurred on a continuous basis. In principle, similar costs will be incurred in the long term if an entrant acquires a small local supplier and tries to expand the acquired infrastructure.
- (211) A newly established industrial gases business often takes a certain period of time to become profitable. The need to sustain operative losses during this start-up period constitutes an additional barrier to entry. If market entry occurs, incumbent suppliers may attempt to prevent the entrant from establishing a significant foothold in their home market by seeking to undercut the entrant's prices in the area in which the entry takes place. Competitors have provided examples of how BOC has pursued this strategy in order to deny them entry to the United Kingdom market. This means that the entrant will have to be able to finance an operative loss during a start-up period.

- (212) Large industrial gases companies are therefore better able to enter a market already dominated by an incumbent than smaller suppliers. Large companies are more likely to have the financial strength, the logistical and technological resources and the strategic planning ability to make the necessary investments and sustain market entry against aggressive counter-action by a locally dominant incumbent. In the case of the United Kingdom, this assessment is borne out by the observation that two large competitors based abroad, Linde and Messer, have been more successful in gaining market share than small start-up entrants, even though the latter were operating from within the United Kingdom (for instance Energas and Medigas).
- (213) Against this background, Air Liquide, as the leading industrial gas company in Europe, possesses specific strengths making it the foreign competitor most suited and most likely to enter the United Kingdom market.
- (214) Air Liquide has a strong capability to establish a production and distribution infrastructure in foreign markets. This is demonstrated by the fact that Air Liquide has successfully established a production and distribution network for industrial gases in a range of European countries, comprising stand-alone production plants (bulk gases plants), dedicated plants (plants dedicated to one or several customers) with excess production capacity for the bulk market, small on-site production plants and cylinder filling facilities. Table 4 sets out Air Liquide's European production and distribution network in countries outside France. The following conclusions can be drawn:
- in markets remote from its home base (France) to which bulk deliveries are not economical, Air Liquide has established its own production capacity, either by constructing stand-alone plants or by building excess capacity into dedicated tonnage plants. Only in countries to which bulk deliveries could be carried out from French production sites (Belgium, the Netherlands, Luxembourg and, to a lesser degree, Germany) has a less important local production capability been put in place,
 - in all of the countries in which a stand-alone production capacity was installed, Air Liquide has established cylinder filling facilities in line with the size of the market concerned (the only exception being Finland, where only dedicated plants exist). In the majority of countries, the cylinder filling network covers the full range of gases, including a number of facilities capable of filling high-value gases with a higher transportation radius (argon, argon mixtures, acetylene and other gases including speciality gases),
 - in addition, Air Liquide has been able to make substantial inroads into foreign markets by offering and installing small on-site production facilities for standard gases (oxygen and nitrogen). It should be noted that customers in countries remote from Air Liquide's home base can be, and have been, supplied using this technology.
- (215) Air Liquide is generally recognised by competitors and industry analysts as the leading supplier of industrial gases through dedicated on-site (tonnage) plants. Its strong Europe-wide position in the tonnage market increases Air Liquide's ability to enter foreign bulk and cylinder markets, unrivalled by any competitor. Air Liquide has previously pursued a policy of over-sizing such dedicated tonnage plants, with the aim of selling excess capacity on the bulk and cylinder markets. Indeed, this type of simultaneous gaseous and liquid production represented [...] of Air Liquide's total liquid oxygen and nitrogen production in the EEA in 1998.
- (216) Air Liquide has considerable financial strength enabling it to sustain start-up losses. It is the industry leader in terms of turnover as well as capital expenditure. Air Liquide's history of entry into the cylinder and bulk markets in other European countries (Belgium, Denmark, Germany, Greece, Italy, Netherlands, Portugal, Spain and Sweden) confirms that the company is able to bear the financial burden of market entry. It has been able to do so, in particular, in those countries where local suppliers present strong competition (for instance in Germany, Italy and Sweden). Air Liquide is the only European competitor able to rely on a very strong position, amounting to dominance, in a home market for bulk and cylinder gases of considerable size (France).
- (217) Air Liquide has leading technological expertise allowing it to enter foreign markets more effectively. There is consensus in the industry that technology, in particular application technology, is one of the main drivers of competition in the bulk and cylinder gases markets, given that the products are largely homogenous and new customers can be acquired by offering new or more economical application solutions, thereby reducing the customer's costs and increasing productivity. If market entry is attempted, the ability to offer new application solutions becomes even more important. Any entrant faces limits with respect to acquiring customers by offering low prices, since the entrant's production cost base will initially be less advantageous than that of an incumbent, and the incumbent may try

to match the prices offered by the entrant⁽⁴⁶⁾. Therefore, an entrant's ability to compete on applications technology is often vital in order to extend its customer base. It is generally accepted that Air Liquide possesses advanced technological expertise and enjoys a leading position with respect to application technologies⁽⁴⁷⁾.

(218) Furthermore, Air Liquide is a leading provider of specific technologies that can be offered to customers remote from the entrant's home base (for example small on-site production facilities for oxygen and nitrogen based on VPSA and membrane technology). Air Liquide has demonstrated how this technology can be marketed successfully, by placing approximately [...] small on-site contracts with customers in the Community outside France⁽⁴⁸⁾. Given that the quantities of gases supplied using small on-site facilities often correspond to a demand that would otherwise be fulfilled through bulk deliveries, the ability to offer this technology gives an entrant an additional advantage in acquiring bulk customers.

(219) The analysis of Air Liquide's specific competitive strengths confirms that Air Liquide is well placed to enter the United Kingdom cylinder and bulk markets. Furthermore Air Liquide is better placed than any other competitor to successfully sustain such market entry. While Linde and Messer have established a limited presence in the United Kingdom cylinder and bulk markets, their competitive strength, especially if weighed against BOC's market power, is much more limited than the competition Air Liquide could mount in the United Kingdom and Ireland. Indeed, neither of those two companies has, in the past, been able to establish itself in other European countries to the same extent as Air Liquide. Other competitors (Praxair, AGA), are significantly smaller in terms of size, overall market share and production as well as distribution infrastructure in Europe⁽⁴⁹⁾. Neither company is as well placed as Air Liquide to enter the United Kingdom and Irish markets. No other large industrial gases companies

exist that could enter the United Kingdom and Irish markets. Air Liquide is therefore the only credible potential competitor.

(220) In conclusion, potential competition in the markets for cylinder and bulk gases in the United Kingdom and Ireland largely depends on Air Liquide's continuing presence as an independent competitor. Once the incumbent (BOC) and the strongest potential entrant (Air Liquide) were merged, this competitive pressure would be lost.

The absence of Air Liquide in the United Kingdom market to date has to be seen as a strategic decision, which could be reversed at any time

(221) There is consensus in the industry that an industrial gas company's decision to enter a foreign market is a strategic business decision. Any industrial gas company that wishes to grow in the long term cannot do so without expanding its geographic market coverage. This is best demonstrated by Air Liquide's history of expansion in Europe and worldwide, in particular in countries that are remote from its home base. Competitors have unanimously stressed that each industrial gas company, in pursuing its expansion strategy, will weigh the investments required and the risks involved. Given that Air Liquide would have been best placed to expand its operations into the United Kingdom and Ireland, it has to be concluded that the decision not to do so to date is one that could have been reversed. Indeed, Air Liquide has considered becoming active in the United Kingdom market in the past (see recital 203).

(222) It should be stressed that the Commission's objections are not directed against Air Liquide's business strategy to date which may have been to not (yet) launch substantial activities in the United Kingdom and Ireland. Rather, the specific competition concerns arising from the proposed concentration relate to the elimination of the most credible potential competitor in the markets concerned. Irrespective of whether the competitor concerned has previously been willing to launch effective competition, the proposed concentration would permanently remove the possibility of such competition taking place. The proposed concentration would thus permanently eliminate potential competition and thereby strengthen BOC's existing dominant position in the markets concerned. The likely result would be that the combined entity (Air Liquide/BOC) would be able to perpetually dominate the markets for cylinder and bulk gases in the United Kingdom and Ireland.

⁽⁴⁶⁾ According to competitors who have entered the United Kingdom market, BOC has, in the past, indeed pursued the strategy of matching their prices by reciprocal price reductions.

⁽⁴⁷⁾ Air Liquide has gained leading expertise in key, high technology application areas such as the electronics and chemical industries (NatWest Securities, 'Industrial Gases 2000', February 1997, pp. 45 and 73). [...] of Air Liquide's R & D expenditure are focused on improving the technologies associated with the application of industrial gases in the customers' industries. For example, applications in the field of [...] account for [...] of Air Liquide's R&D (figures provided by the notifying party).

⁽⁴⁸⁾ Figures provided by the notifying party, until end 1998.

⁽⁴⁹⁾ AGA has sold its limited operations in the United Kingdom.

(d) ***Disincentives for Air Products to compete vigorously with Air Liquide/BOC in the bulk and cylinder markets in the United Kingdom, Ireland and France***

(223) This section concerns the structure of the planned joint takeover and division of BOC, as foreseen in the Agreement between Air Liquide and Air Products of 2 July 1999 (incorporating amendments made on 7 July 1999 (the Agreement)), in terms of the allocation of BOC's R & D facilities, intellectual property and know-how as well as the links created between Air Liquide and its main competitor in the United Kingdom and Ireland, Air Products, as a result of that allocation. The creation of significant ongoing links between Air Liquide and Air Products would be a major incentive for Air Products not to compete vigorously with Air Liquide/BOC. This would, in particular, have an impact on the market position of Air Liquide/BOC on the bulk and cylinder markets in the United Kingdom and Ireland. In the United Kingdom, apart from Air Products the only competitors of BOC in nearly all of those markets are Messer and Linde. The position of those two competitors is, however, insignificant in most United Kingdom bulk and cylinder markets. A reduced intensity of competition by Air Products, resulting from links with Air Liquide, would therefore further strengthen Air Liquide/BOC's dominant position. The same is true of the Irish markets where Air Products is BOC's only competitor.

(224) The links created by the planned transaction between Air Liquide and Air Products are, however, not only relevant for assessing the market power of Air Liquide in the bulk and cylinder markets following the proposed acquisition but are also relevant for the assessment of Air Liquide's market power in the tonnage market and the possibility of joint dominance by Air Liquide and Air Products in the markets for helium and electronic speciality gases.

(aa) **Technology of BOC**

(225) BOC is one of the major producers of industrial gases in the world and has developed significant technical knowledge, in particular, in the field of application technology for electronics, glass, environmental, food, cryogenics, chemical and petroleum, metals, pulp and paper and medical industries, which is developed close to and often together with the customer. Research and development in the field of application technology includes resolving technological problems relating to the customers' production costs, product quality, operational productivity and environmental performance.

(226) The position of BOC has been relatively strong in the supply of smaller non-cryogenic nitrogen and oxygen

generators, and the company has subsequently focused its research and development efforts more and more on the production of large on-site cryogenic plants. The supply of industrial gases using large on-site facilities is highly capital intensive, and an advanced process technology can offer the supplier a competitive advantage in terms of the required power consumption and capital cost of the plant. Industry analysts estimate⁽⁵⁰⁾ that due to advanced process technology cryogenic air separation costs (per unit output) have fallen in excess of 25 % and non-cryogenic technology eliminating delivery costs for medium volume gas consumers has resulted in an overall cost reduction of 28 to 50 % over the past 20 years. The research and development of on-site plants carried out by BOC has concentrated on reducing the plants' consumption of electricity and improving and simplifying the systems for cooling, liquefying and separating the air in the production process. BOC has also developed advanced technology relating to the production of high purity gases and systems for the electronics industry, including the introduction of several ultra-high purity grades of gases, new dry pumps, exhaust management systems and temperature systems introduced for semiconductor applications.

(227) BOC employs more than [...] researchers in [...] main research centres a number of smaller research centres, covering process systems as well as key industries such as the electronics industry (BOC Edwards). BOC has a large number of ongoing R & D cooperation agreements with third parties worldwide, in particular in the field of electronics, food and the environment. Most of BOC's research and development work relating to industrial gases is undertaken in the United States, and some in the North Pacific, Australia and South Africa. The technical centre at Murray Hill in the United States is the primary gases technology facility supporting the gases businesses. To some extent, development work is also conducted at customer sites. Research and development work by BOC Edwards focusing on the semiconductor industry is conducted in the United Kingdom.

(228) The Commission's investigation has confirmed that BOC possesses a wide range of patents, trademarks and know-how relating to both process and application technologies.

(bb) **Allocation of BOC's intellectual property and know-how between Air Liquide and Air Products**

(229) The effect of the planned joint takeover and division of BOC would be that the intellectual property (IP) of BOC

⁽⁵⁰⁾ NatWest Securities, 'Industrial Gases 2000', February 1997, p. 57.

would be shared by Air Liquide and Air Products on equal terms. IP refers in this context to patents, patent applications, technology, know-how (including operational know-how), trade secrets, copyrights, software, trademarks, trade names and other intellectual property owned by BOC or its affiliates.

(230) The Agreement sets out the procedure according to which the assets, business and IP of BOC are to be allocated between Air Liquide and Air Products (together the 'Parties'). [...]*

(231) [...]*.

(232) [...]*.

(233) [...]*.

(cc) **Links between Air Liquide and Air Products**

(234) The planned transaction, as provided for the Agreement, presents some specific characteristics in so far as it involves two competitors making a joint bid to acquire parts of a further competitor. From a competition point of view, the structure of the present joint bid is problematic as it is evident that, in order to be able to bid for, and subsequently split up BOC, both Air Liquide and Air Products may have to acquire extensive knowledge of BOC's activities and have extensive contact with each other. This may endanger the confidentiality of information relating to each other's operations, and thus effective competition between the companies.

(235) [...]*.

(236) [...]*.

(237) [...]*.

(238) [...]*.

(239) [...]*.

(240) [...]*.

(241) [...]*.

(242) [...]*.

(dd) **Conclusion on the links created by the proposed transaction**

(243) [...]*.

(e) **Conclusion on the bulk and cylinder markets**

(244) The Commission therefore concludes that the notified operation and the transactions considered together with the notified operation would strengthen Air Liquide's dominant position in the bulk markets for oxygen, nitrogen and argon and in the cylinder markets for oxygen, nitrogen, argon/argon mixtures, acetylene, carbon dioxide and hydrogen in France, as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it.

(245) The notified operation would also strengthen BOC's dominant position in the bulk markets for oxygen, nitrogen and argon in the United Kingdom, the cylinder markets for oxygen, nitrogen, argon/argon mixtures, acetylene, carbon dioxide and hydrogen in the United Kingdom, the bulk markets for oxygen, nitrogen, argon, carbon dioxide and hydrogen in Ireland, and the cylinder markets for oxygen, nitrogen, argon/argon mixtures, acetylene, carbon dioxide and hydrogen in Ireland, as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it.

3. FUTURE DEVELOPMENT AND POTENTIAL COMPETITION

The proposed operation would increase the barriers to entry to the tonnage markets in the EEA and the bulk and cylinder markets in France, the United Kingdom and Ireland

(246) The tonnage markets in the EEA, as well as the bulk and cylinder markets in France, the United Kingdom and Ireland, are already characterised by high entry barriers due to the high investments and the expertise required. Cryogenic gas production plants and more recently non-cryogenic on-site equipment are capital intensive. According to the notifying Party, capital intensity usually ranges from [...]* to [...]* for an industrial gases business based on air separation plants. For both the tonnage markets in the EEA and the bulk and cylinder markets in France, the United Kingdom and Ireland, the currently high degree of concentration is an additional barrier to market entry.

(247) There have been no significant market entries into the tonnage markets in the EEA and into the bulk and cylinder markets in France, the United Kingdom and Ireland in the last five years. As a result of the operation, the level of concentration in the tonnage markets in the EEA would be further increased by a considerable degree. The combined market position of Air Liquide and BOC and their specific strengths would make it even more difficult for newcomers to enter the EEA tonnage markets in the future. As regards the bulk and cylinder markets, the proposed concentration would lead to the elimination of the most credible potential competitor in the markets in the United Kingdom and Ireland, thus strengthening BOC's already dominant position in the markets concerned. The proposed concentration would also further strengthen Air Liquide's existing dominant position in the bulk and cylinder markets in France.

(248) Therefore, it cannot be anticipated that Air Liquide/BOC's room for manoeuvre would be restricted by potential competition either in the tonnage markets in the EEA or in the bulk and cylinder markets in France, the United Kingdom and Ireland. By combining existing dominant positions in the bulk and cylinder markets, the notified operation raises the concern that an extended area would be perpetually dominated by one single entity.

4. HELIUM

(a) *Market structure*

Access to refined helium is limited to four industrial gases companies which also act as wholesalers

(249) Helium-rich natural gases ⁽⁵¹⁾ are the only source from which helium can be extracted economically. The number of helium-rich natural gas deposits is limited. Known reserves are located in the United States (Kansas, Oklahoma, Texas and Wyoming), Algeria (Bethouia), Poland (Odolanov) and western Russia (Orenburg). Only a small number of facilities exist for the extraction of crude helium and production of pure helium (refining).

(250) In Algeria, Air Liquide and Air Products, through their jointly-owned subsidiary Helap SA, have a production joint venture (Helios) with Sonatrach, a company owned by the Algerian state. The helium refining capacity of Helios amounts to up to [...] mmcf/yr. The entire production of refined helium is committed to Air Liquide and Air Products under a long-term contract (total production in 1998 — approximately [...] mmcf; to Air Liquide — approximately [...] mmcf; to Air Products — approximately [...] mmcf).

(251) In Russia, approximately [...] mmcf of the helium refining capacity at Orenburg is committed to BOC and Messer [...] (total capacity approximately [...] mmcf/yr). The helium refining capacity in Poland is entirely committed to BOC (approximately [...] mmcf/yr). Air Liquide would acquire BOC's rights under these contracts.

(252) In the United States, the following companies extract crude helium from natural gas but do not have a captive refining capability: Coastal Field Services, Amoco, Crescendo Resources, Duke Energy, Enron Corp., KN Energy Inc., Mobil, Phillips Gas Corporation, Pioneer Natural Resources Co., Williams Field Services. The Commission's inquiries have shown that those companies, with one minor exception, have committed their crude helium to BOC, Air Products and Praxair under long-term supply contracts. BOC, Air Products and Praxair refine this crude helium. The crude helium production capacity committed amounted to approximately 3 220 mmcf in 1998, and the amounts supplied, to approximately 2 400 mmcf. Approximately 65 % of the United States crude helium production capacity (4 800 mmcf) were thus committed to BOC, Air Products and Praxair.

(253) BOC, Air Products and Praxair are the only industrial gases companies to have a captive helium refining capacity in the United States. BOC owns and operates the world's third largest refining plant at Otis, Kansas (estimated capacity [...] mmcf/yr), which would be acquired by Air Liquide. Air Products refines helium at Liberal, Kansas and Sherman, Texas (estimated capacity < 1 000 mmcf in 1998, upgrade to 1 500 mmcf expected in 2000). Praxair has plants at Bushton, Kansas and Ulysses, Kansas (estimated capacity 1 500 mmcf/yr) ⁽⁵²⁾. Those companies together have a total refining capacity of [...] mmcf/yr.

(254) The remainder of the United States crude helium is extracted and refined by the following companies: CIG Resources, Exxon, Keyes Helium Company, Nitrotec Energy Corporation, Union Pacific Resources Inc. and Unocal Corporation. In 1998, the crude helium capacity of those companies was up to 1 580 mmcf, and their refining capacity up to 1 640 mmcf, with Exxon accounting for the largest part (up to 1 200 mmcf/yr) ⁽⁵³⁾. The Commission's inquiries have shown that almost all of those companies, in particular Exxon, have committed their refined helium to Air Liquide, BOC, Air Products and Praxair on the basis of long-term supply contracts (with the exception of two companies whose refining capacity does not exceed 165 mmcf). Approximately 1310 mmcf of refined helium were supplied under those contracts in 1998. Air Liquide, BOC, Air Products and Praxair distribute and market this refined helium.

⁽⁵²⁾ Source: Chemical Economics Handbook, Helium Data Summary, 1998.

⁽⁵³⁾ Source: Chemical Economics Handbook, Helium Data Summary, 1998.

⁽⁵¹⁾ Defined as those containing at least 0,3 % helium.

- (255) The Commission concludes that only four industrial gases companies, namely Air Liquide, BOC, Air Products and Praxair, refine helium or participate in the refining of helium. In addition, practically all the helium refined by other companies is committed to the same four industrial gases companies under long-term contracts. Air Liquide, BOC, Air Products and Praxair control access to almost the entire production of refined helium. Those companies provide helium at the wholesale level to retailers, including all other industrial gases companies, using their own distribution infrastructure.

Air Liquide/BOC and Air Products would control most helium sources located close to Europe and most of the European refining capacity

- (256) As indicated above, Air Liquide and Air Products jointly control the supply of helium from Algeria. According to the notifying Party, [...] of Algerian helium is shipped to the EEA. The Commission estimates that Air Liquide's/Air Products' Algerian joint venture supplies approximately [...] of the helium consumed in the EEA. By acquiring BOC's helium operations, Air Liquide would gain control over the helium supply from Poland and [...] of the helium supply from Russia ([...]). BOC, from its sources in Poland and Russia, supplies

approximately 15 to 20 % of the EEA consumption. After the transaction, two companies (Air Liquide and Air Products) would control the access to almost all helium sources located close to Europe. The two companies would control, in approximately equal parts, almost [...] of the refining capacity located near Europe.

- (257) The fact that all helium wholesalers seek to gain access to the helium sources near Europe illustrates their significance for supplying the EEA. Even companies with a large captive production capacity in the United States (Air Products, Praxair, BOC) import only those quantities from the United States which they cannot source locally. For instance, [...] purchases helium produced in Algeria from Air Liquide.

Air Liquide/BOC and Air Products would have high combined market shares

- (258) Helium is sold at the wholesale level to distributors (including most other industrial gases companies). The Commission's estimate of the market shares in the wholesale market are set out in table 10 ⁽⁵⁴⁾.

Table 10

Market shares in the wholesale market for helium

	Air Liquide	BOC	Air Products	Praxair	Messer	Linde	Others
EEA	[...]	[...]	25-30 %	15-20 %	< 5 %	—	—
World	[...]	[...]	15-20 %	25-30 %	< 1 %	—	—

- (259) At the wholesale level, Air Liquide/BOC and Air Products would have a combined market share of [...] for the supply of helium to the EEA and [...] worldwide.

- (260) Air Liquide has stated that it is not a helium wholesaler. However, this statement contradicts the information provided by Air Liquide during the procedure. According to that information, Air Liquide had sales to wholesale customers in the EEA of [...] mmcf in 1998 ([...] mmcf excluding a back-to-back agreement) and of [...] mmcf worldwide. Even if the quantities supplied under the back-to-back agreement are excluded, Air Liquide's wholesale market share still amounted to [...] in the EEA in 1998. Air Liquide/BOC's and Air Product's combined market share would still be [...].

further competitor, Praxair would have little incentive to challenge Air Liquide and Air Products. For the supply to the EEA, [...] sources Algerian helium from Air Liquide under a back-to-back agreement and, therefore, at a similar or higher cost. That arrangement does not favour vigorous competition. It is unlikely that Praxair would use helium from its captive United States production in order to compete with Air Liquide or Air Products on price, due to higher investment costs (if own containers are used) and transport costs. At the world level, it is fair to consider that Praxair also has few incentives to present vigorous competition. Praxair, like the other helium wholesalers, benefits from the flexibility of its captive helium production in the United States. Its refining plants are linked to a pipeline and storage system operated by the United States Government's Bureau of Land Management (BLM). This system offers the possibility of storing excess crude

- (261) The proposed concentration would leave Praxair as the only remaining competitor at the wholesale level. The Commission considers that, in the absence of BOC as a

⁽⁵⁴⁾ Figures for 1998 on the basis of volumes.

helium and cutting back the production of refined helium. Thus, Praxair would not be prevented from adapting its production and distribution of refined helium to reductions in demand and price rises. Messer is active as a wholesaler only to a very limited degree. All other competitors are only retailers and depend entirely on the other industrial gases companies for their supply of helium.

- (262) Air Liquide has further stated that those market shares are not a relevant indication of the competitive conditions in the helium business because it considers 'independent refiners' of helium to be more important wholesalers. However, the Commission does not consider it to be correct to qualify the companies which have a refining business but no distribution capability (see recital 254) as wholesalers. These companies supply wholesalers under long-term contracts but do not themselves act as wholesalers. The question whether such refiners are likely to enter the helium wholesale business would also have to be answered in the negative. As the notifying Party rightly states, those companies produce helium only as a by-product of their natural gas business. They are not involved in the industrial gases business, and have no distribution capability and no existing customer relations. In order to build up a container fleet comparable to that of Air Liquide, such a company would have to make an investment of EUR 45 to 50 million (for [...] transport containers). Indeed, even large producers of refined helium, such as Exxon, have not, in the past, acted as wholesale distributors of helium.

The proposed concentration would reduce the number of vertically integrated helium suppliers with a full distribution infrastructure to three

- (263) After the planned transaction, only three companies (Air Liquide/BOC, Air Products and Praxair) would have in-house production of helium and be fully vertically integrated. Moreover, only those three companies would have an extensive helium distribution infrastructure in Europe and worldwide. Within Europe, Air Liquide/BOC and Air Products would also have the largest number of transport containers (both above [...]* and transfill centres (above [...]*). According to the Commission's inquiries, Messer and Linde have a smaller but still significant distribution infrastructure. The other industrial gases companies fall behind. Worldwide, Air Liquide/BOC would have a fleet of more than [...]* large cryogenic transport containers (11 000 gallons or larger). According to the Commission's inquiries, only Air Products would have a similar worldwide distribution capacity. Praxair has a significant but smaller number of transport containers worldwide. Messer's distribution capacity is insignificant in comparison.

Conclusion on the market structure

- (264) The Commission considers the control of access to refined helium to be indicative of Air Liquide/BOC's and Air Product's market power. The Commission estimates that Air Liquide/BOC and Air Products together control the access to approximately [...] of the helium refining capacity worldwide. They would control the access to all helium sources near Europe. Their high combined market shares confirm their strong position.

(b) Position of other industrial gases companies

The position of other industrial gases companies is weak because they depend on Air Liquide/BOC and Air Products for the supply of helium

- (265) None of the other industrial gases companies in Europe or worldwide have a captive helium production capability or contractual access to refined helium⁽⁵⁵⁾. They depend entirely on the supply of refined helium by the four large companies. In Europe, competitors depend largely on Air Liquide/BOC and Air Products which together control [...] of helium imports to the EEA. This situation creates the risk that other industrial gases companies could be prevented from competing in the helium retail market. Indeed, most companies contacted by the Commission have raised this concern.
- (266) The potential threat of market foreclosure must be seen as a serious obstacle to competition. Industrial gases companies have stressed that helium is a strategic product that each supplier must offer in its portfolio. This is true irrespective of whether the gas supplier is large or relatively minor in terms of size. Indeed, even smaller, regionally active gas suppliers purchase helium for resale.

The high investment in the necessary production and distribution facilities further reduces the likelihood of a competitive challenge

- (267) The investment necessary to establish helium extraction and refining capability is considerable. A crude helium extraction plant is normally linked to natural gas processing. Competitors have estimated the cost of such

⁽⁵⁵⁾ The only exception is Messer's rights in the Orenburg source.

a plant to be EUR 50 to 100 million (on a stand-alone basis). The investment in a refining plant can be up to EUR [...] million for a large plant ([...]) and can be estimated to be EUR 10 to 30 million for a medium-sized facility (up to 350 mmcf/yr). Moreover, substantial investments are required to establish a helium storage, transport and distribution infrastructure. Standard 30 000 gallons (3 mmcf) storage tanks, as installed at most liquefaction facilities, cost up to EUR 0,9 million (purchase and installation). Standard 11 000 gallon transport containers cost up to EUR 0,75 million. In order to create a container fleet comparable in size to that of the three leading helium suppliers (Air Liquide/BOC, Air Products and Praxair), any competitor would have to purchase at least [...] (additional) containers. The cost of a helium transfill centre (used to transfer helium from large containers into smaller ones used for retailing) has been estimated at EUR 1 to 1,5 million. Any competitor would have to build new transfill centres.

- (268) Irrespective of whether a competitor can afford to make those substantial investments, it is unlikely that it will gain access to sufficient quantities of helium in order to justify the necessary expenditure. Crude helium is typically committed to the four large companies under long-term and exclusive contracts. It is highly unlikely that any newcomer would be able to displace one of the four incumbents. The companies that already have extensive distribution infrastructures in place (Air Liquide/BOC, Air Products and to a lesser degree Praxair) would remain the most likely purchasers of refined helium from independent producers. Even if an independent helium refiner, for instance Exxon, decided to commit part of its refined helium production to a newcomer, the quantities concerned would be limited. It is unlikely that the purchase of such limited quantities alone, without in-house production of sufficient quantities, would allow a newcomer to constrain the joint market power of Air Liquide/BOC and Air Products.

Air Products controls the only supplier of cryogenic helium transport containers

- (269) The only producer and supplier of large (11 000 gallon) cryogenic transport containers for helium is Gardner Cryogenics, a United States-based subsidiary of Air Products. Cryogenic containers manufactured by this company keep liquid helium at the necessary low temperature to allow long-distance transport. They are the only containers used for the overseas transport of helium. The Commission assumes that no other company can currently produce such containers. Large

industrial gases companies (including Air Liquide) have confirmed that they do not have the manufacturing capability to produce such tanks.

(c) Creation of a joint dominant position

Significant links exist between Air Liquide/BOC and Air Products

(270) [...].

(271) [...].

(272) [...].

The proposed concentration would remove an important competitor

- (273) BOC has considerable helium wholesales in the EEA ([...]* market share) and worldwide ([...]* market share). In terms of revenue, BOC is the second largest helium supplier worldwide ⁽⁵⁶⁾. It controls approximately [...] of the European and [...] of the world's refining capacity and has one of the most extensive distribution infrastructures in terms of transport containers and transfill centres.

- (274) BOC currently supplies approximately [...] of the EEA helium demand from its sources in Poland and Russia. The notified operation would eliminate the competitive pressure that results from BOC's independent access to refining capacity in Poland and Russia. The fact that BOC also has a production capacity in the United States at its Otis, Kansas plant means that BOC's competitive potential as a helium wholesaler does not depend entirely on its continued access to the Polish and Russian sources. The removal of BOC as an independent competitor would therefore significantly reduce the competitive constraints on Air Liquide and Air Products.

After the proposed concentration, Air Liquide/BOC and Air Products would have similar cost structures

- (275) Crude helium is extracted from natural gas using cryogenic extraction processes. Pressure-swing adsorption is mainly used for the purification (refining) of the crude helium. The pure helium is subsequently liquefied, filled into large cryogenic containers (11 000 to 30 000 gallons) and either stored for a limited period of time or shipped immediately.

⁽⁵⁶⁾ Source: Competitor's estimates.

- (276) Insofar as Air Liquide and Air Products source helium in Algeria, both companies have identical cost structures. In the United States, Air Liquide/BOC would operate BOC's Otis, Kansas helium refining plant (capacity up to [...] mmcf/yr). Air Products operates refining plants at Liberal, Kansas and Sherman, Texas (total capacity currently less than 1 000 mmcf/yr) ⁽⁵⁷⁾. These facilities have a similar capacity and are supplied with natural gas from a cluster of fields located in Kansas, Oklahoma and Texas. The Commission considers that Air Liquide/BOC and Air Products have similar production costs ⁽⁵⁸⁾.
- (277) Distribution costs are also similar. Cryogenic transport containers are produced by only one company worldwide (Gardner Cryogenics) and are provided to all gases companies at the same cost. The costs of transfill centres are also similar. On the basis of the data provided by the companies concerned, Air Liquide/BOC and Air Products would have similarly extensive transfill and container networks worldwide and in Europe.

Helium is a homogenous product that is offered in a highly transparent market

- (278) Refined helium is a homogenous product which is produced in accordance with an international quality standard (grade A helium of 99,995 % or higher purity). Industrial gases companies view helium as a commodity-type product that is traded amongst themselves and with other retailers. They purchase helium from each other and are therefore well informed about prices.
- (279) A number of factors ensure that the market is highly transparent. The number of vertically integrated helium wholesalers is small (only three after the transaction). Air Liquide/BOC and Air Products mainly source helium at the same or similar sites and under similar conditions. Production technology is not evolving rapidly as installed plants may be upgraded, but are not frequently replaced. Distribution equipment is standardised and largely identical. The transparency of the production process is illustrated by the internal study of an industrial gases company reviewed by the Commission ⁽⁵⁹⁾. In that study, the industrial gases company concerned analyses precisely the cost position

of each of its competitors at each of their sources, whether those sources are captive production or third Party supply.

Wholesale customers have limited countervailing purchasing power

- (280) The customers in the wholesale market, that is to say retailers, in general other industrial gases companies, usually have a limited ability to counterbalance Air Liquide/BOC's and Air Products' joint supplier power. They rely on helium as a key product for their own retail offering. The fact that they compete with Air Liquide/BOC and Air Products in retail markets for industrial gases aggravates this constraint. Other industrial gases companies face not only the possibility of market foreclosure but also disadvantages in other markets. It should also be noted that many customers are smaller regional retailers. Even larger companies have voiced concern.

(d) Conclusion

- (281) The Commission concludes that the notified operation would create a joint dominant position in the market for the wholesale supply of helium to the EEA. The Commission considers that the same conclusion would have to be drawn should the wholesale market be qualified as worldwide.

5. ELECTRONIC SPECIALITY GASES

(a) Current market structure

The European market for electronic speciality gases is already highly concentrated with Air Liquide, Air Products and BOC as the leading suppliers

- (282) Electronic speciality gases are essentially produced by chemical companies in the United States and in Asia. Industrial gases companies produce these gases only to a limited extent, in particular where they also have chemical activities, for instance Air Products. However, the chemical companies do not distribute the gases to the end users, which are mainly semiconductor manufacturers. The distribution is carried out by the industrial gases companies. By contrast, chemical companies are not considered to be equivalent suppliers

⁽⁵⁷⁾ Source: Chemical Economics Handbook, Helium Data Summary, 1998.

⁽⁵⁸⁾ This is confirmed by a BOC analysis 'Global Helium Strategy', 29 August 1997 (provided to the Federal Trade Commission as part of the HSR filing).

⁽⁵⁹⁾ See footnote 58.

because they not normally have the know-how and facilities for transfilling and analysing electronic speciality gases including the treatment of cylinders.

Their global presence and technological competence confer a strong competitive advantage on the leading suppliers

(283) At the oral hearing, the notifying Party argued that industrial gases companies are merely distributors of electronic speciality gases without real market power. However, industrial gases companies which distribute electronic speciality gases, such as Air Products, Praxair, Air Liquide and BOC, provide key services and goods which cannot be supplied by the gases' producers. Their role is essential and goes beyond that of mere distributors. Firstly, the purification, mixing and filling of electronic speciality gases, according to detailed customer specifications, are highly specialised processes that are performed in 'transfill centres' operated by the industrial gases companies. Each individual gas specification undergoes a certification process that can last up to two years. The producers of electronic speciality gases, such as chemical companies, do not have such 'transfill' capabilities. Secondly, electronic speciality gases are transported and delivered in specialised containers which are also offered only by gases companies. Thirdly, semiconductor manufacturers also require high purity atmospheric gases and helium, for instance as plasma gases or for oxidation and reduction processes. They increasingly source those gases together with electronic speciality gases. Fourthly, industrial gases companies often design, install and certify equipment (gas systems), such as piping, gas cabinets (for the handling of toxic gases) and so forth. Air Liquide's and BOC's offerings cover a range of such products.

(284) On the basis of the figures collected in the Commission's investigation, the value of the market for electronic speciality gases in the EEA was approximately EUR 80 million in 1998. The partition of market shares in terms of value was as follows:

Air Liquide	between [...] % and [...] %
Air Products	between 20 % and 30 %
BOC	between [...] % and [...] %
Praxair	between 10 % and 20 %
Messer	less than 10 %
Linde	less than 10 %
AGA	less than 10 %.

(285) The three leading suppliers Air Liquide, Air Products and BOC accounted together for more than [...] % of the market. There was a clear gap between BOC as the third largest supplier and Praxair as the fourth. The other remaining suppliers played only a minor role.

(286) Air Liquide, Air Products, BOC and Praxair are the global players in the market for electronic speciality gases. Unlike the other competitors, each of these companies operates production sites (transfill centres) in the EEA, the United States and the Far East. However, the global presence of Air Liquide, Air Products and BOC is more important than that of Praxair.

(287) It is estimated that in terms of total gas sales for the electronic sector (also including, for example, bulk air gases) Air Products' global market share is between 22 and 25 %, Air Liquide's share, between [...] % and [...] %, and BOC's share, between [...] % and [...] % whilst Praxair's share is only between 7 and 9 %⁽⁶⁰⁾. The strong global presence of the three leading suppliers gives them a significant competitive advantage on the European market. Although, according to the notifying Party, the actual purchase orders for electronic speciality gases are decided, managed and issued by the local site of the customer taking into consideration specific local factors, account should be taken of the fact that the large semiconductor manufacturers operate on a global basis. Where a supplier of electronic speciality gases has a strong worldwide presence, it can offer global consistency in the quality of the gases supplied to the semiconductor manufacturers worldwide.

(288) Air Liquide, Air Products and BOC are also considered to be the leading competitors with respect to technology for electronic speciality gases. Air Liquide and Air Products are, furthermore, leading in providing so called 'Total Gas and Chemicals Management (TGCM) services' which include safety environment management, on-site maintenance, quality monitoring, control and supervision, electronic speciality gases cylinder changes, point of use analysis and inventory management. Air Liquide has approximately [...] % TGCM' service centres worldwide and the Air Products Megasys teams manage [...] % facilities for [...] % different customers in [...] % countries.

(289) More generally, it can be concluded that Air Products and Air Liquide and, to a significant extent, BOC, focus on the electronics sector. Air Products achieves 17 % of its total sales in this sector and Air Liquide, [...] % BOC achieves [...] % of its sales in electronics whilst this sector accounts for only 5 % of Praxair's sales.

⁽⁶⁰⁾ These market share figures concerning the electronic speciality gases are presented in a number of articles published in specialised periodicals concerning the gas and chemical industry.

(b) Situation after the concentration**Two competitors, Air Liquide and Air Products, would account for more than [...] of the market**

- (290) Since the European activities of BOC would be taken over by Air Liquide, Air Liquide would become the clear market leader for electronic speciality gases in the EEA, with a market share of between [...] and [...]. Air Liquide and Air Products would together have a market share of more than [...]. The remaining market would be fragmented.
- (291) On a global basis, Air Liquide and Air Products would probably be on a more or less equal footing, [...].

In addition to the narrow market structure, the pooling of technology resulting from the concentration would be a further disincentive for competition between Air Liquide and Air Products

- (292) It is true that there are some 30 different electronic speciality gases used in the production process of semiconductor components. However, the different gases themselves are homogenous products. To the extent that the industrial gases companies do not produce the gases themselves, they purchase them from the same chemical companies. Therefore, and because of the very limited number of competitors, the market is also transparent. In those circumstances, a market structure where two suppliers have a combined market share of [...] is already a strong incentive for parallel behaviour.
- (293) In addition to the very narrow market structure, the planned joint takeover and division of BOC would create significant links between Air Liquide and Air Products. In particular the pooling of BOC's technology could lead to permanent cooperation, which would be a further disincentive for competition between the two companies. In these circumstances, it has to be anticipated that there would be no effective competition between Air Liquide and Air Products in the market for electronic speciality gases after the proposed concentration.

Conclusion on the market position of Air Liquide/BOC and Air Products

- (294) Given their high combined market share, their global presence and their leadership in technology, it must be concluded that Air Liquide/BOC and Air Products would together be able to act to a significant extent independently of their competitors and their customers.

It is unlikely that new competitors would enter the market

- (295) There are considerable barriers to entry to the market for electronic speciality gases. A supplier of gases must meet the specific requirements of the semiconductor industry resulting from the complex production process for computer chips and the characteristics of the gases. Suppliers must guarantee a particularly high degree of purity, which requires, *inter alia*, the handling of equipment under clean room conditions. They must be able to offer the full range of products. Furthermore, it should be noted that a number of electronic speciality gases are highly poisonous. The transfilling, storage and transport of these gases therefore requires specific safety procedures. For those reasons, a supplier of electronic speciality gases needs experience in handling those gases as well as specific know-how and technology.

V. COMMITMENTS SUBMITTED BY THE NOTIFYING PARTY AND MODIFICATIONS TO THE OPERATION

- (296) On 21 December 1999 the notifying Party submitted commitments in order to remove the competition concerns identified by the Commission. In summary, the commitments comprise the following elements:
- (a) divestiture of tonnage assets and businesses including on-site plant facilities, pipelines, all related tonnage customer contracts and the operating, maintenance and support personnel related to such facilities. The following tonnage plants will be divested: Runcorn, Sheerness, Cardiff, Brinsworth, Fawley (all United Kingdom), Pardies, Tarnos (both France), Mons (Belgium) and Terneuzen (Netherlands). The total tonnage divestitures (United Kingdom and continental Europe) represent annual sales of approximately [...] tpd and EUR [...] million of oxygen and nitrogen;
- (b) divestiture of bulk facilities and businesses associated with certain of the tonnage facilities (Brinsworth, Fawley, Pardies, Mons and Terneuzen). The assets and businesses to be divested include the bulk production and storage facilities, the associated bulk distribution equipment (road tankers), the bulk tanks located on the customers' premises as well as the personnel for sales, technical support, distribution and customer service, in addition to the customer bulk contracts. The United Kingdom bulk divestitures represent a total of approximately [...] tpd of liquid oxygen, nitrogen and argon sold and total annual sales of liquid oxygen, nitrogen and argon of approximately EUR [...] million. The Continental bulk divestitures represent approximately [...] tpd of liquid oxygen and

nitrogen sold and total annual sales of liquid oxygen, nitrogen and argon of approximately EUR [...] million and together with the bulk business of Carboxique (a 100 % subsidiary of Air Liquide) of approximately EUR [...] million;

- (c) divestiture of cylinder assets and businesses including certain cylinder fill plant facilities, associated cylinders, distribution equipment (trucks) as well as production and distribution personnel, in addition to contracts with customers. In particular, the following cylinder fill plants will be divested: Brinsworth, Bristol (including an acetylene production plant) and Ipswich (all United Kingdom), Bobigny and Hauconcourt (both France). Cylinder divestitures in the United Kingdom represent sales of approximately EUR [...] million. Cylinder divestitures in France represent sales of approximately EUR [...] million, coming from the divestiture of cylinder gases business of Carboxique;
- (d) divestiture of the contracts for liquid helium supply that BOC currently has in Russia and Poland, together with appropriate distribution infrastructure (transport containers). The total divested contracts represent approximately [...] mmcf per year. For liquid helium that Air Liquide/BOC purchase in the United States access will be granted to other industrial gases companies (including existing BOC wholesale customers) under resale agreements which in all material conditions, including price and duration, are identical to the purchasing agreements to which Air Liquide/BOC are Parties (back-to-back agreements). The back-to-back agreements will be up to a total amount of [...] mmcf per year. For the helium sourced from Algeria, Air Liquide will appoint an independent third Party to manage Air Liquide's 50 % holding in the joint venture with Air Products, in order to ensure that there are no ongoing links with Air Products. Air Products has undertaken to use its rights in the joint venture to formalise Air Liquide's compliance with this commitment;
- (e) divestiture of the transfill facility for electronic speciality gases owned and operated by Air Liquide in France together with a licence of the technology necessary to operate the transfill plant, all relevant customer information and current purchase orders. Air Liquide undertakes to ensure, within the scope of its existing sourcing agreements, continuity of sourcing electronic speciality gases from existing manufacturers to that transfill facility for a period of two years following the divestment;
- (f) licensing of all of BOC's patented technology (process and applications technology) to third Parties who request such licensed rights under reasonable and non-discriminatory conditions.

- (297) The divestiture of tonnage oxygen and nitrogen businesses will reduce Air Liquide/BOC's market share in the EEA to approximately [...]*. The divestiture accounts for approximately [...] of the market share that Air Liquide would otherwise have acquired. The business to be divested in the United Kingdom comprises five tonnage plants, two with associated bulk businesses. The business to be divested in France, Belgium and the Netherlands comprises four tonnage plants, three with associated bulk businesses. The divestments will limit the market power accruing to Air Liquide. Given that substantial pipelines will be divested together with one of the plants, the combined entity's position as a pipeline operator will be less strong than before the transaction. Air Liquide will acquire a less strong regional position in the United Kingdom that is less liable to be used as leverage against competitors, not only because of the tonnage divestments but also because of the bulk divestments which will weaken its position in the United Kingdom bulk markets. The commitment to license patented BOC technology to third Parties will lessen the concerns arising from the combination of technologies. Moreover, the Commission considers that an acquirer will be able to present additional competition in the EEA tonnage market. The divestment of bulk, cylinder and distribution facilities will give the acquirer(s) access to a related bulk and cylinder infrastructure and will create the possibility of operating the divested tonnage assets as part of an integrated gases business.
- (298) In view of these elements the Commission considers that the proposed commitments remove the fear that a dominant position in the EEA tonnage market will be created.
- (299) The divestiture package for the bulk gases oxygen, nitrogen and argon in the United Kingdom represents approximately [...] of the markets for these three gases. The liquefiers in Brinsworth and Fawley can supply customers in most regions in Southern and Northern England. The Commission considers that these facilities, together with related customer contracts, personnel and equipment, will enable a new entrant or a smaller existing competitor to present effective competition in the United Kingdom bulk market.
- (300) The divestiture package for the cylinder gases in the United Kingdom represents approximately [...] of the relevant markets for oxygen, argon/argon mixtures and acetylene and covers other cylinder gases. Besides the reduction of actual market share, the divestment of three production facilities will give the acquirer the flexibility to fill those or other gases depending on demand. The three cylinder-filling centres are located so as to allow a significant coverage of the United Kingdom market. The divestiture of the bulk gases

production facilities in Brinsworth and Fawley is also necessary to supply those filling centres. Acetylene is produced at a plant in Bristol, which will also be divested. The distribution infrastructure to be divested comprises personnel, collect centres, agents' contracts and equipment. It is reasonable to suppose that these divestments will enable a new entrant to compete effectively in the United Kingdom cylinders markets.

electronic speciality gases transfilling, continued product supplies and ongoing customer orders, the divestiture will enable another industrial gases company to compete effectively in the EEA-market for electronic speciality gases.

(301) The Commission considers that the proposed commitments will remove the operation's anti-competitive effects in the United Kingdom bulk and cylinder markets concerned, by substantially reducing the acquired market position and allowing the entry of a significant competitor. It is likely that the new competitor's market position (approximately [...] for bulk gases and approximately [...] for cylinder gases) will be more significant than that which Air Liquide could have acquired initially had it entered the United Kingdom market. The Commission also considers that the presence of one or several new competitors in the United Kingdom will enhance the chances of those competitors also becoming active in Ireland. This outweighs the effect of the removal of Air Liquide as a potential competitor in Ireland.

(302) The size of the divestments relating to the bulk and cylinder markets in France exceeds the BOC businesses which Air Liquide acquired prior to the notified operation. The Commission considers that the divestments will remove the concentration's anti-competitive effects in the French bulk and cylinder markets concerned.

(303) The divestiture package relating to the helium wholesale market ensures that Air Liquide will not acquire access to the supply of refined helium from Russia and Poland. In order to enable a new wholesale supplier to replace BOC's competitive potential to a comparable extent, it is also necessary for that entrant to obtain access to refined helium supplied from a further source, namely in the United States. The ability to spread supply risks over different, unrelated sources ensures competitiveness in the wholesale market. This commitment is thus intended to re-establish the competitive potential that existed before the operation. Furthermore, the link between Air Liquide and Air Products that currently exists through their joint venture in Algeria will be removed.

(304) With respect to the market for electronic speciality gases, the divestiture will cover one of Air Liquide/BOC's two transfill facilities in the EEA. Together with the personnel and technologies relating to

(305) The Commission therefore considers that the proposed commitments will remove the fear that collective dominant positions would be created on the markets for wholesale helium and electronic speciality gases.

(306) Furthermore, Air Liquide's commitments of 21 December 1999 comprise the following elements:

(a) [...]*.

(b) [...]*.

(c) [...]*.

(d) [...]*.

(e) [...]*.

[...]*.

(307) The Commission considers that the commitments of 21 December 1999 (as amended on 7 January 2000) will, if acted upon in their entirety, eliminate the risk that ongoing links between Air Liquide and Air Products will contribute to the creation or strengthening of dominant positions by Air Liquide/BOC in the tonnage, bulk and cylinder markets and the creation of collective dominant positions by Air Liquide/BOC and Air Products in the markets for wholesale helium and electronic speciality gases.

VI. FINAL CONCLUSION

(308) In view of the foregoing, the notified concentration should be declared compatible with the common market pursuant to Article 8(2) of the merger Regulation and with the functioning of the EEA Agreement pursuant to Article 57 thereof, subject to the condition of full compliance with the commitments given by Air Liquide to the Commission on 21 December 1999 (as amended on 7 January 2000) which are set out in the Annex,

HAS ADOPTED THIS DECISION:

Article 2

This Decision is addressed to:

Article 1

Air Liquide SA
75, Quai d'Orsay
F-75321 Paris Cedex 07

The operation notified to the Commission on 16 August 1999 whereby Air Liquide SA will acquire sole control of parts of The BOC Group plc by way of a public bid to be implemented jointly with Air Products and Chemicals Inc. is hereby declared compatible with the common market and the functioning of the EEA Agreement, subject to the condition of full compliance with the commitments given by Air Liquide SA to the Commission on 21 December 1999 (as amended on 7 January 2000) which are set out in the Annex.

Done at Brussels, 18 January 2000.

For the Commission

Mario MONTI

Member of the Commission

ANNEX

[...]*.

COMMISSION DECISION**of 30 October 2001****declaring a concentration to be compatible with the common market and the functioning of the EEA Agreement****(Case COMP/M.2420 — Mitsui/CVRD/Caemi)***(notified under document number C(2001) 3363)***(Only the English text is authentic)****(Text with EEA relevance)***(2004/270/EC)*

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57(2)(a) thereof,

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings ⁽¹⁾, as last amended by Regulation (EC) No 1310/97 ⁽²⁾, and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 26 May 2000 to initiate proceedings in this case,

Having regard to the opinion of the Advisory Committee on Concentrations ⁽³⁾,

Having regard to the final report of the Hearing Officer in this case ⁽⁴⁾,

Whereas:

- (1) On 31 May 2001, Mitsui and Companhia Vale do Rio Doce (CVRD) notified to the Commission a concentration pursuant to Article 4 of Regulation (EEC) No 4064/89 whereby Mitsui and CVRD would acquire joint control over Caemi Mineração e Metalurgia SA (Caemi) by way of a purchase of shares.

- (2) After examination of the notification, the Commission concluded on 3 July 2001 that the notified operation fell within the scope of Regulation (EEC) No 4064/89 and that it raised serious doubts as to its compatibility with the common market and the EEA Agreement. On 29 August 2001, the Commission issued a statement of objections, which was followed by an oral hearing of the parties on 24 September 2001.

I. THE PARTIES

- (3) Mitsui is a Japanese company conducting worldwide trading in various commodities and other products, including iron ore, and having minority and controlling stakes in a number of Australian and Indian iron ore mining companies, including a significant minority stake in the world's second largest iron ore mine, Robe River. Mitsui also arranges financing and other project support for the trading activities of other companies.

- (4) CVRD, based in Brazil, is a diversified mining company and the world's largest iron ore producer. It already jointly or solely controls most of Brazil's iron ore production, with the principal exception of Mineração Brasileiras Reunidas SA (MBR), a subsidiary of Caemi. CVRD recently acquired Ferteeco Mineração SA (Ferteeco), Brazil's third-largest iron ore producer. It is also active in commercial transport (railways, port operations and shipping). Apart from iron ore, CVRD also manufactures a number of other products including fertilisers, kaolin, metallurgical bauxite, pulp and paper.

- (5) Caemi is a publicly held company organised under Brazilian law which holds equity investments in companies active in the production and sale of iron ore

⁽¹⁾ OJ L 395, 30.12.1989, p. 1 (corrected version in OJ L 257, 21.9.1990, p. 13).

⁽²⁾ OJ L 180, 9.7.1997, p. 1.

⁽³⁾ OJ C 79, 30.3.2004.

⁽⁴⁾ OJ C 79, 30.3.2004.

in Brazil and Canada, of kaolin and refractory calcified bauxite in Brazil, and in related logistics businesses (railway and port operations in Brazil). In the iron ore sector it is active through its 84,6 % controlling participation in MBR (Brazil), and through its 50 % joint controlling interest in Quebec Cartier Mining Company (QCM) (Canada), the other controlling shareholder being Dofasco, Canada's largest integrated steelmaker. MBR is Brazil's second-largest iron ore producer (behind CVRD) and the fourth iron ore producer worldwide (behind CVRD, Rio Tinto and BHP).

II. THE OPERATION

- (6) Mitsui currently owns 40 % of the voting shares of Caemi. The remaining 60 % of the voting shares of Caemi are owned by 'the Frerings' (two brothers of the Frering family and [...] (*)). For the purpose of the acquisition Mitsui has created a wholly owned subsidiary 'the Mitsui Holding Company' (MHC); this entity will ultimately be jointly controlled by Mitsui and CVRD (see below).

- (7) The acquisition of joint control over Caemi by Mitsui and CVRD will be effected in two stages as described below:

[The first stage of the concentration involves Mitsui's exercise of its pre-existing]* right of first refusal in respect of the Frerings' holding. The second stage involves CVRD's purchase of 50 % of Caemi's voting shares from Mitsui]*:

(i) [...]*

(ii) [...]*

- (8) Accordingly, within a legal instant Caemi's voting shares will be jointly controlled by CVRD and Mitsui. According to the parties, the MHC/Frerings purchase agreement and the strategic alliance agreement are conditional upon each other in a manner such that stage one of the concentration could not happen without stage two also taking place. Therefore, the necessary end result of the set of transactions as notified is the acquisition of joint control by the notifying parties over Caemi. Consequently, this staged operation would constitute a single concentration within the meaning of Article 3(1)(b) of Regulation (EEC) No 4064/89.

(*) 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.

III. COMMUNITY DIMENSION

- (9) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 5 billion (Mitsui: EUR 78 billion in its financial year ending on 31 March 2000; CVRD: EUR 5,5 billion in its financial year ending 31 December 2000; Caemi: EUR 560 million in its financial year ending on 31 December 2000). Each of them has a Community-wide turnover in excess of EUR 250 million (Mitsui [...]*; CVRD: EUR [...]*; Caemi EUR [...]*, but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.
- (10) None of the undertakings concerned by the operation is active in the production or distribution of iron ore in the territories covered by the ECSC Treaty, but are engaged in such activities in third countries. Therefore, those aspects of the present concentration do not fall within the scope of Article 66(1) of the ECSC Treaty.

IV. GENERAL DESCRIPTION OF THE IRON ORE INDUSTRY

- (11) The only affected markets will be in the iron ore sector. Iron ore is a raw material, sold almost exclusively to the steel industry. It is sold to steel producers by iron ore mining companies in three principal forms: sinter fines, lump, and pellets. A detailed explanation of why the Commission considers these three forms of ore as constituting distinct relevant product markets is given in section V below.

A. The supply of iron ore

Iron ore mining

- (12) Iron is the second most commonly-occurring metal (after aluminium) and makes up around 4,6 % of the earth's crust. Despite the large variety of mineralogical forms in which iron naturally occurs, only a few are commercially important, principally the ferrous oxides magnetite, hematite, limonite and ilmenite. In the iron making process, the first step in producing steel, the oxygen is removed by a process known as 'reduction'. Other forms of iron ore that are also mined include carbonates such as siderite, sulphides and silicates.
- (13) Iron ore deposits vary considerably in chemical composition throughout different parts of the world. The largest resources of iron ore are found in what are known as banded iron formations (BIFs), also known as taconites and itabirites. These BIFs can be hundreds of metres thick and thousands of kilometres wide. The

most commercially important are found in Brazil, Western Australia, the Lake Superior area of Canada, Krivoi Rog in Ukraine and Kursk in Russia.

- (14) World reserves of iron ore are currently estimated at around 140 000 Mt ⁽⁵⁾. The largest reserves of ore (measured by iron content) are found in Ukraine, China, Australia, Russia, United States, Brazil and Kazakhstan respectively. The iron content of iron ore varies considerably between countries: Chinese ore, for example, is very low in iron content (approximately 32 %), whereas Brazilian ore is high in iron content (approximately 63 %).
- (15) In excess of 95 % of all iron ore is mined using open pit methods, because of economies of scale and the relatively low unit value of iron compared to other metals. The only iron ore mining company producing significant amounts of ore from an underground mine is Sweden's LKAB. In open-pit mining, the initial process involves stripping the 'overburden' from the layers of ore. Blasting is often then required to reduce the ore to a size that can easily be loaded by shovels and/or front-end loaders into trucks, railcars or onto conveyor belts for transportation to a crusher for primary crushing and sizing.
- (16) Almost all iron ore is then 'beneficiated' ⁽⁶⁾, which involves the crushing, grinding, separating, screening, and sizing of the ore. These processes remove impurities such as silica and alumina from the ore, and reduce it to the form and size desired by the mining company. The degree of beneficiation depends on the nature of the iron ore deposit, the levels of impurities present in the ore and on customer specifications. Lump and fine ores are usually produced after the crude ore has been crushed and ground. Further beneficiation may also produce an iron ore concentrate which is usually pelletised (turned into iron ore pellets) at a pelletising plant located close to the mine.
- (17) Every mine produces both lump ore and fine ore as the inevitable result of the mining process. However, the ratio of fine and lump production of each mine is determined by the nature of its iron ore deposits (such as hardness). Many mines produce relatively little lump, owing to the tendency of its ferrous material to break into small particles upon extraction and handling. (This tends to be the case for much of the Brazilian ore, for

example.) As a result, much of the lump ore imported into the Community comes from Australia, South Africa and India. Brazilian and Venezuelan mines do produce some lump ore, but it represents a comparatively much lower percentage of their overall ore production. Mines containing ore with low ferrous content (of the order of 30 to 35 %), such as those in the United States, Canada and China, sell little or no lump ore, as it is necessary to crush the ore finely in order to produce iron ore concentrates with a commercially viable iron content.

- (18) Similarly, it appears that not all ores can adequately and economically be used for the production of pellets. Pellets have traditionally been produced in the Americas and in Europe, with most of the pellet plants intended to serve the export market being built in Sweden, Canada, Venezuela and Brazil. One of the reasons is that pellet feed is produced by grinding and concentrating natural fines, and not all ores are well suited for concentration. In particular, the parties have indicated that, although pelletising has been tried in the past in Western Australia, it was not a success.
- (19) Another important consequence of the geology of the mine is the quality of the ore. Quality is principally measured in terms of ferrous content (which should be maximised) and level of impurities (which should be minimised). Particular attention is given to the loss on ignition ('LOI', mainly crystal water) and to the presence of silica, phosphorus and alumina, which have adverse effects on the blast furnace operation.
- (20) According to the data provided by the parties, there are significant variations in the quality of the ore produced in the different regions. Generally speaking, it can be said that (i) Brazilian ore is a high grade product; (ii) Australian ore has also traditionally been considered a high quality product, but these mines are being progressively depleted, and they are replaced by newer mines (Yandi, Robe River, etc.) with higher silica and LOI contents [...]*, (iii) South African ore has a high level of alkalis, limiting its use in the blast furnaces; (iv) Swedish ore is a good quality sinter feed of high ferrous content, and produces a very pure pellet with excellent performance; and (v) as indicated above, iron ore found in Canada, the United States or China has a low ferrous content (of the order of 30 to 35 %, compared with more than 60 % in Brazil or in Australia).

- (21) As noted above, iron ore pellet plants are generally located adjacent to mine sites or exporting ports because pellets do not disintegrate during transport. The highest quality pellets are produced from Brazilian,

⁽⁵⁾ The Economics of Iron Ore, fourth edition 2000 (Roskill).

⁽⁶⁾ Ore sold directly from a mine without beneficiation is known as 'run-of-mine' or direct shipping ore.

Canadian and Swedish ore. Most mines located outside Australia could, at least in theory, make the investments necessary to engage in the production of iron ore pellets. In general, pellet production can be achieved by constructing a pellet plant, at a cost of approximately USD 50 to USD 60 per annual tonne of capacity, provided that the fine ore production is of an appropriate quality.

Forms of iron ore

- (22) Approximately 99 % of all iron ore is used in steel production, mostly in those steel mills which produce iron through the blast furnace method. A blast furnace converts iron ore into pig iron, which is then fed into a basic oxygen furnace (BOF) and converted to steel. The types of iron ore and their percentage usage are defined (and modified from time to time) by the steel maker as a function of technological and metallurgical considerations and market conditions (availability and price of iron ore, and demand for steel products).
- (23) When extracted from the mine, iron ore comes in two forms: lump (6 to 30 mm in diameter) and fines (less than 6 mm in diameter). For technical reasons, only lump ore can be directly loaded into a blast furnace (fines are too small and tend to block the reduction process undertaken in the blast furnace). In earlier times, the only type of iron ore marketed was lump ore, and the fines which were mined were considered waste materials.
- (24) In order to take advantage of the fines, two agglomeration processes were subsequently developed: sintering and pelletising. Sintering agglomerates fines (or sinter feed, with diameter between 1 and 6 mm), whereas pelletising agglomerates super fines (or pellet feed with diameter of less than 1 mm) into pellets. Steel mills usually have their own sintering plants since sinter tends to disintegrate during transportation. In contrast, pellets do not disintegrate in transport, and pelletising plants can therefore be located at or near the mines. Certain European steel mills have thus shifted a portion of their imported ores to pellets, rather than make the investments necessary to improve the performance of their sintering plants from an environmental perspective (sintering is environmentally costly). This same trend has not occurred in Japan, where the steel mills have elected to invest instead in improvements in their sintering plants.
- (25) As a result of the development of sintering and pelletising, blast furnace operators gained the ability to select between fines (to be sintered by the blast furnace operator), lump and pellet. For complex reasons related to the fine-tuning of the blast furnace operation to maximise overall efficiencies and minimise costs, most blast furnaces operate using a mix of the three.
- (26) Owing to such considerations, the percentage of sintered fines used in a blast furnace tends to vary from mill to mill. However, subject to certain exceptions, steel mills within one region tend to face the same conditions of supply and therefore to procure comparable proportions of each form of iron ore. As a result, the parties estimate that sintered fines represent approximately 60 % of the 'burden' (the feed) used by typical blast furnaces in Europe and Asia, whereas sintered fines represent less than 10 % of the burden of a typical United States blast furnace. Blast furnace operators also have differing preferences as regards the relative weighting of lump ore in their feed. In Europe, lump usage tends to be approximately 20 % of total burden, whereas in the United States it is closer to 10 %. In Asia, the usage is around 25 % (due principally to the proximity of the Australian mines, which produce a higher percentage of lump ore). Again the relative use of pellets varies considerably among the regions. In Europe, pellets tend to represent about 20 % of the feed, whereas in the United States it is about 80 % and in Asia only 5 % to 10 %.
- (27) Finally, iron ore can also be produced for conversion into direct reduction iron (DRI) in a DR furnace. The DR furnace uses two main forms of DR iron ore, lump and pellets; the ore must be of a particularly high grade (high iron content and low levels of impurities such as silica, phosphorous and sulphur). The DRI can then be fed into an electric arc furnace for conversion into steel.

World production of iron ore

- (28) Total world production of iron ore in the year 2000 amounted to some 931 million tonnes (Mt), up from 868 MT in 1999 and 878 Mt in 1998. Production of iron ore closely follows output of steel and so is cyclical in nature. Demand for steel is in turn largely a function of economic cycles, and particularly of the business cycles in the automotive and construction sectors. Iron ore production has grown by an average rate of 2,6 % a year since 1950, reaching a peak of 967 Mt in 1988.

Worldwide production

(in Mt)

	Fines	Lump	Pellet	Total
1998	509	141	228	878
1999	510	135	223	868
2000	540	145	254	938

Parties' estimates and data from UNCTAD.

- (29) The largest iron ore producing countries in the world are (using production figures for 2000): Brazil (236 Mt), Australia (176 Mt), China (96 Mt), Russia (87 Mt), India (75 Mt), United States (63 Mt), Ukraine (55 Mt), Canada (36 Mt), and South Africa (34 Mt). However, the proportion of iron ore production that is exported from each of these countries varies very considerably (tonnage exported in 2000): Brazil (160 Mt), Australia (165 Mt), China (no exports), Russia (15 Mt), India (35 Mt), United States (6 Mt), Ukraine (19 Mt), Canada (27 Mt), and South Africa (21 Mt).

Seaborne trade in iron ore

- (30) Before the Second World War, steelworks tended to be located close to iron ore mines, on account of the high cost of transporting the ore. The development of the large, high quality reserves (BIFs) in Brazil and Australia has changed the structure of the iron ore industry, however, from a preponderance of relatively small-scale producers located close to the main steelmakers, to the development of an increasing number of large-scale mines located far from consumers. This has occurred largely as a result of the economies of scale associated with very large mines of this kind. The development of these mines has caused a sharp increase in the transportation of iron ore by seaborne large bulk carriers (today about half of world production), which has in turn required investment in port facilities to handle ever larger ships which offer reductions in unit transport costs.
- (31) Much of the world's production of iron ore is nonetheless still not transported to customers by sea. The most notable examples are the United States, eastern Europe and China, which still have significant domestic iron ore production, and where most of that production is still consumed domestically. Furthermore, much of this domestic production is captive; in the United States, for example, steel companies own around 60 % of domestic production capacity, and so most production there does not reach the open market. Iron ore production in western Europe (with the main exception of Sweden), by contrast, has almost disappeared.
- (32) Principally as a result of the abovementioned decline in iron ore production in western Europe, and also as a result of growth in the Asian steel industry, demand for seaborne iron ore has been growing significantly in

recent years. Indeed, western Europe and East Asia (Japan, South Korea and Taiwan) have become largely dependent on imported seaborne iron ore. Despite its domestic iron ore production, consumption of imported iron ore in China is also growing rapidly to meet increasing demand.

Seaborne trade(Fearnleys estimates ⁽⁷⁾)

(in Mt)

	Fines	Lump	Pellet	Total
1998	260	85	72	417
1999	253	87	71	411
2000	288	85	82	455

- (33) Iron ore exports are dominated by shipments from South America (mainly Brazil) and Oceania (mainly Australia), and this dominance is growing: in 1989, 60 % of iron ore exports worldwide were from Oceania or South America; in 1999, this combined share had grown to 70 %. The trend is expected to continue. Freight rates vary considerably, depending on the shipping route taken, and from year to year. These rates are particularly sensitive to oil price movements, and to the availability of suitable ships.
- (34) Partly as a result of a deliberate policy of diversification on the part of Japanese steel companies (to avoid over-dependence on the two Australian suppliers), Brazilian iron ore exports are more widely distributed than those from Australia. Other reasons for this wider distribution of Brazilian ore include the wider product range of Brazilian producers (there are almost no pellets offered by Australian suppliers, for example), the fact that some Japanese steelmakers own stakes in Brazilian pellet plants, and the Japanese customers' policy of freight-sharing (described in more detail below).

Barriers to entering the iron ore market

- (35) There are a number of factors which make entry into the iron ore market difficult and the costs of entry high. Indeed, there has been no significant new entry to the market in recent years. Moreover, any new entry is likely to take the form of acquisition of an existing operator.

⁽⁷⁾ These statistics are based on figures published by the Norwegian shipping company Fearnleys.

- (36) Locating new commercial iron ore reserves with sufficient quality and economies of scale to compete on the world market involves significant exploration and feasibility study costs. Obtaining mineral rights for new mining sites and the required permits to develop and operate such sites, as well as adjacent rail and port facilities, usually require extensive negotiations with governmental authorities over a number of years. In a few countries, such as Liberia and Guinea, development of high quality ore deposits has been prevented by political instability. Moreover, many of the world's known high quality reserves are already in the hands of the three-biggest iron producers: CVRD, Rio Tinto, and BHP.
- (37) Occasionally, a new mine can take advantage of the existing rail and port infra-structure of adjacent mines. Normally, however, mine, rail link and port development costs are very substantial, ranging from several hundred million to billions of euro. For these reasons, new mines need to have very large economies of scale in order to compete in worldwide trade.
- (38) Most new capacity has therefore taken the form of expansion of existing mines or the opening of new pits adjacent to existing mines ('brownfield' expansion). The last major 'greenfield' iron ore mine development was CVRD's Carajas mine in northern Brazil, which was opened with an initial capacity of 35 Mt at a cost of USD 3,5 billion in the mid-1980s, and was then expanded to a capacity of 50 Mt at an additional cost of USD 500 million.
- (39) Constructing and operating pelletising plants are subject to fewer obstacles. The cost of constructing a pelletising plant is currently about USD 50 to USD 60 per tonne of annual capacity. Pelletising plant capacity may range from as little as 1,5 Mt to 7 Mt or more, with total costs ranging from USD 100 million to USD 420 million.
- (40) In their response, the parties submit that, although the barriers to greenfield entry are significant, they are not insurmountable. In particular, the parties indicate that certain equipment and know-how used in the iron ore industry are common to other mining sectors, and that there are no technical barriers. The Commission considers that this does not affect the above conclusion, since the main barriers to entry are not in the area of mining equipment or know-how.
- High rate of capacity utilisation*
- (41) According to some key market participants, capacity utilisation in the seaborne iron ore industry is operating at close to 100 %, and this has been the pattern for much of the past 10 years. Moreover, iron ore does not tend to be stocked in significant quantities, either by the iron ore mining companies or by steelmakers; iron ore stocks are expensive to hold. Producers and consumers only tend to hold stocks in order to allow for short-term fluctuations in production and consumption.
- (42) A forecast increase in world demand for steel has led the largest iron ore producers to invest in new production capacity, although much of this new capacity will replace exhausted mines ⁽⁸⁾. In addition to the expansion of existing mines, a number of new mines are planned in Brazil and Australia, by CVRD, BHP and Rio Tinto. Other expansions in capacity are planned for India and Canada.
- (43) Any significant increases in capacity outside Brazil and Australia are, however, likely to be on 'brownfield' rather than 'greenfield' sites, for two reasons. First, the cost of developing new iron ore mines means that it is far more economical to expand existing operations in most cases. Second, there is increasing opposition to open-pit mining in many parts of the world, especially in developed countries.
- (44) In that context, it is expected that the current situation of tight supply will continue for a number of years. In particular, data provided by the parties indicates that the capacity utilisation rate, which reached 93 % in 2000, is still expected to be in a range between 88 % and 92 % in 2005.
- (45) In their response, the parties submit that excess capacity exists. First, the parties indicate that year 2000 corresponds to a year of unforeseen, all-time high demand, and that the coming years will show a very different picture.
- (46) Secondly, the parties consider that the capacity figures used by the Commission (provided by the parties) underestimate the actual level of capacity in the industry. In particular, the parties rely on a study which they commissioned to be carried out by an economic consultant. In its study, the economic consultant considers that 'capability' rather than capacity is a better measure of a firm's maximum capacity to supply iron ore in the export market. More specifically, the economic consultant considers that nominal capacity may have been improved by de-bottlenecking, so that 'capability', which is calculated on the basis of the

(41) According to some key market participants, capacity utilisation in the seaborne iron ore industry is operating at close to 100 %, and this has been the pattern for

⁽⁸⁾ This forecast increase in demand is likely to result in the construction of nearly 100 Mt per year of new capacity in the near future: see *The Economics of Iron Ore*, fourth edition 2000 (Roskill).

highest observed production levels, may therefore provide a better indication of capacity to supply. For instance, the economic consultant calculated the capability of CVRD's northern system by observing that it had reached a peak shipment rate of 4,9 Mt in March 2001 and extrapolating that figure on an annual basis (thereby reaching an annual capability of 58,5 Mt).

(47) The Commission cannot accept the parties' arguments about capacity ⁽⁹⁾. The Commission considers that the capability figures calculated by the economic consultant significantly overestimate actual capacity in the industry. In particular, the Commission considers that deriving annual capacity by extrapolating on the basis of the highest monthly production is not appropriate. This methodology supposes that an iron ore supplier can every month reproduce the ideal conditions which it enjoyed during the 'best' month, a scenario which seems unlikely in view of the complexity of the logistic chain (production, storage, rail transport and ship loading) and the bottlenecks at every level. In short, the economic consultant's methodology assumes that there is always the optimal production level available, the right iron ore train capacity available and the right ship present at the port. In addition, this methodology ignores seasonal factors (especially the seasonal character of demand and of weather conditions), which are significant in that industry. The Commission therefore considers that the capacity figures initially provided by the parties, which are consistent with those provided by third parties, should be those used for the assessment of the present transaction.

(48) In addition, the Commission notes that, even on the basis of the capability figures calculated by the economic consultant, capacity utilisation rates are expected to remain close to 90 % for the whole of the 2000-2005 period, which is already a high figure given the frequent disruptions caused by factors such as weather conditions (delaying ships and trains, affecting the extraction process, etc.). Given that the actual capacity utilisation rate (on the basis of real capacity) will exceed those estimates, the Commission maintains that the industry is and will continue to be in a situation of tight supply.

(49) Furthermore, the parties' arguments about lower demand in 2001 and 2002 are not confirmed by the results of the Commission's investigation. In particular, the first- and second-quarter results of CVRD in 2001 show an increase in fine and pellet sales when compared to 2000. In a presentation of those results made in May 2001, CVRD indicated that long-term perspectives are for a 1 % annual growth for all iron ore

products, and 4 % annual growth for pellets; and that, in the short term, demand should remain firm, the only risk being a slowdown of current market growth (rather than a contraction in demand). Rio Tinto's half-year results show the same pattern, with demand for iron ore 'remaining quite strong'.

(50) Even a lower demand for steel, and therefore a lower demand for iron ore than that currently forecast, will not materially affect that conclusion, since it will also lead iron ore suppliers to postpone their capacity expansion schemes. As the parties explain in their response, it would be uneconomical to add capacity ahead of demand as it would reduce the industry capacity utilisation rate. No bank would finance projects on this basis.

(51) More generally, it should be noted that the arguments made by the parties in their response (significant excess capacity, presence of readily expandable capacity, homogeneous products and low marginal costs) all point to the conclusion that iron ore markets are close to a situation of perfect competition. In such a scenario, one would expect iron ore producers to be experiencing very low (if any) profit margins. However, the results of the investigation show a very different reality. In particular, a presentation made by CVRD and Merrill Lynch in May 2001 indicate that all major iron ore suppliers achieve considerable profit margins (EBITDA ⁽¹⁰⁾ margins between 27 % for BHP, and 46 % for CVRD) as well as very high returns on capital (reaching 30 % in the case of CVRD). Similarly, a presentation made by BHP presents the iron ore sector as a sort of aberration among commodity markets, because, of all the commodities considered, iron ore provides the highest return on capital for (paradoxically) the lowest risk and volatility. These features demonstrate the presence of substantial rigidities in the iron ore sector, enabling the major producers to enjoy very comfortable profits.

The main suppliers of seaborne iron ore

(52) The main suppliers of seaborne iron ore to western Europe and worldwide are as follows:

CVRD

(53) As mentioned above, CVRD is based in Brazil and is the world's largest iron ore producer. It already jointly or solely controls most of Brazil's iron ore production,

⁽⁹⁾ It should be pointed out that the parties never questioned the capacity figures which they had provided until two weeks after the issuance of the statement of objections.

⁽¹⁰⁾ Earnings before interest, taxes, depreciation and amortisation.

with the principal exception of Mineração Brasileiras Reunidas SA (MBR), a subsidiary of Caemi. CVRD's iron ore mining operations are essentially located in two geographic regions in Brazil: the 'northern system', mines located in the Carajas region of the State of Pará (with a capacity of some 50 Mt); the 'southern system', mines located in the State of Minas Gerais (with a capacity of some 60 Mt). Both mine systems are linked by dedicated freight railways to deep-water ports, some of which facilities are owned by CVRD. Furthermore, CVRD has recently acquired controlling interests in SA Mineração da Trindade (Samitri), also located in the 'southern system' (having high grade reserves, and an estimated annual production capacity of 17 Mt), as well as in the Socomex mining companies (having an estimated annual production capacity of 7 Mt). Each of these mines is located in Brazil and produces fine and lump ores.

- (54) CVRD holds interests variously of 50 % to 100 % in nine pelletising plants, with a 10th wholly-owned plant under construction in Brazil, and an 11th 50 % owned pelletising plant in Bahrain (Gulf Industrial Investment Company). In Brazil, Nippon Steel has a 49 % interest in two of those pelletising plants, Riva of Italy and Aceralia of Spain each has a 49 % interest in one of those plants, and Posco of Korea has a 50 % interest in one of those plants. Two pelletising plants in Brazil are 50 % held through Samarco (an iron ore pellet exporter and formerly a subsidiary of Samitri), with BHP holding the other 50 % interest. Pellets produced by each of these joint venture companies are sold either to the joint venture pellet customer or to CVRD under long-term sales agreements. Profit from each joint venture company is distributed to CVRD and the joint venture pellet customer as dividends.

- (55) In 2001, CVRD acquired Ferteco Mineração SA (Ferteco), then Brazil's third largest iron ore producer, based in the State of Rio de Janeiro. It has a production capacity of some 15 Mt per year of iron ore and mineable reserves of approximately 263 Mt of ores. Ferteco operates two open-pit iron ore mines located in the 'southern system', and a 4 Mt per year pellet plant, also in the State of Minas Gerais. Ferteco also holds a 10,5 % stake in MRS Logística SA, a freight railway network serving the 'southern system' and linking it with the deep-water port of Sepetiba, Rio de Janeiro. CVRD owns the other freight railway linking the 'southern system' with the deep-water port of Tubarão, where many of CVRD's pelletising plants are located. Ferteco moreover operates a marine terminal through its wholly owned subsidiary, Companhia Portuária Baía de Sepetiba SA (CPBS), in the port of Sepetiba.

Rio Tinto

- (56) Rio Tinto, is based in Australia and is the world's second-largest iron ore producer; sold some 116 Mt in 2000 (including the sales of North Limited — see below). Of this 113 Mt were sold on the seaborne market.
- (57) Rio Tinto owns 100 % of the Marandoo, Mount Tom Price/Paraburdo and Yandicoogina mines and 60 % of the Channar mine in Western Australia (the 'Hammersley' mines), with total listed capacity of some [...] Mt per year, and which is to expected to increase to some [...] Mt by 2002 and to some [...] Mt by 2010. According to public sources, production of marketable iron ore from the Hammersley iron ore mines amounted to 65,7 Mt (with total sales of 67,1 Mt) in 2000, substantially all of which was exported. Sales in 2000 included [...] Mt to Japan, [...] Mt to China, [...] Mt to Korea, Taiwan and elsewhere in Asia and [...] Mt to Europe ⁽¹¹⁾.
- (58) In the autumn of 2000, Rio Tinto acquired North Limited, which held a 53 % indirect shareholding in the Robe River Iron Associates mine. Rio Tinto directly controls 65 %, and markets as sales agent 100 % of Robe River production, which amounted to some [...] Mt in 2000, all of which was exported. Robe River's annual capacity is expected to be increased by an additional [...] Mt by 2009, commencing with [...] Mt in 2003, through development of the West Angelas deposit in Western Australia ⁽¹²⁾.
- (59) Rio Tinto also owns some 56 % of the shares of the Iron Ore Company of Canada (IOC). The IOC open-pit mine in Newfoundland can currently produce [...] Mt of fine iron ore (concentrate), of which [...] Mt are being sold in the form of pellets produced near the mine site. Ore is exported through a port in Quebec. Rio Tinto has announced that it is renovating its Sept Îles, Quebec pelletising plant, which is to reopen in 2002 with a capacity of [...] Mt to increase to [...] Mt per year in 2004. IOC's annual sales in 2000 amounted to [...] Mt of which a portion was sold to Canadian steelmakers and [...] Mt were exported. Rio Tinto also owns a mine in Brazil (Corumbá), with a current annual capacity of some [...] Mt ⁽¹³⁾.

BHP

- (60) BHP is based in Australia and is the world's third-largest iron ore mining company, accounting for about 8 % of world production. The parties estimate that sales of iron

⁽¹¹⁾ All figures provided by the parties.

⁽¹²⁾ All figures provided by the parties.

⁽¹³⁾ All figures provided by the parties.

ore controlled by BHP (including 50 % of Samarco's output — see below) represented some [...] Mt in 2000.

- (61) BHP owns 85 % interests in the Mount Newman, Yandi and Goldsworthy joint ventures in Western Australia and 100 % interests in the Middleback Range in Southern Australia and the Jimblebar mine in Western Australia. These mines have a total listed capacity of some [...] Mt, which is expected to increase to some [...] Mt by 2003. BHP also owns the Taharoa and Waikato mines in New Zealand, with a capacity of approximately [...] Mt. Current projects under development would, according to the parties, expand capacity controlled by BHP by an additional [...] Mt for 2003 and a further [...] Mt in the following years ⁽¹⁴⁾.
- (62) In 2000, BHP acquired an additional interest in the Samarco mine and pelletising plants in Brazil, bringing its total equity interest to 50 %. The remaining 50 % interest in Samarco is held by CVRD. The Samarco mine currently has a rated capacity of [...] Mt per year, which includes [...] Mt of pelletising capacity. Total sales amounted to [...] Mt in 2000 (including [...] Mt of pellets) ⁽¹⁵⁾.

CAEMI

- (63) As mentioned above, Caemi is a Brazilian holding company with stakes in several iron ore mining companies in Brazil and Canada, and in related logistics businesses. Caemi controls the Brazilian mining company Mineração Brasileiras Reunidas SA (MBR), where it holds 85 % of the voting shares; MBR is Brazil's second largest iron ore producer (behind CVRD), with a seaborne export capacity of some [...] Mt per year, and is currently operating three open-pit mines producing fine and lumpy ores. Caemi also jointly controls Quebec Cartier Mining Company (QCM) (Canada), where it holds 50 % of the voting shares (the remaining 50 % are held by the Canadian steel company, Dofasco); QCM produces fine ore and pellets, and has a seaborne export capacity of some [...] Mt per year. Worldwide, Caemi is the number four iron ore producer (behind CVRD, Rio Tinto and BHP) ⁽¹⁶⁾.
- (64) As regards logistics (railway and port operations in Brazil), Caemi holds, *inter alia*, a 32 % stake in MRS Logística SA, Brazil's most important general cargo railway network serving the 'southern system' of iron ore mines, and linking it with the deep-water port of Sepetiba.

SNIM

- (65) Société Nationale Industrielle et Minière (SNIM) is the only producer of iron ore in Mauritania, and has a total capacity of some [...] Mt per year. All of its production is exported, with almost all of its exports (over 90 % in 1998) going to western Europe, predominantly to France, Italy, and Belgium ⁽¹⁷⁾.

LKAB

- (66) The Swedish iron ore producer Luossavaara Kirunavaara AB (LKAB) produces and sells fine iron ore and pellet and currently has a total capacity of some [...] Mt ([...] Mt of pellets and [...] Mt in fines). Total sales amounted to [...] Mt in 2000 ([...] million tonnes of pellets), of which approximately [...] million tonnes were exported. LKAB therefore accounted for [<5] % of worldwide production and [<5] % of global import trade in 2000. However, owing to its advantageous shipping costs to Europe, LKAB accounts for a much higher percent of iron ore consumption in the European Union ⁽¹⁸⁾.

ISCOR

- (67) Iscor is the main South African producer of iron ore, with a production capacity of some [...] Mt per year. Just under half of its production is consumed internally by its own steelworks. The rest (around [...] Mt) is exported, mainly to Asia ⁽¹⁹⁾. Although Iscor intends to increase its export capacity in the near future, this is likely to be affected by difficulties in expanding rail and port capacity in South Africa.

Mitsui

- (68) As mentioned above, Mitsui is a Japanese company with minority and controlling stakes in a number of Australian and Indian iron ore mining companies. Mitsui controls 51 % of the Indian mining company SESA Goa Ltd, which produced some [...] Mt of iron ore in 2000, some [...] Mt of which was exported to Europe. Mitsui's minority holdings include a significant minority stake in the world's second-largest iron ore mine, Robe River in Australia, whose other stakeholders include Rio Tinto and two Japanese steel companies. Mitsui has further interests in the Yandi, Goldworthy

⁽¹⁴⁾ All figures provided by the parties.

⁽¹⁵⁾ All figures provided by the parties.

⁽¹⁶⁾ All figures provided by the parties.

⁽¹⁷⁾ All figures provided by the parties.

⁽¹⁸⁾ All figures provided by the parties.

⁽¹⁹⁾ All figures provided by the parties.

and Mount Newman mines (7 % each), along with the controlling shareholder BHP (85 %). Finally, as was described in more detail above, Mitsui also currently holds 40 % of the voting shares in Caemi. As SESA Goa is the only company controlled by Mitsui, only this company's (negligible) production and sales are taken into account in the competitive assessment made below, including the calculation of market shares.

B. Demand for iron ore ⁽²⁰⁾

Trends in demand for iron ore

- (69) As indicated above, the demand for iron ore originates from the steel manufacturers, which use iron ore as a raw material for the subsequent production of steel products. Iron ore consumers can be divided into two types: first, the basic oxygen furnace (BOF) steel mills producing pig iron from sinter (fines), lump, pellets and, to a lesser extent, scrap, and secondly, the direct reduction segment using pellets and lump to produce direct reduction iron (DRI) for electric arc furnace (EAF) steel production.
- (70) The relatively high cost of energy in the European Union means that almost all iron ore sold there is for steel production which uses the blast furnace method (DR iron ore accounts for less than 10 % of total world consumption of iron ore); the only Western European EAF production facility using DRI ⁽²¹⁾ is a 0,45 Mt capacity plant operated by Ispat in Germany ⁽²²⁾. It is, for the same reason, considered unlikely that new EAF facilities using DRI will be constructed in the EU ⁽²³⁾.
- (71) In the last decade, world production and consumption of crude steel has closely followed trends in the US, Asian and European economies. From 770 Mt in 1990, world crude steel production fell to a low of 720 Mt as a result of the US and European recession in 1991-1992 and the deepening economic crisis in the CIS countries, and then gradually increased to a high of 799 Mt in 1997. As a result of the Asian crisis at the end of 1997,

production again fell to 772 Mt in 1998 and then rebounded in late 1999 and 2000. The International Iron and Steel Institute estimates that total crude steel production in 2000 was over 840 million tonnes.

- (72) Viewed regionally, production of crude steel in western Europe and the United States has grown only modestly during the last decade. Production of crude steel in the CIS countries fell by nearly half from 207 Mt in 1990 to less than 103 Mt in 1998, but then increased in 1999 and 2000 as a result of very aggressive export policies to offset the fall in domestic consumption. Chinese and Korean production of crude steel (and imports of iron ore) grew substantially throughout the decade. Competition from relatively cheap steel imports has placed considerable pressure on US and, to a lesser extent, European steel producers. This competition also indirectly affects Brazilian, Australian, Swedish and other iron ore producers for the seaborne trade, which furnish most of the iron ore requirements of western European steel-makers and only small amounts to eastern European steel producers.
- (73) During the same period, changes in the demand for steel were mirrored in the iron ore market. Notwithstanding the Asian crisis, the demand for iron ore has grown by approximately 1,5 % per year since the 1991-1992 recession. Global iron ore production did fall from a high of 921 Mt in 1997 to slightly less than 900 Mt in 1999 and seaborne iron ore trade fell from 417 Mt in 1998 to 411 Mt in 1999. Increased steel production in 2000 was reflected by an increase in global iron ore production to over 931 million tonnes, and in seaborne trade from 411 Mt in 1999 to 455 Mt in 2000. Prices for iron ore fell sharply in 1999 as a result of the Asian crisis, and then increased in 2000 and 2001, but still did not match the record 1998 levels.
- (74) World steel production has been following an upward trend since 1992. A faster than expected recovery of the steel industry after the Asian crisis is evident when the 1999 production figures are compared with those of 2000, when a record level of 847 Mt of crude steel production was reached. Looking towards 2005, CVRD expects this positive trend in steel production to continue in the future, with crude steel production reaching 890 Mt by 2005, an annual average increase of about 1 %. Analysing steel growth by region, the biggest absolute increase is likely to occur in Asia (+26 Mt), followed by Latin America (+7 Mt). European demand is forecast to remain constant.
- (75) World iron ore production is expected to follow the trend of steel production although at a lower growth

⁽²⁰⁾ The data contained in this section is based on information provided by the parties.

⁽²¹⁾ There are many EAF facilities in the EU which use 'scrap' iron (rather than DRI) as an input. EAF production using DRI consumes very large quantities of energy, usually gas.

⁽²²⁾ This plant has been temporarily shut down, principally on account of high gas prices, but is expected to be reopened in October 2001; Ispat expresses confidence that the plant is viable long-term, in the expectation of lower gas prices following liberalisation of energy markets in Europe.

⁽²³⁾ The Economics of Iron Ore, fourth edition 2000 (Roskill).

rate, since steel production which uses scrap instead of iron ore is expected to increase more rapidly than steel produced via the blast furnace route. On the other hand, international trade in iron ore is expected to grow faster than world iron ore production since a large part of the growth in steel production will be in countries which import iron ore.

Consumption of iron ore in the European Union

- (76) As indicated above, steelmakers in the European Union are today almost totally reliant on seaborne iron ore. Western European steelmakers all import large quantities of iron ore from a variety of sources outside the EU, and mainly from Brazil (by far the largest exporter of iron ore to Europe), Australia, Canada and Mauritania. The table below includes a small amount of consumption that is not imported (principally, about 5 Mt of Swedish production which is consumed domestically).

	Fines	Lump	Pellet	Total
1998	95,0	18,3	34,9	148,2
1999	83,1	17,1	32,8	133,0
2000	88,6	19,6	35,7	143,9

Parties' estimates and data from UNCTAD

Limited change in the iron ore mix

- (77) Iron ore cannot be regarded as a typical commodity. Indeed, as the parties have stated during the procedure, products made in different regions have highly differentiated intrinsic metallurgical properties as described above, and clients are conservative in their purchasing behaviour. As was indicated above, the demand for iron ore emanating from each customer is determined by the particular burden used by that customer. The composition of that burden defines the relative proportions of sinter fines, lump and pellets required, as well as the quality (and therefore the geographic origin) of each type of ore. Given that customers usually blend several varieties of fines in order to obtain the feedstock parameters (ferrous content, LOI content, level of impurities, etc.), the burden also determines the proportion of each quality (and therefore origin) of fines.
- (78) The data provided by the parties, and the results of the Commission's investigation, indicate that customers are

highly reluctant to change the composition of their burden, and that they rarely do so. In particular, the parties state that in Europe, blast furnaces run at high productivity levels by utilising high levels of pulverised coal injection and low volumes of coke. These conditions can only be achieved and maintained if all feedstock parameters are kept as stable as possible. This need for stable operating conditions limits the raw material buyer in his ability to switch between input materials on a short-term basis, and also explains why iron ore has traditionally been contracted for multi-year periods.

- (79) This phenomenon operates at two levels. First, it limits the customers' ability to switch between sinter, lump and pellets. Secondly, it has also effects within each form of iron ore (namely lump, pellet and sinter fines), by restricting the customers' ability to switch between products of different origin and quality. The results of the Commission's investigation confirm this phenomenon. In particular, it appears that blast furnaces steel mills usually do not change the proportions of sinter, lump and pellets significantly (on average, by not more than 3 to 5 %). Furthermore, while some customers have clearly switched between different qualities of sinter fines (e.g. between Australian fines and Brazilian fines), it appears that most competition takes place within ores with the same quality (and therefore often with a similar geographic origin).
- (80) The parties emphasise that, with respect to fines, the buyer's flexibility improves if all sinter fines are blended on-site at the steel mill, just prior to producing the agglomerate. In that situation, one component of the blend may be exchanged, removed or added, provided that the overall chemical composition and metallurgical behaviour of the agglomerate remains stable. However, they also admit that there is a trend amongst iron ore customers towards reducing the number of blend components in order to save costs in transport, handling and stocks. A consequence of this trend is a further reduction in the buyer's ability to switch suppliers in the short term.
- (81) As regards the production of steel in an electric arc furnace, direct reduction iron (DRI), like pig iron and scrap iron, can be used as an input; DRI is produced, using DR iron ore, in a DR furnace. The ore comes in two main forms: DR pellets and DR lump. Depending on the type of DR furnace concerned, there are technical limitations to the intersubstitutability of DR lump and DR pellets, in that lump can be substituted by

pellets, but pellets cannot be fully substituted by lump (because lump cannot exceed 20 % to 40 % of the total burden).

13 Mt of iron ore or roughly 3 % of global seaborne imports each.

C. Concentration and joint ventures

Concentration in the iron ore and steel industries

(82) The ownership structure of the iron ore market has been rapidly transformed over the past few years, and is now concentrated among relatively few companies. Capacity has become even more concentrated during 2000 and 2001, notably following Rio Tinto's purchase of the Australian mining company North Ltd (2000) and CVRD's string of recent acquisitions of other Brazilian mining companies ⁽²⁴⁾. Concern over production costs has been one of the most important factors driving the current wave of consolidation. The bulk of the world's internationally traded iron ore is now concentrated in the hands of three companies: CVRD, Rio Tinto and BHP. Industry analyst Roskill Information Services Ltd notes that this consolidation tends to make it harder for iron ore consumers to negotiate price discounts ⁽²⁵⁾.

(83) Ownership in the steel industry is considerably less consolidated than in the iron ore industry. Nevertheless, European steel producers have been pursuing rapid consolidation in recent times. Among others, in 1997, Thyssen and Krupp merged to form Thyssen Krupp Stahl (16,1 Mt of steel production in 1999); in 1999, British Steel and Hoogovens of the Netherlands merged to form Corus (21,3 Mt); in 1997, Arbed acquired 35 % of Aceralia; in 1998, Usinor acquired 53 % of Cockerill Sambre; and this year Arbed/Aceralia and Usinor (the world's third- and fourth-largest steelmakers) announced a merger to produce the world's largest steel company with 46 Mt of production capacity.

(84) The notifying parties estimate that in 1999, Usinor, Arbed, Aceralia, Cockerill Sambre and their European subsidiaries together consumed 35 to 40 Mt of iron ore or roughly 9 % of global seaborne imports. Corus (including Hoogovens) consumed 25 to 27 Mt of iron ore or roughly 6 % of global seaborne imports, and each of Thyssen Krupp and Riva of Italy consumed over

(85) In their response, the parties submit that consolidation in the steel industry is more significant than is described by the Commission. In particular, they consider that, if one regards the Japanese steel mills as a buying bloc then, with the merger of Usinor/Arbed/Aceralia, 67 % of seaborne iron ore would be purchased by the six largest customers. The Commission does not share this view. [...]*

Production joint ventures (both horizontal and vertical)

(86) There are a number of 'horizontal' mining joint ventures, notably between CVRD and BHP, who each hold a 50 % stake in Samarco, a Brazilian pellet producer. Mitsui has a significant minority stake (33 % in equity terms) in the important Australian mine Robe River, in which Rio Tinto is also a shareholder. Mitsui has further interests in the Yandi, Goldworthy and Mount Newman mines (7 % each), along with the controlling shareholder BHP.

(87) There also exist a number of 'vertical' production joint ventures between iron ore producers and steelmakers, such as the Robe River, Mount Newman, Goldworthy and Yandi ventures.

(88) Moreover, some steelmakers own 'captive' iron mines or make minority equity investments in iron mines with long-term sales agreements for all or a portion of the production. In recent times, however, this trend has seen some reversal, as witnessed, for example, by Thyssen Krupp's sale of Ferteco. In their response, the parties indicate that this phenomenon indicates their lack of concern about 'exploitation' by iron ore producers. The Commission considers this argument to be highly speculative. There may be plenty of reasons for steel mills to sell their iron ore interests, such as the need to levy capital for investment in their core business, and/or the fact that the iron ore producers concerned no longer represent a significant part of their supplies. Furthermore, the steel mills concerned may counterbalance any risk of 'exploitation' from the purchaser of the iron ore interest to be divested, either by obtaining a higher purchase price reflecting future price expectations, or by reaching long-term contractual arrangements with the acquirer.

(89) Increasingly, steelmakers have also invested, both as majority and minority shareholders, in pelletising plants. For example, Nippon Steel, Posco Pohang Iron & Steel Co. Ltd, Riva of Italy, and Aceralia of Spain hold substantial minority interests in four CVRD pelletising plants.

⁽²⁴⁾ In addition to the notified operation, CVRD has added substantially to its production capacity over the past year or so: it has acquired the Brazilian operators Ferteco, Socoimex, and Samitri, as well as a 50 % stake in Samarco.

⁽²⁵⁾ The Economics of Iron Ore, fourth edition (2000).

D. Iron ore prices: contracts and price negotiations

- (90) Supply contracts between iron ore producers and consumers have become shorter over the past 30 years. In most cases, contracts are now between three and five years in length, compared to 10 years in the 1970s. Contracts between producers and Japanese steelmakers tend to be longer-term than those between producers and European steelmakers.

Benchmark prices

- (91) Although contracts may last for several years, prices are revised on an annual basis following the results of price negotiations taking place in Western Europe and in East Asia (more specifically, in Japan) at the beginning of each year. The objective of those price negotiations is to set a reference price (the 'benchmark prices') for lump, sinter fines and pellets, respectively, in each of the two customer areas.
- (92) The negotiations take place through a series of meetings between the large iron ore and steel producers, normally starting at the end of the previous year and continuing for several months. The negotiations are based principally on the perceived state of demand and supply for iron ore, the financial situation of ore producers and steel mills, as well as the long-term needs of both industries.
- (93) At some point along the line in the pricing negotiation season, one of the steel mills will reach an agreement with one of the iron ore producers on a percentage change above or below the previous year's free-on-board (FOB) price for the fines of that particular producer. This percentage change is then made public to the other iron ore suppliers and customers, and thus defines the new benchmark price for fines. As can be seen in the following table, the agreed price change is then normally used in both East Asia and western Europe.

Changes of the first price setters in Japan and Europe

(in %)

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Japan	change	15,96	7,95	- 4,90	- 13,47	- 9,50	5,80	6,00	- 1,94	2,82	- 9,20	4,35	4,31
	Price setter	HSY (²⁶)	HSY	HSY	HSY	HSY	BHP	BHP	BHP	BHP	HSY	RR	HSY
Europe	change	15,96	7,93	- 4,90	- 11,00	- 9,50	5,80	6,00	1,10	2,82	- 11,00	4,35	4,31
	Price setter	CVRD	CVRD	CVRD	SNIM	CVRD	SNIM	CVRD	HSY	CVRD	CVRD	SNIM	CVRD

Source: The Tex report and the parties' data.

- (94) As noted above, the new benchmark price is normally agreed first for fines, principally because of the lower prices and higher volumes concerned. Once the annual price adjustments for fines have been agreed, the annual price changes for lump ore and pellets are then negotiated. According to the parties, the benchmark price for lump is traditionally agreed between Japanese steel mills and Australian suppliers, while that for pellets is always negotiated in western Europe. This phenomenon reflects the different rate of utilisation of pellets and lump in those regions. In recent years, the first contracts have generally been between Australian iron ore companies and Japanese steel producers, and these have tended to be used as a benchmark for prices in Europe (²⁷).

(²⁶) HSY = Hammersley, a subsidiary of Rio Tinto; RR = Robe River, also a subsidiary of Rio Tinto.

(²⁷) In 2000, this trend was upset: the first price agreed was between the Mauritanian producer SNIM and the European steel company Usinor.

(95) It should also be noted that the negotiation process is a rather transparent one. Suppliers' and customers' expectations about the state of demand and supply, and therefore 'fair' price movements, are widely advertised in the press; industry journals⁽²⁸⁾ report regularly on progress in the talks, describing who has met whom, and speculating on the content of discussions.

(100) On the basis of the outcome of the, almost unanimous, views expressed by iron ore customers during the course of the Commission's market investigation, it can be concluded that each of these three types of iron ore constitutes a distinct product market, with only limited substitutability between the three products.

Final prices

(96) Following the determination of benchmark (or 'reference') prices, individual negotiations between producers and customers commence, before final prices are agreed. [...]*

Technical barriers to switching between iron ore types

(101) The three different types of ore are not significantly substitutable from a demand-side perspective. As indicated above, blast furnaces can only run at high productivity levels if all feedstock parameters are kept as stable as possible. This need for stable operating conditions limits the raw material buyer in his ability to switch between input materials on a short-term basis, and also explains why iron ore is usually contracted for multi-year periods.

V. PRODUCT MARKET DEFINITIONS

(97) As indicated above, iron ore is a raw material sold almost exclusively to the integrated steel industry. It is offered to basic oxygen furnace (BOF) steel producers by iron ore mining companies in three forms: sinter fines, lump, and pellets.

(102) According to the parties, major changes usually occur when dictated by operational requirements (the re-lining of a blast furnace or the closure of a sinter plant), or when the iron ore supplier is providing a new product in substitution for an existing one which is no longer available. When such changes are contemplated, an extensive test period is planned. This starts with lab and pilot tests and is followed by full scale trials which last at least a number of weeks. These practical constraints inevitably limit the scope for any significant short-term changes in iron ore supplies.

(98) Steel producers feed an individually composed burden of sinter, lump and pellets into their blast furnaces to produce pig iron, which can further be converted into steel. According to the parties, in western Europe the burden consists of approximately 60 % fines, 20 % lump and 20 % pellets, but varies from steel mill to steel mill. As indicated above, while lump ore can be directly used as a feedstock to the blast furnace, sinter fines are too small to be used directly in the blast furnace and have to be further processed into sinter; this processing takes place in sintering plants almost always operated by the steel mills. Pellets are the product of further processing smaller 'super-fines' in pelletising plants, operated usually by the mines, and can be then directly used as a feedstock.

(103) The results of the Commission's investigation confirm the very limited substitutability of the different forms of iron ore. In particular, a vast majority of steel producers have indicated that they are highly reluctant to change to any significant extent the composition of the burden fed into the blast furnace. Several customers also indicated that any significant change in the proportions of sinter, lump and pellets could take several years, and that it could in certain cases cost several million euro of investment.

(99) The notifying parties submit that there is a single relevant product market which includes all supplies of iron ore, without distinction between the three different types of ore (fines, pellets or lump). They argue that the various forms of iron ore have a high degree of substitutability since iron ore users can, to a significant extent, switch among the three forms of ore. Prices generally move together, although their absolute levels differ significantly as a result of the differences in processing.

Economic barriers to switching between iron ore types

(104) The results of the Commission's investigation also indicate that there are significant economic barriers to switching between sinter fines, lump and pellets. Prices

⁽²⁸⁾ Principally Tex Report and Metal Bulletin.

differ significantly for the three product types: sinter fines are typically priced at around 37 US-cent/fe-dmt cif; lump at around 45 US-cent/fe-dmt and pellets at around 65 US-cent/fe-dmt ⁽²⁹⁾. That results in a differential of 22 % between sinter fines and lump, and of 76 % between fines and pellets. Fines remain the cheapest option, even if steel mills operate their own pellet plants (which is usually not the case).

No constraining effects of fines on other iron ore types

- (105) First, a vast majority of customers have indicated that the ability of a steel mill to alter its use of sinter at the expense or to the profit of other forms of iron ore is limited, as steel mills tend to maximise their use of sinter fines. Since fines are by far the cheapest iron ore product and sinter plants, operated by the steel mills, have high fixed costs and low marginal costs, the steel mills usually run their sintering plants at capacity. Given that there are significant barriers to expansion of sintering capacity, it follows that neither lump nor pellets have significantly constraining effects on sinter feed prices and demand.

- (106) Sinter feed prices, in turn, have little constraining effect on the prices of lump and pellets. Contrary to the parties' view, a vast majority of customers stated that steel mills cannot increase their sintering capacity in the short or medium term, both because of the substantial investment required and as a result of environmental constraints.

- (107) More specifically, expansion of the capacity of the sinter plants is not a viable option. New sinter plants have not been built in Europe for at least 20 years, which implies that the maximum proportion in the blend has probably already been reached, and that the start-up of an

entirely new plant (which probably could not be operated at full capacity) would be uneconomical. An expansion of the capacity of already existing plants is theoretically possible to a limited extent, but the additional output would be insufficient to influence the prices of the other iron ore types. Furthermore, costs of expanding capacity may be too great to be worthwhile, given the extremely high costs brought about by the necessary shut-down of the blast furnace and the consequent disruption in steel production. In Europe, steel mills would also face regulatory difficulties, given the release of toxic gases generated by sinter production. A capacity expansion by loading further processed, more productive feed into the sinter plant would, in turn, incur additional costs which would dilute the economic advantage of fines. In any event, the additional proportion (about 5 %) obtained would also be not sufficient to exercise price constraining effects.

- (108) It should also be noted that, unlike sinter fines, certain grades of lump and pellets are also used for the production of DRI. According to presentations made by JP Morgan and CVRD in November 2000 ⁽³⁰⁾, demand for pellets is likely to derive to a significant extent from the expected growth in DRI production. This will further dissociate the competitive conditions for pellets from those for sinter fines (only used in blast furnace processes).

No constraining effects between lump and pellets

- (109) The results of the Commission's investigation also show that the scope for the interchangeability between lump and pellets is also limited. According to the vast majority of customers, steel mills procure lump and pellets to satisfy the rest of their needs, seeking to maximise the use of lump, which is about 40 % cheaper than pellets. They are, however, constrained in their capacity to use lump, because lump, being a 'natural' product with a variable quality, cannot represent a high proportion of the total iron ore mix, the primary requirement for good steel production being consistency of input. Moreover, in the blast furnace part of the lump decomposes into fines, which blocks the necessary airflow, thereby posing further risks to blast furnace productivity.

⁽²⁹⁾ Average price for seaborne sales into western Europe, according to parties' answer to questionnaire of 15 June, question 4; cif price is the most meaningful in this context (demand-side substitutability), as it reflects the horizon of the customers.

⁽³⁰⁾ Latin American Equity Conference.

- (110) There is also little flexibility in increasing the proportion of pellets relative to lump. Owing to the high price of pellets, which are the most expensive but also the most productive option, the main incentive to use more pellets would be to increase the output of the blast furnace in times of high demand (when higher steel production costs can be passed through to the customers). Generally speaking, pellets are therefore normally considered a swing product, except obviously in those areas (such as North America) where it is the only product available, on account of the geology of domestic iron ore mines.

Conclusion

- (111) In the light of the above, it is concluded that, from a demand-side perspective, each of sinter fines, lump and pellets constitutes a separate product market. A vast majority of customers have indicated that they would not change their proportions of sinter feed, lump and pellets should the price of one of these iron ore forms increase by 5 to 10 % relative to the other forms⁽³¹⁾. This is so because (i) customers are reluctant to change their burden; (ii) customers cannot significantly increase their demand for sinter fines because they already operate their sintering plants at close to full capacity, and they cannot increase that capacity in the short to medium term; (iii) customers cannot significantly increase the proportion of lump, because they already try to maximise this use and because lump is in short supply; and (iv) pellets being substantially more expensive than other iron ore forms, customers use it as a swing product and would not increase their demand for pellets if they could produce the desired quantities of steel through the use of sinter and lump only.
- (112) This does not mean that customers never change their burden. In particular, it appears that customers sometimes reduce or increase the quantities of pellets

which they use. However, the results of the Commission's investigation show that these changes are limited, as the proportion of the distinct iron ore products used in the individual burden can only vary to a limited extent (usually 3 to 5 %), at least in the short and medium term. Furthermore, it appears that these changes are seldom the result of competition between the various iron suppliers, but instead result from exogenous considerations like the evolution of demand for steel. For instance, in periods of high demand for steel, a steel mill's sintering capacity may be insufficient to cover production requirements. In such cases, the steel mill concerned may need to procure higher cost pellets in order to meet demand.

- (113) As the parties indicate, the skill of an iron ore buyer is therefore not determined by his ability to shift orders between suppliers in accordance with price considerations. Instead, the skilful buyer is the one who extracts the maximum value from his existing suppliers, in terms of timing of supply, product quality and consistency, and price.

B. Supply-side substitution

- (114) Fines, pellets and lump are generally not substitutable from a supply-side perspective. Iron ore mines produce both lump and fines (some of which is sold to steel mills as sinter feed, and some of which is converted by the mine into pellets). However, the ratio of fines and lump ore production of each mine is determined by the geology of the iron ore deposits. Mines located in Australia, India and South Africa, for example, produce relatively more lump than mines located in Brazil and Venezuela. Mines producing ore with a low ferrous content, such as those located in the United States, Canada and China, produce little or no saleable lump.

⁽³¹⁾ The parties dispute that conclusion, on the basis that the Commission did not sufficiently specify the 'permanent' character of the price rise concerned. However, prices are established on an annual basis. It is therefore obvious that any price rise mentioned by the Commission would be for at least one year. As NERA indicated, 'in general, the competitive assessment of mergers considers time periods of at least one year and in some instance up to two years. Considering the scope for switching over this time period is particularly appropriate in assessing competition in the iron ore industry, given that most competition in this industry takes place on an annual basis'. Finally, the parties claim that switching can occur within a limited time period. It is therefore not easy to explain why customers would only react to a price increase in the long term, if, as the parties claim, they can switch between iron ore types within a few months.

- (115) Fine ore cannot be converted into lump. While it is theoretically possible to convert lump into fines, this does not make economic sense owing to the higher value of lump ore. As regards the possibility of converting lump into feedstock for pelletising plants (pellet feed), it would be theoretically possible to crush the lump in order to yield such feed. However, the Commission's market investigation has indicated that this would not be economically viable.

- (116) As regards the possibility of converting fines to pellets, this possibility is constrained by the fact that it requires the construction of a pelletising plant, a major investment which can only be justified for mines which produce a significant proportion of fine ore suitable for use as pellet feed. Because of the nature of most Australian ore, for example, it is currently not economical to make pellets from that ore.

C. Price differences

- (117) As indicated above, prices differ significantly for the three product types: sinter fines are typically priced at around 37 US-cent/fe-dmt cif; lump at around 45 US-cent/fe-dmt and pellets at around 65 US-cent/fe-dmt ⁽³²⁾. That results in a differential of 22 % between sinter fines and lump and of 76 % between fines and pellets.
- (119) The fact that there is a high degree of correlation between the evolution of these various prices does not affect this conclusion. First, it is quite normal to find a correlation between these prices, since the various products are often produced in the same mining areas with the same equipment. They therefore share a high proportion of their costs. Second, [...] and thirdly, it should be noted that the distribution of quantities sold does not follow what one might expect should the three forms of iron ore be entirely substitutable. For instance, in 1999, each of sinter fines, pellets and lump basically followed the same price movement (with a minor additional decrease for pellets). However, during that year, the seaborne quantities did not follow the same pattern: demand for fines was 6 % less than in 1998, while that for lump increased by 11 % and that for pellets decreased by 2 %. If the three forms of iron ore were part of the same product market, one would have expected demand for each of sinter fines, lump and pellets to follow the same evolution (with possibly a slighter higher demand for pellets than for the other two forms of iron ore), which was clearly not the case.
- (120) Secondly, the vast majority of customers responding to questionnaires during the course of the Commission's market investigation have indicated that — should the price of one ore type increase by 5 to 10 % — this would not result in substitution of one ore type for another.

D. The parties' response

- (118) The parties argue that these differences do not indicate the presence of different product markets, but instead reflect the different value in use of each form of iron ore. However, this is not confirmed by the trends in prices and quantities. First, benchmark prices for fines, lump and pellets follow somewhat different movements, as indicated on the following table. This suggests that the conditions of demand and supply are specific to each form of iron ore, and therefore that fines, lump and pellets constitute distinct product markets.
- (121) In their response, the parties do not dispute the Commission's findings. However, they contest the product market definition described above, on the ground that customers could switch to a significant extent between the various forms of iron ore. In particular, the parties rely on the study produced by their economic consultant, which considers that steel mills can switch between the various forms of iron ore.

Changes in the benchmark prices for lump, sinter and fines in Europe

(in %)

	1995	1996	1997	1998	1999	2000	2001
Fines	5,8	6,0	+ 1,1	2,8	– 11,0	4,3	4,3
Lump	7,9	5,0	0	2,9	– 11,0	5,8	3,2
Pellets	12,6	7,5	– 1,0	2,8	– 12,5	6,0	1,7

⁽³²⁾ Average price for seaborne sales into western Europe, according to parties' answer to questionnaire of 15 June, question 4; cif price is the most meaningful in this context (demand-side substitutability), as it reflects the horizon of the customers.

- (122) First, the economic consultant considers that iron ore is a homogeneous product, and that it is possible for steel mills to achieve equivalent productivity levels using burdens of quite different composition. According to the economic consultant, this is demonstrated by the fact that different steel mills use substantially different burden.
- (123) The Commission does not share this opinion. The fact that iron ore is not a normal commodity is clearly reflected in the results of the Commission's investigation. As indicated above, the physical and chemical characteristics of the iron ore produced in

different mining areas may significantly differ from one another, both in terms of ferrous content and in terms of impurity levels. Although products of different origin belong to the same product market, there are limits to substitutability between products mined in different areas, and it appears in particular from the Commission's investigation that Australian and Brazilian suppliers could not easily gain market share from each other, in particular due to the different characteristics of their products.

(124) In addition, the Commission does not agree with the parties' economic consultant that differing burden conditions in the various steel mills demonstrate those steel mills' ability to switch between the various products. As indicated above, the burden and process conditions for each steel mill are optimised for the specific characteristics and productivity requirements of that particular steel mill, so that the different process conditions observed by the economic consultant may simply reflect the (sometimes widely) varying configurations of different blast furnaces. Although each individual steel mill could theoretically operate with a burden other than the one which they currently use, this does not prove (and the Commission's investigation dismisses this possibility) that steel mills could in practice substantially alter their burden. First, drastic changes are not an option for blast furnace managers, because of the risks involved and because of the high investment and time period required for the necessary testing. As the parties have indicated, clients are conservative in their purchasing behaviour and some steel companies have difficulties fully understanding blast furnace technology. Secondly, although risks might be reduced if the contemplated change simply concerned switches between sinter fines and pellets, there nonetheless remain strong economic barriers (such as the much higher price of pellets, the presence of the sinter plant, etc.). All this is further confirmed by the fact that, even among the plants operated by an individual steel manufacturer, different blast furnaces frequently use different burdens.

(125) Second, the parties' economic consultant has also observed 'significant fluctuations in the proportion mix between fines, lump and pellet ore from one year to the next' as well as 'fluctuations in the source of supplies within the various categories of iron ore from one year to the next', at the level of individual steel mills. In the economic consultant's opinion, these data, combined with the customers' tendency to reduce the duration of their supply contracts, confirm the customers' ability to switch between the various forms of iron ore.

(126) The Commission does not dispute that even individual blast furnaces may somewhat modify their burden

under certain conditions. As described in detail above, blast furnace managers run their sintering plants at capacity, then maximise the use of lump (subject to technical limitations), and then fulfil the rest of their needs with pellets. Obviously, different productivity requirements will lead to different burdens. For instance, in times of high demand, steel mills need to increase the proportion of pellets (despite the higher price of that product), because they cannot increase the absolute volume of sinter (because of capacity constraints), and they cannot increase the level of lump above technical limits. As a steel mill indicated, 'demand for pellets is directly depending on the capacity level of the blast furnaces. Sinter plant works on maximum capacity. When the iron ore production decreases, the pellets demand will first decrease (higher price)'. Customers may also change their burden when a new quality of iron ore is introduced and/or an existing mine is depleting. In those cases, customers progressively examine to what extent they may introduce the new quality, by substituting that quality to others within the same type of ore. Although the substitution is essentially confined to a single form of ore, it may have effects on the burden, for instance by affecting the productivity of the sinter plant.

(127) However, the Commission maintains that these changes do not affect its conclusion that customers would not effectively alter their burden if only the relative prices for the various forms of iron ore change. As the investigation indicates, these latter changes, which would mean altering the burden and process conditions while maintaining similar productivity requirements, are subject to substantial barriers, due both to technical risks and economic reasons (maximum use of sintering plant, sinter fines being much cheaper than lump, itself much cheaper than pellets). In that context, it appears that relative price movements in the order of 5 to 10 % are not sufficient to affect the economics of the plant and to make blast furnace managers take significant risks.

(128) The parties also dispute the fact that the Commission's investigation proves the existence of significant barriers to switching from one form of iron ore to another. In particular, the parties have provided quotations from customers demonstrating, in their opinion, the ability of customers to switch between iron ore types.

(129) However, the Commission does not agree with the parties' interpretation of these quotations. First, the

Commission considers that some of these quotations are inconclusive (such as statements by several customers on switches between qualities within one form of iron ore, or the statement of a customer making switches subject to operational feasibility) and that many actually support the conclusions drawn by the Commission. For instance, the parties cite a reply by a customer, saying 'we will not change our blending ratio of sinter, pellets and lump; however, we may change the blending ratio when repairing the sintering machine is required. Even in that case, we will reduce sinter ration slightly and increase pellets ration for a balance, though, this repair may occur once in several years'. Similarly, the parties cite another steel mill, which indicated that 'the proportion of lump is limited to 20 % due to operation reasons. So, the proportion of sinter and pellet is more than 80 %. Since sinter is regarded as more economical than pellet, sinter is used as much as possible. Pellet is a buffer ore.' More generally, it clearly appears that the only real technical opportunity to switch is between pellets and sinter fines. But there are very substantial economic and operational barriers to switching (such as very high price differences, and the utilisation of sintering plants at capacity).

(130) In addition, it should be noted that most of the quotations made by the parties concern statements about theoretical technical limits to switching. These statements may not take into account sintering capacity constraints, operational constraints (blast furnace operations need to be stable, which hampers frequent changes), logistical considerations, contractual arrangements or economic barriers to switching, which are addressed in other parts of their reply. For instance, the parties quote a European customer, who stated that it could theoretically change 5 to 10 % of its blend. However, later in its reply, that customer indicated that it is operating its sintering plant at capacity, and that in the event of a relative price movement between sinter fines, lump and pellets, it would not change the proportions in its burden.

(131) In that context, the Commission therefore maintains that, if one takes a broader view combining all relevant factors, it clearly results from the enquiry that each form of iron ore constitutes a relevant product market. In particular, it should be recalled that a quasi-unanimity of customers confirmed that, once all relevant elements are integrated, they would not change

their proportions of sinter feed, lump and pellets should the price of one of these iron ore forms increase by 5 to 10 % relative to the other forms.

(132) The Commission also notes that the parties implicitly admit that each form of iron ore constitutes a distinct market, since they acknowledge in their response that the pellet premium (and, to some extent, the lump premium) for a particular year may expand somewhat relative to the prior year when there is a markedly higher level of demand for pellets (or lump) in that particular year, and therefore lead to a price rise for that form. If all forms of iron ore were part of the same market, a higher price in one form should lead to lower demand for that form (and higher demand for the other forms). In addition, the parties' statement indicates that switching is not an economical option. If a hypothetical dominant supplier for one form of iron ore (say, sinter fines) attempts to increase the price for that form by 5 to 10 %, and assuming that customers could switch to another form of iron ore (say, pellets) to an extent sufficient to make the attempted price rise unprofitable, this would markedly increase demand for that other form. According to the statement made by the parties, this increased demand would result in higher prices for the latter form (in the example just provided, pellets). This seems all the more likely because seaborne iron ore excess capacity is limited. It follows that customers would have little incentive to switch, since this would give rise to significant economic, technical and logistical difficulties for customers and still lead to higher prices.

E. Direct reduction iron ores

(133) Iron ore is also sold in forms suitable for conversion into direct reduction iron (DRI), which can in turn be fed into an electric arc furnace for the production of steel. DR iron ore comes in three forms: DRI lump, DRI pellets, and DRI fines (including DRI pellet feed). However, given that there is no demand in western Europe for DRI fines/pellet feed, these products will not be discussed further, and this Decision will focus on DR lump and pellets instead.

(134) As regards substitutability between DR lump and pellets, on the one hand, and BOF lump and pellets, on the other, this is a one-way substitution process: the latter are replaceable by the former but not vice versa,

principally on account of the higher iron content and lower level of impurities of DR ore. However, in view of the higher price of DR iron ore, this substitutability of DR ore for BOF ore is of a theoretical nature.

(135) The parties also suggest that DR lump does not form a separate product market, because it can be entirely replaced by pellets (for the sake of clarity, it should be noted that the parties admit that, by contrast, DR lump is not a substitute for DR pellets). According to the parties, the use of DR lump traditionally had in the past been mandatory, because pellets tend to stick at high temperatures (when DR operators want to increase productivity), and because lump prevents that sticking. However, new coating technologies for pellets would prevent sticking and therefore would no longer make lump ore an indispensable input. Altogether, the parties therefore suggest that, if DR iron ore has to be separated from BF iron ore, then two markets should be considered: a market for DR pellets on the one hand, and a market combining DR lump and DR pellets on the other.

(136) The Commission agrees that, from a technical point of view, DR pellets can fully replace lump ore. In addition, the results of the investigation suggest that the economic barriers to switching within the DR sector may be lower than in the BF sector. In particular, the only western European customer for DR lump and DR pellets indicated that if lump prices were to increase by between 5 and 10 % while pellet prices remained constant, there probably would be significant substitution of pellet for lump. Overall, it therefore appears that there is a one-way substitutability between DR lump and DR pellets, in that DR lump cannot replace DR pellets over a certain proportion of the burden (for technical reasons) but DR pellets can fully replace DR lump. The competitive impact of the transaction in DR iron ore should therefore be measured on the basis of two product markets: (i) DR pellets, and (ii) DR iron ore (combining lump and pellets).

products. In other words, the parties' claim is that DR ores do not form a separate product market because, on the downstream market, DRI (resulting from the processing of DR iron ore and fed into electric arc furnaces) may be replaced by other products. The Commission considers that the presence of competitive alternatives on a downstream market does not prevent the existence of market power on an upstream market. The fact that DRI producers may compete with suppliers of scrap or pig iron does not necessarily prevent a hypothetical monopolist supplier of DR iron ore from imposing monopoly prices for its iron ore supplies to DRI producers (who in turn will sell DRI to EAF steel mills). The only consequence of the presence of alternatives to DRI is that DRI producers will have both to incur high supply costs (through high iron ore prices) and low sale prices (owing to the presence of substitutes for its DRI production).

(138) In any event, the results of the investigation do not confirm substitutability between scrap, DRI and pig iron. In particular, as the parties acknowledge, scrap is not a high quality material. It follows that low value added products such as rebar can be made using 100 % scrap, but that high value added long products, or flat-rolled products produced through the EAF route, require a significant proportion of much cleaner raw materials such as pig iron or DRI. It should also be noted that, although scrap is usually cheaper than DRI (so that EAF steel mills try to maximise the proportion of scrap), this is not always true, especially in times of peak demand for scrap. While DRI theoretically competes with solid pig iron, there are indications that this substitutability is also limited, because pig iron contains 4 % or more carbon and therefore requires additional oxygen for processing. It follows that it can only be used at the beginning of the melting process, and that subsequent charges have to be made with either scrap or DRI.

(139) However, whether iron ore suitable for DRI production belongs to distinct product markets can be left open, since the competitive assessment of the transaction remains unchanged in all alternatives considered.

F. Conclusion

(137) In their response, the parties suggest that DR ores do not form a relevant market, on the ground that DRI (resulting from the direct reduction of DR ore) could be replaced by scrap or pig iron. This does not stand up to scrutiny. The parties do not contest that only DR ore is suitable for the production of DRI. Their argument is that DRI, the product offered by DR iron ore customers (and not DR iron producers) is replaceable by other

(140) In view of the above, it is concluded that sinter fines, lump and pellets constitute three separate product markets. Moreover, there are strong indications that iron ore suitable for DRI production belongs to distinct

product markets, and that the competitive impact of the operation on a hypothetical product market for DR pellets and on a hypothetical product market combining DR pellets and DR lump should accordingly also be examined.

VI. RELEVANT GEOGRAPHIC MARKETS

(141) The parties submit that the relevant geographic markets for iron ore should be viewed as total world production. First, the parties emphasise that most of the largest steel mills in the world procure their iron ore supplies both from mines in their own countries and from mines in other countries. Secondly, the parties take the view that the global character of the iron ore markets derives from the global dimension of the downstream steel markets. Because of the global nature of the steel markets, iron ore producers would have to sell their products at a price which will allow their customers (the steel mills) to manufacture steel competitively. For a mine operator to seek to obtain a higher price for its ore from a nearby steel mill is a practice which would price the production of that steel mill out of the market, which in turn would severely harm the interests of that mine operator (due to the outright loss of a nearby customer).

(142) The Commission does not share this analysis. Based on the results of its detailed investigation, it considers that a distinction should be made between those customers based in countries with domestic iron ore production (who may in some cases have a choice between indigenous and seaborne supplies) on the one hand, and those customers with almost no indigenous iron ore production (such as western European and Japanese steel producers), on the other. The following analysis applies to all types of iron ore.

A. Transport of iron ore

(143) In order to be delivered to its customer, iron ore is transported either by rail (in the case of regions with large domestic production such as China, Russia or the United States) and/or by dedicated ships. Iron ore delivered by ship is designated 'seaborne sales'.

(144) In order to be economically transported, iron ore usually requires dedicated, high-capacity infrastructure. With regards to land transportation, it appears that conventional railways are not suited to the specific requirements of iron ore transportation. Iron ore is transported in large quantities on trains with a length of

2 to 3 km, and tracks have to be specifically designed to carry these very long and heavy trains. This is why iron ore is normally transported via dedicated railways. Similarly, seaborne transportation of iron ore cannot be economically achieved by container ships (i.e. similar to the larger oil tankers), but instead requires dedicated ships with a capacity up to 200 000 t (equivalent to that of the larger oil tankers). It also follows that the shipping of iron ore can only be handled in certain deep-water ports with specific infrastructure, equipped to handle iron ore vessels.

(145) These considerations indicate that not all iron ore producers can supply all customers worldwide. In practice, the capacity of a given iron ore supplier to deliver its products to a given customer will be determined by the existence (or the absence) of sufficient transport infrastructure between them. Existing transport links will therefore condition which suppliers can approach which customers and vice versa.

B. Distinction between 'domestic' and 'seaborne' customer areas

(146) In much of the world, customers usually purchase most of their iron ore requirements from 'domestic' suppliers connected to them either by rail or by inland waterways. This is for instance the case in the United States, where 88 % of demand is met by North American mines (the rest being essentially procured from Brazilian suppliers), or in eastern Europe, where 80 % of supplies are from domestic iron ore producers. The conditions of competition in those areas are therefore primarily determined by local market characteristics (such as the relative competitiveness of domestic suppliers and the structure of demand in those areas). Furthermore, demand in those areas has frequently been adjusted to the types and the qualities of the products offered by 'domestic' mines, and therefore may concern a specific product mix. For example, customers in Brazil or in Australia almost exclusively use the iron ore quality produced locally. Similarly, North American steel mills almost exclusively use pellets, because this corresponds to the local characteristics of iron ore deposits in that region. This markedly differs from traditional purchase patterns in western Europe or East Asia, where most of the demand is for sinter fines and lump.

(147) By contrast, a specific situation exists in western Europe, in East Asia (Japan, Taiwan and South Korea) and, to a lesser extent, in China (where domestic supply is widely insufficient or non-competitive). Customers in those areas are therefore obliged to purchase their products from distant suppliers with an access to relevant

transport infrastructure. In practice, transport is primarily undertaken by ship, because land transportation cannot compete with seaborne deliveries for those customers. Japan and Taiwan can physically only be reached by ship, and there are no suitable land links in place that could connect western European customers with continental supply areas (such as China, the former USSR or India). In addition, the Chinese and Russian iron ore reserves are characterised by low iron content (approximately 30 % compared to 60 % in Brazilian and Australian mines), which further increases transport costs (because more 'gangue' and non-ferrous content have to be shipped for every unit of iron).

between western Europe, on the one hand, and East Asia, on the other. It should be noted that there are arguments for including western Europe in a wider 'Atlantic' seaborne market, on account of the similarities in the conditions of supply and demand in this wider region (and notably transport costs). However, it is not necessary to decide upon the existence of such a geographic market, as the competitive assessment would be almost identical in that hypothesis as for a western European market: the only significant 'Atlantic' consumers of seaborne iron ore outside western Europe are in the Gulf of Mexico region of the United States and in eastern Canada. However, only relatively small quantities of seaborne iron ore are consumed there.

(148) Domestic supplies being either non-existent or marginal, customers in western Europe or East Asia depend almost totally on seaborne supplies from Brazil, Australia, Canada, India and Africa. It follows that customers have to purchase only the product types and qualities available from those suppliers, and that they procure their iron ore needs from a different supplier set than that which exists in other regions. In that context, it is clear that, should a hypothetical monopolist seaborne supplier raise prices by 5-10 % in those regions, customers would not be able to defeat that price rise by finding alternative sources of supply. This is clearly confirmed by the fact that, although the western European benchmark price for lump has increased by 11,8 % in 2000, no new supplier has started selling lump in western Europe during that year. This is also further indicated by the fact that prices in seaborne areas do not follow the same pattern as in other regions. For instance, the data provided by the parties indicate that, between 1997 and 1998, prices rose by 6 % in the United States but decreased by 1 % in western Europe.

(149) In the light of the above, it is concluded that the conditions of competition in seaborne areas (regions dependent, or partly dependent, on seaborne supplies) are specific to those regions, and therefore that the supply of the different types of iron ore to those regions constitute geographic markets distinct from the supply of ores to non-seaborne areas. This is broadly confirmed by the results of the Commission's investigation.

C. Single seaborne market

(150) It is necessary to determine whether a distinction should be made between seaborne areas, and especially

(151) There is no need to further delineate the scope of the seaborne markets for DR iron ore products, since (i) there is only one western European customer for DR iron ore, (ii) this customer is part of a larger group with DRI production plants in several continents, and (iii) the operation would create a dominant position whatever the geographic market definition retained. DR iron ore will therefore not be further discussed in this section.

(152) In the statement of objections, the Commission took the preliminary view that there might be a western European market for iron ore, on the grounds that (i) customers in western Europe have a different demand from customers in other areas (in particular, the proportions of sinter fines, lump and pellets are different from those in East Asia); (ii) transport costs affect the competitiveness and the competitive incentives for suppliers to sell in western Europe, thereby making the conditions of supply in western Europe different from what they may be in the other seaborne areas; and (iii) [...]*.

(153) In their response, the parties no longer maintain their original position, namely that the relevant geographic market should be viewed as total production, and they now admit that it is at least as wide as the worldwide market for seaborne sales. However, they do contest the existence of a western European/Atlantic market, mostly on the basis of the economic study performed by their economic consultant.

(154) First, the parties (and their economic consultant) submit that the Commission has failed to apply properly the standard principles applicable when defining a relevant geographic market as set out in the Commission's notice. According to the economic consultant, the definition of the geographic market is based on the

identification of regions of production that customers consider as effective sources of supply. This methodology they point to is set out in paragraph 13 of the Commission Notice on the definition of relevant market for the purposes of Community competition law ⁽³³⁾, where it is said 'basically, the exercise of market definition consists in identifying the effective alternative sources of supply for the consumers of the undertakings involved, in terms both of products/services and of geographic location of suppliers'.

(155) Second, the parties provide indications that Brazilian, Canadian, Australian, South African, Mauritanian and other iron ore producers are effective competitors in seeking to win sales to western European steel mills. In particular, the parties refer to the fact that all of these producers supply significant volumes to western European steel mills, that they are able to sell profitably in western Europe, and that there is some switching between suppliers.

(156) And third, the parties state that the basis on which the statement of objections defines a narrow market definition has little or no relevance to the assessment of the competitive constraints that operate between Brazilian and non-Brazilian iron ore producers when competing for sales to particular steel mills. In particular, the differences presented in the statement of objections (such as the basis on which prices are agreed, the differences in demand, etc.) affect all iron ore producers equally, regardless of where they are located.

(157) Altogether, the parties' argument is that all seaborne suppliers (as well as certain domestic producers in western Europe) can effectively compete for sales in western Europe. This, the parties submit, shows that western Europe is part of a global market.

(158) The approach followed by the Commission consisted in verifying whether the prices and the contractual conditions for supplies to western Europe are determined by demand and supply features which are specific to that region, or whether they are fixed on the basis of the conditions of competition at a wider level ⁽³⁴⁾.

⁽³³⁾ OJ C 372, 9.12.1997, p. 5.

⁽³⁴⁾ This method corresponds to the definition of 'relevant geographic market' as described in paragraph 8 of the Notice: 'The relevant geographic market comprises the 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'.

(159) After a careful examination of the parties' response, the Commission notes that, despite somewhat different demand and supply conditions in western Europe, these differences are not sufficient to justify the existence of narrow geographic markets. As the parties submit, most seaborne suppliers sell in most seaborne areas, and most seaborne customers buy from the larger iron ore producers (mostly Australian, Brazilian and Canadian companies). Narrower geographic markets can therefore only exist if iron ore suppliers have the ability and incentives to discriminate between customer areas. The results of the Commission's detailed investigation show that, despite somewhat different supply and demand conditions in western Europe, there is insufficient evidence of discrimination to justify the existence of narrow geographic markets within areas dependent on seaborne supplies.

(160) A decisive element is that price levels and contractual conditions are effectively based on and result from the overall market conditions in the seaborne market, and are not significantly determined by local factors. First, as indicated above, benchmark prices are established on the basis of the negotiations held in both major seaborne areas (western Europe and East Asia). These negotiations take into account the competitive situation at the global seaborne level, and the benchmark prices therefore reflect the overall balance of supply and demand in the seaborne sector.

(161) [...]*

(162) In addition, one of the main sources of competition in the iron ore sector (finding sufficient outlets for capacity expansion projects) strongly militates against narrower geographic markets. The Commission's investigation shows that one of the main challenges faced by iron ore suppliers consists in obtaining sufficient customer support for the considerable investment required for capacity expansion schemes. This is all the more so as new projects do not necessarily concern the same quality iron ore as that currently offered ⁽³⁵⁾, so that iron ore companies need to convince customers to

⁽³⁵⁾ For instance, most new mines opened by Australian mining companies are for pisolitic iron ore, which has different characteristics from traditional Australian ores.

overcome their reluctance and change their blend. In that context, iron ore suppliers have strong incentives to compete for all possible customers. Given the high capital costs of capacity expansion schemes, it would not be profitable for them to accept losing volumes in a major customer area in exchange for a moderate price increase in that region.

- (163) Altogether, the Commission therefore concludes that, while there are indications that supply and demand conditions are somewhat different in western Europe than in East Asia, these indications do not amount to differences which are sufficient to enable the western European market to be characterised as distinct for the purposes of defining the geographic scope of the relevant markets. There is therefore no need to further categorise between seaborne customer areas.

D. Conclusion

- (164) It is therefore concluded that the relevant geographic markets for the purposes of the present case are the various markets for sale of the different types of iron ore to all seaborne customer areas. For the purpose of market share calculation, the Commission will look at total seaborne sales, which, despite including (limited) seaborne sales to domestic customer areas, provide an acceptable proxy for sales to all seaborne customer areas.

VII. COMPETITIVE ASSESSMENT

- (165) In accordance with Article 2(3) of Regulation (EEC) No 4064/89, a concentration which creates or strengthens a

dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it is to be declared incompatible with the common market.

- (166) The Court of Justice ⁽³⁶⁾ has defined the concept of dominance as a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition from being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers and, ultimately, of consumers.
- (167) The existence of a dominant position may derive from several factors which, taken separately, are not necessarily determinative; amongst these factors, a highly important one is the existence of large market shares. In addition, the relationship between the market shares of the undertakings involved in the concentration and their competitors, especially those of the next largest, is relevant evidence of the existence of a dominant position ⁽³⁷⁾.
- (168) The factors which are taken into account for concluding, on a preliminary basis, that the notified concentration will create or strengthen dominant position in the markets for the sale of iron ore pellets and fines in the EEA are set out below. Given that the Commission has no objections about the effect of the operation in lump, this product will not be discussed further in this Decision.

Market Shares

- (169) Based on total seaborne iron ore sales in 2000, the market shares of the parties and of their main competitors may be calculated as follows:

⁽³⁶⁾ Case 85/76 — Hoffmann-La Roche, (1979) ECR 461, at paragraphs 38 and 39; see also CFI, case T-102/96 — Gencor, (1999) ECR II-753, at paragraph 200.

⁽³⁷⁾ See ECJ, Case 85/76 — Hoffmann-La Roche, (1979) ECR 461, at paragraph 39; see also CFI, case T-102/96 — Gencor, (1999) ECR II-753, at paragraphs 201 and 202.

(in %)

	Total seaborne			
	Fines	Lump	Pellets	All iron ore
CVRD ⁽³⁸⁾	[25-35]*	[10-20]*	[35-45]*	[25-35]*
Caemi ⁽³⁹⁾	[< 10]*	[< 10]*	[< 10]*	[< 10]*
Merged entity	[35-45]*	[10-20]*	[40-55]*	[35-45]*
BHP ⁽⁴⁰⁾	[10-20]*	[10-20]*	[10-20]*	[10-20]*
Rio Tinto	[25-35]*	[25-35]*	[10-20]*	[25-35]*
LKAB	[< 10]*	[< 10]*	[10-20]*	[< 10]*
SNIM	[< 10]*	[< 10]*	[< 10]*	[< 10]*
ISCOR	[< 10]*	[10-20]*	[< 10]*	[< 10]*

Source: [...]*.

Share of worldwide seaborne capacity

- (170) The following table describes the share of total seaborne iron ore mining capacity of each of the main suppliers:

(in %)

	2000				2005			
	Fines	Lump	Pellets	All iron ore	Fines	Lump	Pellets	All iron ore
CVRD	[30-40]*	[20-30]*	[45-55]*	[30-40]*	[30-40]*	[10-20]*	[45-55]*	[30-40]*
Caemi	[5-15]*	[< 10]*	[5-15]*	[< 10]*	[5-15]*	[< 10]*	[< 10]*	[< 10]*
Merged entity	[45-60]*	[40-50]*	[45-60]*	[40-50]*	[45-60]*	[20-30]*	[45-60]*	[40-50]*
BHP	[10-20]*	[20-30]*	[5-15]*	[10-20]*	[10-20]*	[10-20]*	[10-20]*	[10-20]*
Rio Tinto	[20-30]*	[20-30]*	[5-15]*	[20-30]*	[20-30]*	[20-30]*	[10-20]*	[20-30]*
LKAB	[< 10]*	[< 10]*	[10-20]*	[< 10]*	[< 10]*	[< 10]*	[10-20]*	[< 10]*
SNIM	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*
ISCOR	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*	[< 10]*

Source: [...]*.

⁽³⁸⁾ The CVRD market share includes the output of any company over which it has joint control or sole control. This includes the wholly owned subsidiaries Samitri, Socoimex and Ferteco, as well as the joint ventures GIIC (a joint venture with financial investors) and Samarco (a joint venture with BHP). The calculation of market volume (and market shares) excludes sales to CVRD's joint venture partners in the following pelletising plants: Hispanobras, Itabasco, Nibrasco, and Kobrasco. Quantities from those joint venture pelletising plants sold by CVRD to third parties are included in the CVRD market shares.

⁽³⁹⁾ The Caemi market share includes the output of the Brazilian mining company MBR and of the Canadian mining company QCM, which Caemi controls jointly with a Canadian steel producer. The calculation of market volume (and market shares) excludes internal sales to the joint venture partner.

⁽⁴⁰⁾ Includes 100 % of Samarco output.

A. Dominance in pellets

- (171) The operation will create overlaps in pellets, since each of CVRD (directly and through controlling stakes in other companies such as Ferteco, Samarco and GIIC) and CAEMI (through its joint controlling interest in QCM, a pellet producer in Canada) are active in that market and sell to seaborne customers worldwide.

Market shares

Market shares for pellets (BF and DR qualities)

(in %)

Seaborne sales	Country	Sales 1997	Sales 2000	Capacity	Capacity 2005
CVRD ⁽⁴¹⁾	Brazil	[25-35]*	[25-35]*	[25-35]*	[30-40]*
Samarco (CVRD/BHP) ⁽⁴²⁾	Brazil	[5-15]*	[10-20]*	[10-20]*	[10-20]*
Caemi (QCM) ⁽⁴³⁾	Canada	[5-15]*	[5-15]*	[10-20]*	[5-15]*
Merged entity		[30-40]*	[45-55]*	[50-60]*	[50-60]*
Rio Tinto (IOC)	Canada	[10-20]*	[10-20]*	[10-20]*	[10-20]*
LKAB	Sweden	[10-20]*	[10-20]*	[10-20]*	[10-20]*
SNIM	Mauritania	[< 5]*	[< 5]*	[< 5]*	[< 5]*
ISCOR	South Africa	[< 5]*	[< 5]*	[< 5]*	[< 5]*

Source: [...]*.

- (172) In their response, the parties have contested the market share calculations used by the Commission in the statement of objections. An examination of the parties' submission shows that the difference between the parties' and the Commission's calculations are due to the fact that the parties have failed to remove from the total market those internal sales made by the Brazilian joint ventures (jointly controlled by CVRD) to their parent companies. Given that these internal sales have not been subject to market conditions or to any competition, the Commission considers that these sales should be excluded from the market volume. Furthermore, it would not be consistent to exclude those sales from CVRD's sales volume and to include them in the total market volume. The resulting figures appear in the above table.

⁽⁴¹⁾ The CVRD market share includes 100 % of the output of any company over which it has joint control or sole control. This includes the wholly owned subsidiaries Samitri, Socomex and Ferteco, as well as the joint ventures GIIC (a joint venture with financial investors) and Samarco (a joint venture with BHP). The calculation of market shares excludes sales to CVRD's joint venture partners in the following pelletising plants: Hispanobras, Itabasco, Nibrasco, and Kobrasco. Quantities from those joint venture pelletising plants sold by CVRD to third parties are included in the CVRD market shares.

⁽⁴²⁾ Samarco is a 50/50 joint venture between BHP and CVRD. It is jointly controlled by CVRD and BHP.

⁽⁴³⁾ The Caemi market share includes the output of the Brazilian mining company MBR and of the Canadian mining company QCM, which Caemi controls jointly with a Canadian steel producer. The calculation of market shares excludes sales to the joint venture partner.

(173) On the basis of the above market shares, there are strong indications that the operation would give rise to competition concerns in relation to the seaborne supply of iron ore pellets. CVRD's [40 to 50]* % market share would be added to Caemi's [5 to 15]* % share (accounted for by the pellet sales of its Canadian subsidiary, Quebec Cartier Mining), to yield a market share of [45 to 60]* %. CVRD/Mitsui/Caemi would moreover control all Brazilian pellet production, and consequently pellets exported from Brazil to all seaborne destinations. The merged entity's closest competitors would have considerably smaller shares of the pellet market: Rio Tinto ⁽⁴⁴⁾ ([10 to 20 %]*); LKAB (13 %).

(174) This apparent dominance is also reflected at the capacity level, since the newly-merged entity would furthermore control [50 to 60]* % of current worldwide seaborne pellet production capacity (2000) and would control [50 to 60]* % of the worldwide seaborne pellet production capacity forecast for 2005. The new entity's capacity share is far in excess of those of its closest competitors and will remain so for the foreseeable future: the current worldwide pellet production capacity of Rio Tinto is estimated at some [10 to 20]* %, and is forecast to rise to some [10 to 20]* % in 2005; the current worldwide pellet production capacity of LKAB is estimated at some 18 %, and is forecast to fall to some 17 % in 2005. BHP's current and future capacity ([10 to 20]* % today and [10 to 20]* % in 2005) are largely accounted for by its 50 % stake in Samarco, its joint venture with CVRD.

(175) On this basis alone, the operation would seem at least to create a dominant position in the market for the sale of iron ore pellets to all seaborne customer areas, if not to the strengthening of an already existing dominance for CVRD in that market.

Limited competitive constraints from existing seaborne suppliers

(176) The results of the Commission investigation clearly demonstrate that existing competitors will not be in a position to sufficiently constrain the competitive behaviour of the merged entity.

⁽⁴⁴⁾ Rio Tinto's sales of pellets in Europe are accounted for almost exclusively by the sales of its Canadian subsidiary, IOC.

Competitive advantages of the merged entity

(177) First, the merged entity will benefit from a number of competitive advantages enabling it to tame its competitors. In particular, it will have the largest reserve base and the lowest production costs in the industry.

(178) According to the AME report ⁽⁴⁵⁾, the cash cost structure of the main pellet producers can be summarised as is done in the following table. The costs given in the table exclude the depreciation of assets, and therefore provide an appropriate proxy for marginal costs:

Average pellet costs 1997-2000

(in USD/t)

	Production fob cost
CVRD ⁽⁴⁶⁾	16,8
QCM (Caemi)	[...]*
IOC (Rio Tinto)	22,7
LKAB	23,3

Source: AME report.

(179) As indicated in this table, CVRD already has the lowest cost base in the industry, both on an fob and on a cif basis. Given that it also has the largest reserve base in Brazil, this provides CVRD with the ability to significantly jeopardise the viability of other pellet suppliers, should they threaten CVRD's interests. The acquisition of QCM will further add to its range of possible retaliation tools, by enabling CVRD to acquire a significant share of Canadian quality pellet capacity — that is to say, more or less the same quality pellet as supplied by IOC, CVRD's main competitor (together with LKAB). This could enable CVRD to engage in selective competitive actions against IOC. The merged entity could also exploit to its benefit the fact that IOC/Rio Tinto and LKAB do not deliver pellets to customers located outside the Atlantic region.

⁽⁴⁵⁾ AME Consulting: Mining costs of the world iron ore industry, 1997 to 2000 (May 2001).

⁽⁴⁶⁾ Including Samarco.

(180) In their response, the parties (and their economic consultant) indicate that the above analysis has two flaws: (i) it relies on the assumption that CVRD can tame its competitors by increasing capacity, a notion which is not economically sustainable (as the new capacity would have depressing effects on prices for a long period, and not only for the short period that any 'taming' action would require); and (ii) retaliatory actions designed to jeopardise the viability of other suppliers requires that these firms can be driven out of the market, which cannot happen given the sunk cost nature of iron ore production.

(181) The Commission does not share those views. There is no indication that 'retaliatory actions' (or disciplinary actions) are effective only in those situations where competitors may be driven out of the market. For instance, should certain competitors exert significant price competition on the merged entity, an effective retaliatory measure by CVRD could consist in exercising a downward pressure on the annual benchmark prices in such a way as to force competitors to suffer losses while CVRD would remain profitable (thanks to its low-cost structure). It follows that CVRD does not need to expand capacity or to drive competitors out of the market in order to keep competitors disciplined. In any event, it should be noted that, according to the parties' estimates, total seaborne pellet demand is expected to increase substantially⁽⁴⁷⁾ in the near future. In that context, a capacity expansion by CVRD would not be economically irrational, as increasing demand would quickly reduce the excess capacity (and therefore the downward effect on prices) generated from that expansion.

(182) Prior to the operation, CVRD's competitive leadership was already reflected in the fact that it was usually the price-setter of the benchmark price for pellets. According to data provided by the parties⁽⁴⁸⁾, CVRD and Samarco have set the benchmark price on four occasions during the last seven years (the other three having been set by IOC).

High capacity utilisation

(183) Should CVRD attempt to raise pellet prices, either through higher benchmark prices or through lower discounts, customers could only defeat that price rise by obtaining larger quantities from other producers. However, the results of the Commission's investigation indicate that this is to a large extent not possible, principally because no new pellet plants were opened during 1999 or 2000, and the worldwide average pellet production capacity utilisation rate was at 92 % during

2000 (an increase from 85 % in 1985)⁽⁴⁹⁾. Indeed, two major European steel companies contacted by the Commission during the course of its market investigation reported having experienced occasional difficulties in obtaining supplies of pellets, at least in order to meet short-term or emergency requirements.

(184) In their response, the parties indicate that the year 2000 was a year of unexpected and exceptionally high demand, and that the demand for pellets in 2001 and 2002 is expected to be significantly lower. This, in the parties' view, indicates that the demand for pellets is unlikely to be supply constrained in the coming years. These assertions are not confirmed by the results of the investigation. In particular, a presentation made by CVRD and JP Morgan in November 2000 indicated that seaborne demand for pellets was expected to increase continually between 2000 and 2005, due to structural factors such as (i) the increasing share of EAF in global steel capacity, (ii) growing DRI production, (iii) the closure of sintering plant and the construction of blast furnaces without sintering capacity, (iv) and the increase in the use of pulverised coal injection. Similarly, CVRD's first- and second-quarter results for 2001 show an increase in pellet sales when compared to 2000. Finally, a presentation by Merrill Lynch and CVRD in May 2001 explains that 'new trends in iron and steelmaking are boosting the demand for pellets'.

(185) It is also expected that this situation of tight supply will continue and even further deteriorate in the foreseeable future. Although capacity is expected to increase in the near future, this will do no more than meet the expected growth in demand. For instance, data provided by the parties indicate that, because of an expected increase in demand for pellets, total seaborne demand could exceed total seaborne capacity by 2005.

(186) In that context, it seems highly unlikely that customers could switch suppliers should CVRD attempt to raise prices or reduce discounts. It is, moreover, questionable whether competing suppliers have incentives to challenge CVRD, since these other suppliers already operate at close to full capacity and since they might be subject to retaliatory actions on the part of CVRD.

(187) Furthermore, the results of the Commission's investigation indicate that, while CVRD can increase capacity and has access to high-quality, low-cost

⁽⁴⁷⁾ For instance, in a common presentation made in November 2000, CVRD and JP Morgan indicated that seaborne demand for pellets was expected to increase from 75 Mt in 2000 to 95 Mt in 2005.

⁽⁴⁸⁾ Iron Ore Manual 2000-2001, the Tex Report.

⁽⁴⁹⁾ Source: The Iron Ore Market (2000-2002), May 2001 (UNCTAD).

reserves, this may not be true for its existing competitors. CVRD enjoys lower operating and capacity expansion costs than any of its competitors in the supply of pellets to western Europe, giving it a distinct competitive advantage over those other suppliers. Following the acquisition, CVRD/Mitsui/Caemi would moreover control most of the best quality reserves suitable for the production of pellet feed in the Atlantic region (all Brazilian reserves and much of Canada's relevant reserves). CVRD intends to expand its pellet production capacity by the construction of a pelletising plant near the deep-water port of São Luis in Brazil (serving CVRD's Carajas mines in the 'northern system'). The plant is scheduled to come into operation during 2002 and would increase the new entity's pellet capacity by some 6 Mt per year. Ferteeco (now part of CVRD) is moreover planning to build a second pelletising plant. The plant would effectively double Ferteeco's pellet production capacity, to some 8,5 Mt per year. The new plant is due for completion in 2004 ⁽⁵⁰⁾.

(188) This planned additional capacity will enable the newly merged entity to meet the expected increase in demand for pellets in seaborne areas, and at a lower cost than will be possible for any of the company's competitors. In particular, CVRD benefits from economies of scale and scope, synergies and lower mining costs, which cannot be matched by its competitors in pellet supply to seaborne areas.

(189) By contrast, the only independent seaborne pellet suppliers of any size are IOC (Rio Tinto) and LKAB, whose mines are located in Canada and Sweden respectively, and who only deliver to customers in the Atlantic region. The current pelletising capacity levels of both these companies would limit their ability to respond to greater demand for pellets. First, IOC and LKAB's rates of capacity utilisation rates have approached 90 % in 2000. Taking into account possible disruptions (due, for instance, to thunderstorms or bottlenecks in the supply chain), this suggests that they effectively operate at capacity. Secondly, even if they did seek to expand capacity, for example in response to a hypothetical price increase by the newly merged entity, the Commission's market test has indicated that this would take at least three years (two years' construction time, plus one year for a feasibility study). Furthermore, a decision to invest in new capacity would most likely only be made once these competitors were convinced of

the sustainability of any such hypothetical price increase (a further delay).

(190) According to one of the main iron ore suppliers contacted by the Commission during its market investigation, LKAB 'would struggle to justify' expanding capacity due to its own high costs. In particular, LKAB's location in Sweden places it at a disadvantage in terms of labour costs, and the cost of compliance with environmental protection requirements. LKAB itself has indicated that it would be prepared to invest in new capacity in the medium and long term, if it were to 'recognise an increased long-term demand with an acceptable return on investment'. LKAB has confirmed, however, that it does not currently have sufficient spare capacity to challenge a hypothetical price increase by CVRD/Mitsui/Caemi.

(191) The Commission's market investigation has also revealed that, while IOC (Rio Tinto) is scheduled to have 4,5 Mt of additional capacity (resulting from the renovation of one of its existing pelletising plants) coming on stream by 2004 (1,3 Mt by 2002), this will do little more than meet the expected increase in demand from its existing customers; it would therefore be very unlikely to be sufficient to defeat a hypothetical price increase by the newly-merged entity.

(192) In their response, the parties indicate that most excess capacity is not held by CVRD, but by QCM, LKAB and IOC. In that context, the parties submit, and despite the fact that individual pellet producers (such as LKAB) do not have sufficient spare capacity to replace CVRD entirely, that those individual competitors do have the capacity to take significant volumes from CVRD and therefore to constrain the competitive behaviour of the merged entity. The Commission does not share this view. First, only two of the three main independent sources of capacity cited by the parties (QCM, LKAB and IOC) will remain after the operation, since QCM is jointly controlled by Caemi. Second, and as indicated above, any excess capacity currently held by IOC and LKAB is expected to decrease in the near future when demand increases. And third, the parties' argument does not take into account the competitive advantages enjoyed by the merged entity and its ability to discipline the market. The fact that CVRD benefits from a higher capacity utilisation rate than its competitors demonstrates the competitive advantages already held by CVRD. Since CVRD's position will be further strengthened by the proposed acquisition of QCM, the situation of existing competitors (and their ability to challenge CVRD's behaviour) is likely to further deteriorate.

⁽⁵⁰⁾ Source: The Iron Ore Market (2000-2002), May 2001 (UNCTAD).

- (193) On the basis of the above, it is concluded that existing seaborne pellet suppliers will not be able to exert a sufficient competitive constraint on the market behaviour of the merged entity.

High barriers to entry

- (194) In addition, the results of the Commission's investigation demonstrate that new entry to the seaborne pellet market would be unlikely to occur to a sufficiently significant extent, or in a sufficiently timely manner, to deter the possible exercise by the new entity of market power in the market. As an independent iron ore producer (with currently no pellet production) indicated to the Commission, it would only consider investment in pellet production capacity in the long term ⁽⁵¹⁾; in the meantime, this company is of the view that the merged entity would be free to raise prices, and that no current supplier has the capacity to constrain such a move. For the same reasons, market entry (to the supply of pellets in seaborne areas) by other iron ore producers seems highly improbable.

- (195) As indicated above, the barriers to entering the seaborne iron ore markets are exceptionally high. The costs of constructing new mines, together with accompanying transport infrastructure, render new entry other than by acquisition more or less impossible. While the expansion of existing iron ore production capacity, notably — in this context — by the construction of pelletising plants, is more feasible, the costs associated with constructing such plants are nevertheless very considerable, running to several hundred million USD per plant. For operators other than CVRD contemplating the construction of a pelletising plant suitable for supplying the seaborne customer areas, those costs would be even higher, and it can therefore be concluded that any such potential competitors would be very reluctant to undertake the investment, at least in the short or medium term.

- (196) Moreover, the nature of Australian iron ore renders almost all of it unsuitable for pelletising. The Commission's market investigation has revealed that a 10 % increase in pellet prices relative to fines would not be sufficient to justify investment in pellet plant capacity in Australia; such investment costs would be expensive due to the geographical remoteness of Australian mines, and because Australian ore tends to require a high level of energy to crush on account of its hardness. There is

therefore no actual, nor any likely potential, competition from Australian mines in the supply of pellets to seaborne customer areas. This fact notably excludes BHP as a potential competitor to the newly merged entity, at least for the foreseeable future ⁽⁵²⁾. BHP does not have pellet production capacity in Australia, and so could not substitute Brazilian ores, at least not in the short and medium term: customers would have to make substantial adjustments to their furnaces in order to take the altered burden.

- (197) For the reasons indicated above in the context of defining the relevant geographic market, market entry (to the sale of pellets in seaborne customer areas) by pellet suppliers in the United States, Russia, Ukraine or China is also highly improbable, and certainly will not occur in the short or medium term.

Limited countervailing buying power, and strong customer concerns

- (198) As noted above, the steel industry is markedly less concentrated than the iron ore industry. In Europe alone, there are seven consumers of iron ore.[...]*. An examination of the relative performances of the steel producers (losses or low margins) and the seaborne iron ore producers (high profits and increasing prices in each of the last two rounds of negotiations) shows clearly that, even before the reduction in the number of first tier iron ore producers, the steel producers have been unable to exert much influence.

- (199) The responses received from customers during the course of the Commission's market investigation confirm the limited buyer power of steel mills located in seaborne customer areas in relation to the purchase of pellets. Almost all of the steel companies contacted by the Commission indicated that they would be unable to resist a hypothetical pellet price increase by the newly-merged entity, at least in the short or medium term. Most respondents confirmed that there is a tight market for pellets, with little or no spare capacity on the supply side, thereby rendering any hypothetical exertion of buyer power impossible ('not without buying alternatives', as one customer put it); customers also confirmed that any new capacity would be slow to come on stream.

⁽⁵¹⁾ Another iron ore producer (with no current pelletising capacity) said it would not be prepared to invest in pellet capacity in the event of a 5 % to 10 % pellet price increase by CVRD/Mitsui/Caemi.

⁽⁵²⁾ The same applies to Rio Tinto's Australian operations: these mines are not potential competitors in the supply of pellets to seaborne customer areas.

(200) In their response, the parties contest the Commission's conclusion regarding limited buyer power of steel manufacturers. In particular, the economic consultant retained by the parties has identified two threats which, in its opinion, would confer on customers with significant power over their pellet suppliers. Those are (i) the ability of steel mills to switch between pellet suppliers, and (ii) the ability of steel mills to sponsor the development of new production capacity with rival pellet producers.

(201) The Commission does not consider those elements as giving any material buyer power to customers. Customers can obviously change suppliers, just like in any industry. However, the buyer power which they may derive from this behaviour depends on the individual importance of each of those customers vis-à-vis the merged entity. It is only if customers represent a substantial proportion of the merged entity's sales, and if the merged entity cannot easily find alternative outlets, that the threat of switching may be regarded as significant. The results of the investigation demonstrate that this is not the case, both because the steel industry is much less concentrated than the iron ore industry and because the existence of low excess capacity means that pellet producers could relatively easily find new outlets for their production.

(202) It is also true that customers can decide to sponsor the development of pellet capacity with rival suppliers. However, as indicated above, it appears that this will not occur to a significant extent, because (i) it would take a significant number of customers to finance sufficient new capacity to constrain the competitive behaviour of the merged entity; (ii) CVRD is already planning to add new capacity, which reduces the incentives for customers to finance additional pellet plants; (iii) as the creation of the Brazilian joint ventures between CVRD and seaborne customers indicates, those customers willing to add new capacity would prefer to do so in areas of lowest production costs (Brazil) so as to maximise their return on investment; and (iv) pellet capacity may not be expanded as easily as the parties submit, especially because of the need for sufficient volumes of pellet feed.

(203) Finally, the Commission reiterates that customers have expressed significant concerns about the effects of the transaction. The high profit margins enjoyed by iron ore producers⁽⁵³⁾, when compared with the low profit

margins achieved by customers, also clearly indicate where the balance of power between suppliers and customers lies. As a customer indicated during the hearing, what customers see is that steel prices tend to decrease, iron ore production costs have been significantly reduced over the last few years, but iron ore prices do not fall.

Effects of the transaction

Elimination of QCM as an independent supplier

(204) By acquiring Caemi, CVRD is removing Quebec Cartier Mining as a competitive force in the supply of pellets to the EEA. QCM has a market share of [10 to 20]* % in the relevant market, and its removal reduces the number of actual competitors from four to three. This comes on top of the recent (2001) removal by CVRD of Ferteco, [...]*, as a competitive force CVRD's acquisition of Ferteco had reduced the number of independent seaborne pellet suppliers from five to four.

(205) [...]*

Capacity to engage in selective competitive actions against IOC

(206) CVRD currently has no production of Canadian quality pellets. Following the notified transaction, CVRD will control QCM (together with IOC/Rio Tinto, the main supplier of Canadian quality pellets). The new entity would hence be in position to engage in selective competitive actions against IOC, aimed at restraining the latter's incentive to expand pellet capacity. Such actions could take the form of [...]* or of cross subsidisation between CVRD's and QCM's pellet activities. This would significantly affect IOC's competitiveness in pellet supply to the EEA. The Commission's market investigation did reveal evidence of some switching by customers between IOC and QCM for pellet supply, on account of having received a more competitive offer from one or the other supplier.

CVRD likely to act as a price leader

(207) CVRD is already the price leader in the sale of pellets to seaborne customer areas; in most recent years, benchmark prices have been fixed on the basis of prices agreed with CVRD. The leadership role is likely to be strengthened following the acquisition by CVRD of QCM (which follows closely upon its recent acquisition of Ferteco) in view of the larger share of pellet sales to seaborne customer areas which the new entity will account for, of the reduction in the number of independent pellet suppliers from five to three in a

⁽⁵³⁾ CVRD's net margin approaches 50 %, and its return on capital employed exceeds 20 %.

matter of months, and of the competitive advantages and new sources of market power to be held by the merged entity. The Commission's enquiry has confirmed the likelihood of such an evolution. Both competitors and customers have indicated that other pellet suppliers to seaborne customer areas would be likely to follow CVRD/Mitsui/Caemi's lead in increasing prices. These suppliers, on account of their higher cost levels and their inability to expand capacity in the short term, would have a greater incentive to raise prices to the 'new market level' than to seek to compete at price levels lower than those offered by CVRD/Mitsui/Caemi.

Higher prices [...]*

- (208) As a result of its new position of increased market power, the new entity is likely to be able to increase real prices. [...]*

Conclusion

- (209) The Commission has therefore reached the conclusion, for the reasons outlined above, that the transaction would give rise at least to the creation of a dominant position, if not to the strengthening of an existing dominance, in the supply of iron ore pellets to all seaborne customer areas.

B. Dominance in hypothetical markets for direct-reduction ore

- (210) As indicated above, there are strong indications that DR iron ore may belong to distinct product markets; and that, within DR iron ore, the impact of the transaction should be measured in two markets, namely (i) a market for DR pellets, and (ii) a market combining DR pellets and DR lump (because of the existence of a one-way substitutability between DR lump and DR pellets).

Dominance in DR pellets

- (211) The market shares for DR pellets appear in the following table. Owing to the limited amount of public information about those sales, the market share calculations have been made on the basis of total merchant sales worldwide. These figures include the production of companies not having access to the seaborne market, and they may therefore underestimate the actual market position of the merged entity.

According to the data provided by a third party, the parties' combined market shares would exceed 62 % on the basis of seaborne capacity in 2001.

Market shares for DR pellets

	Country	Merchant sales 1997	Merchant sales 2000	Capacity
		Merchant (%)	Merchant (%)	2000 (Mt)
CVRD	Brazil	39	38	9,2
Samarco (CVRD/BHP)	Brazil	16	19	6,0
QCM (Caemi)	Canada	[< 10] *	[< 10] *	4,0
Merged entity		[60-70]*	[60-70]*	19,2
IOC (Rio Tinto)	Canada	0	4	2,5
LKAB	Sweden	13	14	8,3

Source: Midrex report 2000.

- (212) The Commission has reached the conclusion, for most of the same reasons outlined above in relation to pellets, that the transaction would give rise at least to the creation of a dominant position, if not to the strengthening of an existing dominance, in the supply of direct reduction pellets to all seaborne customer areas. The market shares are moreover comparable to (if not higher than) those for total pellet sales.

- (213) In their response, the parties indicate that there is currently no demand for DR iron ore in the EEA, since the only direct reduction plant in that region (owned by Ispat and located in Hamburg) is closed. However, although it is true that Ispat's plant has been closed for several months in 2001 (owing to exceptionally high natural gas prices affecting its profitability⁽⁵⁴⁾), this plant has been operating for the last 30 years without interruption, and is expected to resume operations soon.

- (214) Finally, the parties state in their response that DR pellets do not need to be produced from the highest quality fines, so that all pellet plants could easily enter the DR market. Even if that were so, this would not affect the competitive assessment of the transaction, since, as shown above, the merged entity would be dominant on the overall seaborne pellet market.

⁽⁵⁴⁾ There are, moreover, strong indications that natural gas prices will not remain at these exceptionally high levels over the next few years.

Dominance in DR lump and pellets

- (215) The above section has shown that the operation will create or strengthen a dominant position by the merged entity in DR pellets. This already points towards similar conclusions on the overall market for DR lump and pellets, since DR pellets account for 78 % of merchant DR iron ore sales. However, there are also strong indications that the situation in DR lump is very similar to that in DR pellets.
- (216) In the DR sector, a distinction is traditionally made between 'captive' sales (meaning internal sales of vertically integrated companies) and 'merchant' sales to third party DRI producers. This distinction is also relevant for the calculation of market shares: only 'merchant' sales appropriately reflect the actual market power of those suppliers active on the merchant market, because 'captive' sales correspond to quantities which are not really put on the market, which are not available for non-integrated DRI producers and for which no real competition takes place.

(in Mt)

Sales of DR lump	Country	Sales 1997		Sales 2000		Capacity
		Captive	Merchant	Captive	Merchant	2000
CVRD	Brazil	0	0,7	0	1,0	3,7
MBR (Caemi)	Brazil	[< 5] *	[< 10] *	[< 5] *	[< 5] *	[< 5] *
Merged entity		[< 5] *	[< 5] *	[< 5] *	[< 5] *	[< 10] *
MCR (Rio Tinto)	Brazil	0	0	0	0	1,5
NMDC	India	0	4,2	0	2,0	6,2
CVG	Venezuela	0,6	0	0,9	0	2,5
ISCOR	South Africa	0	1,8	0	4,0	4,0
Las Encinas	Mexico	0	0	0,2	0	0,3
World Total		[...] *	[< 15] *	[< 5] *	[< 15] *	20,7

Source: Midrex report 2000.

- (217) As can be seen from the above table, there are currently only four suppliers active on the merchant market worldwide: those are CVRD, MBR, NMDC and ISCOR. By combining CVRD and MBR, the operation reduces that number to three suppliers. Furthermore, not all of these three suppliers should be considered to have a similar position: while CVRD and MBR export a significant proportion of their DR lump, it appears that NMDC does not sell outside India, ISCOR already sells 100 % of its capacity. NMDC's inability to sell on the export market is further indicated by the fact that, although having a significant capacity (in excess of 6 Mt), it has only been able to sell 2 Mt in 2000.
- (218) The Commission's investigation shows that demand for DRI (and thus DR iron ore) is expected to increase dramatically in the near future (from 43,2 Mt in 2000 to 60 Mt in 2005), in line with the average 8 % annual growth rate observed between 1995 and 2000. In that context, competition will be largely determined by the lump suppliers' capacity to meet that extra demand.

- (219) While the merged entity already has significant excess capacity enabling it to meet that higher demand, there are strong indications that NMDC cannot competitively sell outside India. Furthermore, ISCOR is already constrained in its capacity, and its planned capacity expansion (by 10 %) will not match the 38 % expected increase in demand for DR iron ore. Moreover, the Commission's market investigation has revealed that the capacity figure for ISCOR quoted by Midrex above may be somewhat exaggerated. It follows that these suppliers will not be able to sufficiently constrain the competitive behaviour of the merged entity.
- (220) The parties submit that the industry as a whole still has significant excess capacity, and therefore that other suppliers could enter the merchant market should the merged entity raise prices or reduce discounts. However, the results of the Commission's investigation suggest otherwise. First, it appears that MCR does not have access to such infrastructure as to allow for seaborne shipments: MCR is not connected to any port, and its products are mostly transported by barge down the Paraguay and Paraná rivers to be sold to neighbouring Mercosur countries (primarily Argentina). Secondly, although CVG has access to seaborne infrastructure, it only has limited DR capacity (2,5 Mt) and it has a significant local demand in that all Venezuelan pig iron production is carried out by direct reduction methods (covering a total capacity of 8,8 Mt). In that context, and in view of CVG's interests in most Venezuelan DRI producers, it seems highly unlikely that CVG could add sufficient volumes on the seaborne market to significantly constrain the competitive behaviour of the merged entity. In addition, there is no indication that any new producer of lump could enter the market, owing to the very specific quality of lump ore suitable for direct reduction applications.
- (221) It follows that, in practice, the conditions of competition on the merchant market for DR lump essentially depend

on the rivalry between those suppliers with sufficient excess capacity and access to seaborne infrastructure, namely MBR and Ferteco. This is further confirmed by the leading DR iron ore customer (and the only customer in western Europe), who indicated that it was essentially dependent on supplies from these two companies. By combining these two companies, the proposed transaction will eliminate that rivalry, and therefore lead to the creation of a dominant position in that market. The parties' submission that MBR currently does not sell DR lump in western Europe cannot be accepted, because MBR could easily sell DR lump in western Europe (as past deliveries clearly demonstrate) and because MBR is the only credible alternative to CVRD for western European customers.

- (222) In light of the above, the Commission has therefore reached the conclusion that the transaction would give rise at least to the creation of a dominant position, if not to the strengthening of an existing dominance, in the hypothetical market for the supply of direct reduction lump and pellets in all seaborne customer areas.

C. No dominance in sinter fines

- (223) Each of CVRD (directly and through its controlling stakes in Ferteco, Samitri, Samarco, etc.) and Caemi (through its controlling interests in MBR and QCM) are active in that sector and sell products in seaborne customer areas. In its Decision adopted on 3 July 2001 pursuant to Article 6(1)(c) of Regulation (EEC) No 4064/89, the Commission raised serious doubts as to the compatibility of the operation with the common market on the grounds that it might create or strengthen a collective dominant position on this market. For the reasons described below, those serious doubts have been alleviated during the course of the detailed investigation.

Market shares

(in %)

Seaborne sales	Country	Sales 1997	Sales 2000	Capacity 2000	Capacity 2005
CVRD	Brazil	[20-35]*	[20-35]*	[30-40]*	[30-40]*
Caemi (MBR and QCM)	Brazil and Canada	[10-20]*	[5-15]*	[10-20]*	[10-20]*
Merged entity ⁽⁵⁵⁾		[30-40]*	[30-40]*	[40-50]*	[40-50]*
BHP	Australia	[10-20]*	[10-20]*	[10-20]*	[10-20]*
Rio Tinto	Australia and Canada	[20-30]*	[20-30]*	[20-30]*	[20-30]*
LKAB	Sweden	[1-10]*	[1-10]*	[1-10]*	[1-10]*
SNIM	Mauritania	[1-10]*	[1-10]*	[1-10]*	[1-10]*
ISCOR	South Africa	[1-10]*	[1-10]*	[1-10]*	[1-10]*

Source: Midrex report 2000.

No single dominance

- (224) There is no indication that, despite the relatively high market shares of the merged entity, the operation could create or strengthen a single dominant position by the merged entity on the market for sinter fines sold in seaborne customer areas. The merged entity will remain subject to the competitive pressure of other large suppliers, especially Rio Tinto ([20 to 30]* % of sales) and BHP ([10 to 20]* % of sales). The competitiveness of those two suppliers also appears from their cost structures, which are not substantially different from those of CVRD (and are lower than those of MBR). This is further confirmed by the high capacity utilisation rates enjoyed by BHP ([...]* %) and Rio Tinto ([...]* %), which exceed those of CVRD ([...]* %) and Caemi ([...]* %); and by the occurrence of significant switches from customers between products of different origin, as emphasised by the parties in their response.

No collective dominance

- (225) In its decision of 3 July 2001, the Commission raised serious doubts as to the compatibility of the operation with the Common market on the grounds that it might result in collective dominance by the three main seaborne suppliers, namely CVRD, BHP and Rio Tinto.
- (226) In that decision, the Commission in particular referred to (i) the high and increasing combined market shares of these three market players ([...]* % of total seaborne demand after the proposed transaction); (ii) their low and comparable cost structures, especially when compared with other seaborne suppliers; (iii) high market transparency in terms of benchmark prices and volumes; and (iv) stability of demand.

⁽⁵⁵⁾ The merged entity's market share figures also include the output of the Indian mine Sesa Goa, which is controlled by Mitsui.

- (227) In that context, the Commission identified risks that the three major iron ore suppliers could have similar incentives, and that this might lead to parallel anti-competitive behaviour. In practice, the Commission investigated three different mechanisms possibly leading to a situation of collective dominance: (i) parallel negotiating behaviour during the benchmark price negotiations (CVRD, Rio Tinto and BHP are usually the price setters in western Europe and Japan); (ii) concentration of those companies on their 'natural' market (the region where they enjoy transport cost advantages, namely East Asia for the Australian suppliers and western Europe for the merged entity); and/or (iii) restrictions in capacity expansion.
- (228) The investigation has revealed a number of structural reasons making collective dominance difficult to sustain. First, customers and competitors have consistently indicated that there is substantial competition between the two Australian suppliers, who sell the same types of products and who effectively compete with each other for larger volumes and for new capacity expansion projects.

- (229) Second, as indicated above, sinter fines are a differentiated product. In particular, Brazilian ores have substantially different product characteristics from Australian ores. This difference creates asymmetric competitive incentives for Brazilian and Australian suppliers. They also reduce the risks of deviating from a coordinated outcome, by making retaliatory actions less effective.
- (230) Thirdly, the asymmetric competitive incentives of Brazilian suppliers and Australian producers are further intensified by significant differences in their respective cost structures. In particular, it appears from the following table that Brazilian suppliers have a significant advantage in western Europe while Australian suppliers are more competitive in East Asia. These differences mean that Brazilian suppliers and Australian producers pursue distinct profit-maximising strategies, which in turn make it very difficult for the three major producers to arrive at similar pricing or capacity objectives.

Average fines costs 1997-2000

(in USD/mtu)

	fob cost	Transport to Asia	Total cost to Asia	Transport to Europe	Total cost to Europe
CVRD	10,7	13,1	23,8	8,3	19,0
Caemi	[10-20]*	[10-20]*	[20-30]*	[5-15]*	[20-30]*
Rio Tinto	[10-20]*	[5-15]*	[10-20]*	[10-15]*	[20-30]*
BHP	[10-20]*	[5-15]*	[20-30]*	[10-15]*	[20-30]*
ISCOR	20,5	10,4	30,9	8,6	29,1
SNIM	22,6	N/A	N/A	5,7	28,3
LKAB	20,9	N/A	N/A	4,3	25,2

Source: AME report.

- (231) Altogether, the presence of substantial competition between the two Australian producers and of asymmetric competitive incentives between Australian mining companies and Brazilian producers, collectively contribute to effectively preventing the creation of collective dominance in general. This is all the more so as CVRD, BHP and Rio Tinto have also materially different market shares, ranging from 38 % (CVRD) to [10 to 20]* % (BHP). In that respect, the present transaction will further add to that asymmetry (by strengthening the current market leader), and therefore tends to further hinder parallel behaviour. The existence of significant differences in capacity utilisation ratios is a further indication against collective dominance, since it

reinforces the conclusion that different incentives exist among firms in the industry.

- (232) In addition, there are also specific reasons why each of the three mechanisms discussed above cannot effectively operate. The following paragraphs present these reasons in detail.

Parallel pricing

- (233) The results of the detailed investigation have negated the risk of parallel pricing behaviour, for three major

reasons. First, they have shown that there is significant competition between the two Australian suppliers, who produce the same quality of iron ore and therefore compete for the same volumes.

one seaborne region only, they need to vigorously compete for all possible steel mills. This makes a 'geographic split' even more unlikely.

- (234) Secondly, parallel behaviour during the annual benchmark price negotiations may be difficult to realise, because (i) customers could defeat that behaviour by settling with 'fringe' suppliers (as western European customers did in 2000 when they reached an agreement with SNIM); and (ii) suppliers have incentives to be the first settlers, and therefore not to be too demanding during the negotiations, because this 'customer friendly' attitude is usually rewarded by steel mills in the form of higher volumes [...]*.

- (235) [...]*.

Geographic split ('chacun chez soi')

- (236) The results of the detailed investigation have also negated the risk of a 'geographic split' of the market between western Europe (to be essentially supplied by Brazilian suppliers) and East Asia (to be essentially supplied by Australian suppliers). Firstly, as indicated above, seaborne demand growth is not expected to be equally shared between the various seaborne areas. In particular, it appears that western European demand will stagnate during the next 10 years, while East Asian sales will significantly grow during the same period (essentially due to soaring seaborne purchases by customers in China). This asymmetry eliminates the incentives for suppliers to concentrate on a given region (especially western Europe) and, by contrast, provides incentives for all suppliers to vigorously compete for East Asian sales. This is confirmed by CVRD's presence in East Asia (where it already achieves one third of its seaborne sales), and by the sale of significant quantities of Australian ore in western Europe.

- (237) In addition, it appears that one of the main challenges faced by iron ore suppliers consists in obtaining sufficient customer support for the considerable investment required for capacity expansion schemes. For instance, according to the figures provided by the parties, [...]*. Comparable issues are raised for BHP and Rio Tinto's new projects. In that context, projects can only be financed if sufficient outlets are guaranteed. Iron ore suppliers can therefore not approach customers in

Restriction of capacity

- (238) Finally, the results of the Commission's detailed investigation have not highlighted much risk of the three big suppliers engaging in parallel restriction of capacity. It is true that the market shows certain features which might facilitate that sort of behaviour: (i) Rio Tinto, BHP and the merged entity might effectively control capacity expansions, because only they have access to significant relevant reserves; (ii) there is currently very little excess capacity, and demand will increase in the near future, which calls for capacity expansion; and (iii) it would be in the collective interests of the major suppliers to keep supply tight, so as to achieve higher prices.

- (239) However, in order to be effective, such a scheme would need to overcome major obstacles. Even if some sort of common objective could be discerned by each of the producers independently, it could not be achieved because it would be in the individual interest of each supplier to renege on that objective and to add extra seaborne capacity (so as to benefit from both large volumes and high prices). It follows that the mechanism described above can only effectively operate if the iron ore suppliers' incentives to deviate can be counterbalanced by other factors. The most likely way in which this could be done would be through the threat of retaliation. This threat can be summarised as follows: (i) in view of the high transparency of capacity expansion schemes (and of the individual capacity of each supplier), the major suppliers could easily and quickly detect any addition of extra capacity; and (ii) once this is done, the major suppliers could harm the supplier of that extra capacity by adding capacity on their own (since this would create a situation of excess capacity and therefore lower prices and profits). If the reduced, discounted profits achieved during the period of excess capacity would be sufficient to offset the higher discounted profits made by the 'maverick' during the period when it benefits from both larger volumes and higher prices, then iron ore suppliers would effectively have little incentive to deviate.

- (240) It has been suggested that capacity-restrictive parallel behaviour is not possible. The main reason for this, the argument goes, is that the 'punishment' period (of excess capacity) is not credible, because (i) it harms all

suppliers (so that it needs to be relatively short for the threat to be credible) and (ii) capacity is there to stay in the long term. More specifically, it has been indicated that, in that context, any retaliatory action would have no effect on the maverick's behaviour, since the maverick would be 'committed' to using the capacity which it has installed. Retaliation would therefore be both useless and painful to all suppliers. In addition, the excess capacity which would result from any retaliation would also last for a long time, which would in turn do considerable harm to all suppliers. In other words, the retaliation mechanism would be so futile, disproportionate and harmful to all suppliers, as not to be credible. The Commission considers that, in the present case, this is not necessarily true because of the expected market growth. Although capacity would indeed remain in the long term, the expected growth in demand (8 % between 2000 and 2005) could quickly absorb the added capacity, so that the period of excess capacity would not last long.

(241) However, the results of the investigation show that parallel strategies involving capacity restriction would not be likely to work effectively in the market under consideration. In particular, the investigation has revealed that independently identifying and pursuing collective objectives on capacity restrictions would be extremely difficult. In particular, it appears that capacity cannot be finely tuned. Capacity expansion schemes consist of large projects leading to the development of entire mining areas in a given deposit, and they therefore concern lumpy quantities. In that context, it would not be easy for suppliers to independently concur on capacity expansion strategies.

(242) It should also be noted that iron ore is a differentiated product. This factor, combined with the fact that Brazilian sinter fines are substantially different from those extracted in Australia, further complicates the stability of any coordinated outcome between Rio Tinto, CVRD and BHP.

(243) Furthermore, customers have repeatedly indicated that BHP and Rio Tinto significantly compete with each other, especially as far as new capacity expansion projects are concerned. In that context, it seems difficult to imagine that those two suppliers could engage in parallel behaviour regarding capacity expansion.

(244) In addition, there remains the fact that, as indicated above, the seaborne market growth is not expected to be homogeneously shared in all regions, but instead will essentially come from East Asia (and principally China). In that context, all suppliers have strong incentives to compete for larger volumes in China, and future seaborne market positions cannot be easily derived from what they are in mature markets (such as western Europe or Japan). In such a climate it would therefore be extremely difficult for producers to form similar views on optimal capacity sharing, and suppliers would probably have incentives not to pursue any independent capacity-restriction strategies which might limit their sales in China.

(245) Finally, it has been consistently stated that new projects are only undertaken when a sufficient number of customers have indicated their willingness to purchase the product concerned. It follows that the possibility for producers to pursue capacity restriction strategies would strongly depend on the customers' acceptance of the iron ores concerned, something which cannot be assumed. This also indicates that customers could seriously endanger the stability of any parallel strategies.

(246) For all of these reasons, a vast majority of third parties has stated that the three major iron ore suppliers could not reasonably engage independently in such a common capacity-restriction strategy. It is therefore concluded that the operation will not create or strengthen a dominant position on sinter fines sold to seaborne customer areas, as a result of which effective competition in the common market and the functioning of the EEA Agreement would be significantly impeded.

D. No dominance in lump

(247) The operation will create overlaps in lump, where each of CVRD and Caemi (through MBR) are active and sell in all seaborne customer areas. The parties' and their competitors' shares of sales and capacity appear in the following table:

(in %)

Seaborne sales	Country	Sales 1997	Sales 2000	Capacity 2000	Capacity 2005
CVRD	Brazil	[5-15]*	[5-15]*	[20-30]*	[20-30]*
Caemi (MBR)	Brazil	[5-15]*	[5-15]*	[5-15]*	[5-15]*
Merged entity ⁽⁵⁶⁾		[5-15]*	[10-20]*	[20-30]*	[20-30]*
BHP	Australia	[20-30]*	[10-20]*	[20-30]*	[10-20]*
Rio Tinto	Australia	[30-40]*	[30-40]*	[20-30]*	[20-30]*

Source: [...]*.

(248) There is no indication that the operation could create a single dominant position by the merged entity, since it will only be the third-largest seaborne supplier. The transaction nonetheless raises many of the same collective dominance issues in lump as it does in relation to sinter fines. However, the results of the Commission's detailed investigation also show that these risks can be dismissed, on the basis of the same analysis as that described above in detail for sinter fines.

(249) It is therefore concluded that the operation will not create or strengthen a dominant position in lump sold to all seaborne customer areas, as a result of which effective competition in the common market and the functioning of the EEA Agreement would be significantly impeded.

E. Conclusion

(250) On the basis of the above analysis, the proposed concentration would risk bringing about the creation or strengthening of a dominant position in the market for the supply of iron ore pellets to all seaborne customer areas, in the hypothetical market for the supply of direct reduction pellets to all seaborne customer areas, and in the hypothetical market combining direct reduction pellets and direct reduction lump to all seaborne customer areas, as a result of which effective competition in the common market and the functioning of the EEA Agreement would be significantly impeded.

⁽⁵⁶⁾ The merged entity's market share figures also include the output of the Indian mine Sesa Goa, which is controlled by Mitsui.

VIII. REMEDIES

(251) On 5 October 2001, the parties offered certain commitments to remove the competition concerns which the Commission had identified in its statement of objections. The relevant part of the final commitments is set out in the Annex to this Decision.

A. Summary of the undertakings

(252) These commitments consist, in brief, of:

- an undertaking to dispose of Caemi's 50 % interest in QCM, a Canadian producer of sinter fines and pellets,
- the establishment of 'New CAEMI', incorporating MBR, Caemi's Brazilian iron ore mining operation, and Ferteeco, an iron ore mining company that CVRD recently acquired from Thyssen Krupp.

B. Assessment of the undertakings

(253) The first of these undertakings completely eliminates the overlap between CVRD and Caemi in iron ore pellets. In addition, the results of the Commission's market investigation clearly indicate that QCM is a stand-alone business which operates independently from the rest of Caemi and which, if divested to a suitable purchaser, has the ability to act as a competitive and independent force on the market. It follows that this undertaking resolves the competitive concerns identified by the Commission in pellets and DR pellets.

(254) Given that DR pellets account for approximately 80 % of the total hypothetical market for DR iron ore, it also appears that this undertaking is sufficient to resolve the competitive concerns relative to that hypothetical market as well. Although QCM does not produce any DR lump, MBR's sales of [...]* Mt in 2000 represent

only a very small proportion of a combined market for both DR lump and DR pellets. In view of a trend towards the use of DR pellets in preference to DR lump, and in view of the fact that CVRD expects its current reserves of DR-grade lump ore to be exhausted in four to five years ⁽⁵⁷⁾, these sales seem all the more insignificant. It should moreover be noted that the only European customer for DR iron ore is a single DR plant which is currently not operational and which accounted for only 0,3 % of EEA steel production. In the light of these factors, and in the absence of any proportionate remedy for this very small increment in DR iron ore share of sales, it is concluded that this minor overlap does not materially alter the conditions of competition on the market concerned.

- (255) In that context, the second undertaking is not considered necessary for the purpose of the clearance of the notified transaction. The Commission therefore will not take it into consideration for the purpose of the present decision.

IX. CONCLUSION

- (256) In the light of the above, and subject to compliance with the undertaking relative to the divestiture of Caemi's 50 % stake in QCM as set out in the Annex, the proposed operation does not create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the EEA or in a substantial part of it. The operation should therefore be declared compatible with the common market and the functioning of the EEA agreement, pursuant to Article 8(2) of Regulation (EEC) No 4064/89,

HAVE ADOPTED THIS DECISION:

Article 1

The notified operation whereby Mitsui and CVRD acquire joint control over Caemi is hereby declared compatible with the common market and the functioning of the EEA Agreement, on condition that the commitment relative to the divestiture of Caemi's 50 % interest in QCM as set out in the Annex is fully complied with.

Article 2

This Decision is addressed to:

MITSUI & Co. Ltd
2-1 Ohtemachi 2-chome
Chiyoda-ku
Tokyo-100-0004 (Japan)

Companhia Vale do Rio Doce (CVRD)
Graça Aranha, 26 — 15th Floor
2005-900 Rio de Janeiro
Brazil

Done at Brussels, 30 October 2001.

For the Commission

Mario MONTI

Member of the Commission

⁽⁵⁷⁾ CVRD's only source of DR lump is the Feijas mine (formerly owned by Ferteco), which produced 1 Mt of DR lump ore in 2000 (Source: Midrex Report 2000).

ANNEX

The full original text of the conditions and obligations referred to in Article 1 may be consulted on the following Commission website:

http://europa.eu.int/comm/competition/index_en.html

COMMISSION DECISION

of 11 June 2003

declaring a concentration to be compatible with the common market and the EEA Agreement

(Case COMP/M.2947 — Verbund/EnergieAllianz)

(notified under document number C(2003) 1814)

(Only the German text is authentic)

Text with EEA relevance

(2004/271/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

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

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings ⁽¹⁾, as last amended by Regulation (EC) No 1310/97 ⁽²⁾, and in particular Article 8(2) thereof,

Having regard to the Commission decision of 4 February 2003 to initiate proceedings in this case,

Having regard to the opinion of the Advisory Committee on Concentrations ⁽³⁾,

Having regard to the final report of the Hearing Officer in this case ⁽⁴⁾,

Whereas:

- (1) On 20 December 2002 the Commission received notification of a proposed concentration pursuant to Article 4 of Council Regulation (EEC) No 4064/89 (the Merger Regulation). The Austrian undertakings Österreichische Elektrizitätswirtschafts-Aktiengesellschaft (Verbund), EVN AG (EVN), Wien Energie GmbH (Wien Energie), Energie AG Oberösterreich (Energie OÖ), Burgenländische Elektrizitätswirtschafts-Aktiengesell-

schaft (Bewag) and Linz AG für Energie, Telekommunikation, Verkehr und Kommunale Dienste (Linz AG) planned to acquire within the meaning of Article 3(1)(b) of the Merger Regulation joint control of E & S GmbH (E & S) and Verbund Austrian Power Trading AG (APT). EVN, Wien Energie, Energie OÖ, Bewag and Linz AG were to manage their interests jointly under the name EnergieAllianz Austria (EnergieAllianz).

- (2) The Commission examined the notification, and found that the notified concentration fell within the scope of the Merger Regulation and raised serious doubts as to its compatibility with the common market and with the functioning of the Agreement on the European Economic Area (the EEA Agreement).
- (3) On 4 February 2003, therefore, the Commission decided to initiate proceedings in the case pursuant to Article 6(1)(c) of the Merger Regulation and Article 57 of the EEA Agreement.
- (4) After a thorough investigation of the case the Commission has come to the conclusion that in itself the notified concentration would indeed strengthen a dominant position as a result of which effective competition would be significantly impeded in a substantial part of the common market. But the competition concerns to which the transaction gave rise have been overcome by the commitments entered into by the notifying parties.

I. THE BUSINESS OF THE PARTIES

- (5) Verbund generates and transmits electricity and supplies it to industrial customers and to electricity distributors; it also trades in electricity. Verbund is the biggest electricity generator in Austria, and operates the high-voltage grid throughout the country with the exception of Vorarlberg and the Tyrol. Verbund deals with large customers through a 55 % subsidiary,

⁽¹⁾ OJ L 395, 30.12.1989, p. 1; corrigendum in OJ L 257, 21.9.1990, p. 13.

⁽²⁾ OJ L 180, 9.7.1997, p. 1.

⁽³⁾ OJ C 79, 30.3.2004.

⁽⁴⁾ OJ C 79, 30.3.2004.

Verbund — Austrian Power Vertriebs GmbH (APC); the bulk of the other shares in APC, which do not carry controlling rights, are held by Energie Steiermark Holding AG (Estag), a company which is itself controlled jointly by the *Land* of Styria and the French electricity supplier Électricité de France (EdF). Verbund and Estag also jointly own Steweag-Steg GmbH (Steweag-Steg), which is a regional distributor in Styria, Verbund holding 34 % of the capital and Estag 66 %; Steweag-Steg differs from APC in that here Verbund and Estag exercise joint control ⁽⁵⁾. Verbund has a minority 35,12 % holding in Kelag — Kärntner Elektrizitäts-Aktiengesellschaft (Kelag), which is controlled by an intermediate holding company owned jointly by the *Land* of Carinthia and the German company RWE AG (RWE). Verbund also has interests in companies that supply electricity to households on the liberalised Austrian electricity market; these interests currently include 20 % stakes in Unsere Wasserkraft GmbH & Co. KG (Unsere Wasserkraft), which is a joint venture with Estag ⁽⁶⁾, and MyElectric Stromvertriebs GmbH (MyElectric), which is controlled by Salzburg AG für Energie, Verkehr und Telekommunikation (Salzburg AG). Verbund itself is controlled by the Republic of Austria, which holds 51 % of the shares.

II. THE TRANSACTION

- (7) The planned transaction would consolidate the electricity business of Verbund and EnergieAllianz in two joint ventures, E & S and APT. The electricity generation capacity of Verbund and the *Land* corporations that are members of EnergieAllianz would continue to be in separate ownership. But generation would be directed by the trading company APT, which would be owned 67 % by Verbund and 33 % by EnergieAllianz. The electricity generated in Verbund's and EnergieAllianz's power stations would be supplied exclusively to APT. APT would handle electricity trading. APT would also supply electricity to E & S, which would be owned 67 % by EnergieAllianz and 33 % by Verbund. E & S would deal with all the large customers formerly with EnergieAllianz or Verbund which have an annual consumption of more than 4 GWh, and would supply them with electricity. APT would supply electricity to the *Land* corporations which are members of EnergieAllianz, and those corporations would supply commercial customers with a consumption of 0,1 to 4,0 GWh and household customers up to 0,1 GWh. APT would also supply electricity to the remaining *Land* corporations that are not party to the transaction and the city corporations outside the areas supplied by EnergieAllianz.

III. CONCENTRATION

- (6) The members of EnergieAllianz distribute electricity regionally, in Lower Austria (EVN), the Vienna area (Wien Energie), Upper Austria (Energie OÖ), the Linz area (Linz AG) and Burgenland (Bewag); this includes supplying to final consumers. Energie OÖ also has a 26,13 % stake in Salzburg AG, the regional supplier in the *Land* of Salzburg. With the exception of Bewag, the members of EnergieAllianz all generate electricity. The members also distribute gas and heat regionally, and provide services relating to transport, the environment, waste management, waste disposal, telecommunications and cable television. Majority holdings in all the members of EnergieAllianz are held by regional authorities.

- (8) APT and E & S are to be subject to the joint control of Verbund and EnergieAllianz. The agreement of both sides on the supervisory board, or in the case of E & S on the shareholders' committee, would be needed for investments of over EUR [...]*(*) million, the determination of general principles of business policy (including the principles of pricing and product policy), and the conclusion of purchase and supply contracts for an amount of more than [...] TWh a year and a duration of more than [...] years. On the management board the agreement of both sides would be needed for important items such as production and sales planning on a multiannual, annual, monthly, weekly and daily basis, and for 'day ahead' operations. Strategic decisions would require the agreement of both sides at a consortium meeting (*Syndikatsversammlung*).
- (9) APT and E & S are to be linked together by this consortium meeting, which would be common to the two of them and on which they would be equally represented. APT would handle procurement for E & S.

⁽⁵⁾ Commission decision of 14 December 2001 in Case COMP/M.2485 — *Verbund/Estag*, paragraph 7.

⁽⁶⁾ This company previously traded under the name RWA Wasserkraft, and was subsequently renamed Unsere Wasserkraft; it was originally owned 50:50 by Verbund and Raiffeisen Ware Austria AG (RWA); Commission decision of 17 September 2001 in Case COMP/M.2541 — *RWA/Verbund/JV*. At the end of 2002 all of RWA's shares and part of Verbund's shares were sold to Estag.

(*) 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.

- (10) APT and E & S would be performing on a lasting basis all the functions of autonomous economic entities. They would have their own management and sufficient financial, personal, tangible and intangible resources, and on the markets on which they operate they would play an active role.
- (11) The transaction therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

IV. PROCEDURE

- (12) The Commission examined the notification and found that the notified concentration fell within the scope of the Merger Regulation and raised serious doubts as to its compatibility with the common market and with the functioning of the EEA Agreement. On 4 February 2003, therefore, the Commission decided to initiate proceedings in the case pursuant to Article 6(1)(c) of the Merger Regulation and Article 57 of the EEA Agreement.
- (13) On 10 April 2003 the Commission, in accordance with Article 18 of the Merger Regulation, sent the notifying parties a statement of objections, to which they replied by letter of 25 April 2003. At the notifying parties' request a hearing was held on 29 April 2003, which was attended by the notifying parties and a number of third parties. After proceedings were initiated and after the hearing took place there were discussions between the Commission and the notifying parties in which the notifying parties were kept abreast of the progress of the case.
- (14) On 12 May 2003 the notifying parties submitted commitments which they proposed to enter into. The Commission carried out a market test, in the course of which it consulted third parties; it concluded that the commitments proposed were not sufficient to resolve the competition concerns raised by the transaction, and informed the parties accordingly. The parties then modified the commitments in such a way that the Commission can now clearly determine, on the basis of its assessment of information already received in the course of the investigation, including the results of prior market testing, and without the need for any other market test, that the competition problems that had been identified have been resolved. The proposed changes to the commitments were submitted in sufficient time to allow proper consultation of Member States, as required by the Commission notice on remedies acceptable in accordance with Council Regulation (EEC) No 4064/89 and in accordance with Commission Regulation (EC) No 447/98 (the remedies Notice) ⁽⁷⁾, ⁽⁸⁾.

⁽⁷⁾ OJ C 68, 2.3.2001, p. 3, paragraph 43.

⁽⁸⁾ The full text of these modified commitments is attached in the Annex to this Decision.

V. A COMMUNITY DIMENSION

- (15) The combined aggregate worldwide turnover of all the undertakings concerned is more than EUR 5 000 million (in 2001: Verbund EUR 1 784 million, EVN EUR 1 015 million, Wien Energie EUR 1 822 million, Energie OÖ EUR 2 042 million, Bewag EUR 165 million and Linz AG EUR 427 million) ⁽⁹⁾. More than two of the undertakings have an aggregate Community-wide turnover of more than EUR 250 million (in 2001: Verbund EUR [...] * million, EVN EUR [...] * million, Wien Energie EUR [...] * million, Energie OÖ EUR [...] * million and Linz AG EUR [...] * million). The undertakings in EnergieAllianz achieve more than two thirds of their aggregate Community-wide turnover in Austria, but Verbund achieves less than two thirds of its aggregate Community-wide turnover in Austria. The notified concentration therefore has a Community dimension within the meaning of Article 1(2) of the Merger Regulation. It is not a case for cooperation with the EEA Surveillance Authority under the EEA Agreement.

VI. APPRAISAL PURSUANT TO ARTICLE 2 OF THE MERGER REGULATION

A. The structure of the Austrian electricity industry

1. The legal framework

- (16) Until 1999 the electricity industry in Austria was governed by the second Nationalisation Act of 1947, which provided for a strict division of tasks and far-reaching territorial protection for the undertakings operating in the industry. Verbund was essentially responsible for generating energy in large power stations, building and operating transmission grids, and trading in electricity with foreign countries. The nine *Land* corporations, Bewag (Burgenland), Kelag (Carinthia), EVN (Lower Austria), Energie OÖ (Upper Austria), Salzburg AG (Salzburg), Steweag (Styria), Tiwag (Tyrol), VKW (Vorarlberg) and Wienstrom (Vienna) and the five city corporations in the *Land* capitals Graz, Innsbruck, Klagenfurt, Linz and Salzburg distributed electricity to all categories of customer in their own areas. What the *Land* corporations did not generate themselves they generally obtained from Verbund.
- (17) The Electricity Market Directive was initially transposed into Austrian law by the Electricity Industry and

⁽⁹⁾ Turnover calculated in accordance with Article 5(1) of the Merger Regulation and with the Commission notice on calculation of turnover (OJ C 66, 2.3.1998, p. 25).

Organisation Act (*Elektrizitätswirtschafts- und Organisationsgesetz*). From 19 February 1999 all final consumers with an annual electricity consumption of at least 40 GWh, or from 1 February 2000 20 GWh, became entitled to access to the grid, and could freely choose their electricity supplier. From 19 February 1999 operators of distribution networks who had a transmission network at their disposal, essentially the *Land* and city corporations, were also entitled to grid access.

- (18) In 2000 the Energy Liberalisation Act carried the liberalisation of the Austrian electricity market further. Since 1 October 2001 all customers are entitled to grid access, irrespective of their consumption or sales volume, and are free to choose their supplier. The coordination contracts between Verbund and the *Land* corporations came to an end the same day.

- (19) The legal responsibility for market supervision and the protection of competition, in particular industry-specific regulation and supervision of unbundling, rests on Energie-Control GmbH (E-Control), which is a company formed under private law and wholly owned by the Republic of Austria. Above E-Control there is an independent state supervisory authority, the Energy Control Commission, which is responsible for deciding on appeals against decisions taken by E-Control, approving grid access charges, and settling disputes over the granting of grid access.

2. Present situation of electricity generation and supply

- (20) In 2001 a total of 62 250 GWh of electricity was generated in Austria. Hydroelectric production consisted of 29 494 GWh from run-of-river power stations and 12 340 GWh from reservoir power stations. In 2001, therefore, 67,2 % of total generation was in hydroelectric power stations. Thermal stations generated 20 416 GWh, 32,8 % of the total. The following table shows the breakdown of electricity generation between the main undertakings operating in this sector:

Table 1

Electricity generation in Austria in 2001

Producer	Output (GWh)	Share of total output (%)
Verbund	[20 000-25 000]*	[30-40]*
Steweag-Steg ^(a)	[1 000-6 000]*	[0-10]*
Energie OÖ ^(b)	[1 000-6 000]*	[0-10]*

Producer	Output (GWh)	Share of total output (%)
Wienstrom ^(c)	[1 000-6 000]*	[0-10]*
EVN ^(c)	[1 000-6 000]*	[0-10]*
Linz AG ^(b)	[0-4 000]*	[0-10]*
Bewag	0	0,0
Kelag	[1 000-6 000]*	[0-10]*
Salzburg AG	[0-4 000]*	[0-10]*
TiwaG ^(c)	[1 000-6 000]*	[0-10]*
VKW incl. VIW ^(a)	[1 000-6 000]*	[0-10]*
Other electricity suppliers and industry	[10 000-15 000]*	[15-25]*
Total output ^(a)	62 250	100

^(a) Estimated.

^(b) Financial year 2000/01.

^(c) Calendar year 2001.

Source: The parties, citing company reports and E-Control statistics.

- (21) Austria is divided into three control areas. Each of the two western Länder, Vorarlberg and the Tyrol, is a control area by itself, and forms part of the German control block. All the other Länder together, accounting for by far the larger part of the country, make up the eastern control area, or Austrian power grid (APG) area, which is a separate control block. Here Verbund operates the high-voltage grid, and as the control area manager it is responsible under the rules of the UCTE for maintaining a balance between generation and consumption by providing or withdrawing balancing energy.

- (22) The *Land* corporations — the members of EnergieAllianz plus Steweag-Steg in Styria, Salzburg AG in the *Land* of Salzburg, Kelag in Carinthia, TiwaG in the Tyrol, and VKW in Vorarlberg — operate the distribution grid in their traditional supply areas. They obtain electricity both from Verbund and from their own power stations and to some extent also from foreign suppliers and energy traders.

- (23) Both Verbund and the *Land* corporations supply electricity to final consumers. There are also a large number of smaller local and private electricity supply undertakings operating as distributors and supplying to final consumers, some of whom currently have their own generation capacities.

B. Relevant product markets

supply to large customers, electricity trading including supply to distributors and the provision of balancing energy.

1. Introduction

(24) 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. The main tests indicated in the Commission notice on the definition of relevant market for the purposes of Community competition law (the relevant market definition notice) are demand substitution, supply substitution and potential competition ⁽¹⁰⁾.

(29) In their reply to the statement of objections, and at the hearing, the parties changed their standpoint on the precise classification of supply to large and small customers. They now take the view that in this area a distinction has to be drawn between price-oriented and service-oriented customers. For price-oriented customers, price is the only decisive criterion in the choice of a supplier of electricity, while service-oriented customers need additional services such as full supply, energy management or balancing energy, and will consequently look at the quality of those services too when choosing an electricity supplier.

(a) The parties' activities overlap

(25) The proposed concentration would group together the existing electricity sales activities of Verbund and EnergieAllianz.

(30) According to the parties view as they explained it at the hearing, the price-oriented customers market includes some distributors, namely the large regional suppliers (large distributors, also known as 'Land suppliers' or 'Land corporations'), and the municipal utilities in Land capitals; but it includes only very few large customers ⁽¹¹⁾. All those taking part in electricity trading belong to the price-oriented customers market. All other distributors (small distributors) and large customers belong to the service-oriented customer market. The provision of balancing energy continues to be regarded as a separate market.

(26) The parties' activities overlap essentially in supply to industrial and large commercial consumers (large customers) and distributors, and in electricity trading, and to a lesser extent in supply to households and small businesses (small customers, in Austria also commonly known as tariff customers). There is also some overlapping in the supply of the balancing energy needed to maintain a balance between generation and consumption.

(27) In the generation and transmission of electricity there is no overlapping between the parties' activities on the market, because each party's power generation branch supplies the power it generates only inside the organisation, so that power is available to the market not at the generation stage but only at the downstream commercial stage, while grid operation is in each case a natural monopoly. But the position of the parties in the generation of power must be taken into account when assessing the effects of the concentration on the relevant markets.

(31) The Commission has already had occasion to consider market conditions in Austria, in the *Verbund/Estag* case ⁽¹²⁾. But that decision left it open whether the market in the supply of electricity in Austria should be segmented by customer group.

(b) Distinguishing the relevant product markets

(28) The parties initially suggested that there were separate relevant product markets in supply to small customers,

(32) In the present case the Commission has come to the conclusion that, as suggested by the notifying parties, there are separate relevant markets in supply to small customers, supply to large customers and small distributors (described by the parties as 'service-oriented'), and supply to large distributors and electricity traders (described by the parties as 'price-oriented').

⁽¹⁰⁾ OJ C 372, 9.12.1997, p. 5, paragraphs 7 and 13 et seq.

⁽¹¹⁾ One such being Österreichische Bundesbahnen (ÖBB), the federal railway.

⁽¹²⁾ Commission Decision of 14 December 2001 in Case COMP/M.2485, *Verbund/Estag*.

(33) In the present Decision it will not be necessary to determine

- (a) whether a distinction should be made between relevant product markets in supply to large customers and supply to small distributors;
- (b) whether a distinction should be made between relevant product markets in supply to large distributors and supply to electricity traders;
- (c) whether for competition purposes the provision of balancing energy constitutes a separate relevant product market.

1. *Supply to final consumers: distinction between large and small customers*

(34) Although the Austrian market is fully liberalised in regulatory terms, the parties take the view that the supply of electricity to final consumers should be divided into separate relevant product markets, in supply to small customers (private households, small businesses and farms) and large customers (industry and large commercial consumers); the parties now bracket large customers in the category of 'service-oriented customers'. As a dividing line between large and small customers, the parties propose the consumption and load values below which under the general legal provisions in force in Austria standardised load profiles are applied. Under the law as it stands, customers with an annual consumption of less than 100 000 kWh a year, or in other words less than 0,1 GWh a year, or a connected load of less than 50 kW, are offered standardised load profiles.

(35) According to the information assembled by the Commission in this proceeding, the supply of electricity should indeed be segmented, as the parties propose, into a market in supply to small customers and a market in supply to large customers (industrial and large commercial consumers); the Commission's enquiries have not identified any grounds for further differentiation ⁽¹³⁾.

(36) As the parties submit, and as the Commission's enquiries confirm, there are substantial differences

between the demand behaviour of large customers and mass customers. Large customers are usually more price-sensitive, and correspondingly more ready to change suppliers than small customers are. Negotiating power and conduct of negotiations are also different. This is reflected in different sales strategies adopted by the energy suppliers and a different level of prices. For large customers value for money and flexibility of supply are the major considerations, while for mass customers there is a further marketing differentiation (for example between 'clean energy', especially from domestic hydroelectric sources, and electricity from fossil fuels or nuclear energy), and a qualitative approach to customers.

(37) Large customers and mass customers usually take power at different voltage levels, and this too helps to differentiate them. It is true that the voltage at which electricity is supplied is not in itself a barrier to entry, in view of the 'postage stamp tariff' payable for through-transmission. But the lower the voltage at which current is delivered, the higher the share of the entire bill accounted for by the grid itself. The relative advantage to the customer of a change of suppliers is therefore lower at lower grid voltages with higher grid prices.

2. *Supplying distributors: distinction between regional distributors (Land corporations) and smaller distributors*

(38) The parties initially argued that all supply to distributors should be considered part of the electricity trading market, because the business of a distributor largely matches the accepted definition of electricity trading, namely the purchase and sale of electricity with a view to gain. This classification also matches the practice of Austrian electricity suppliers in their company reports, where they classify supply to wholesalers and distributors together in the single category of 'trading'. In their reply to the Commission's statement of objections, and at the hearing, the parties changed their position to argue that a specific group of distributors, namely the small distributors, should be included among the 'service-oriented' customers, along with industrial and large commercial consumers. They pointed to similar prices, similar purchasing behaviour and a need for additional services alongside the necessary power itself.

⁽¹³⁾ Consideration might possibly be given to the question whether a limited number of very large consumers, such as ÖBB for example, ought to be separated from the other large customers, and excluded from the large customers market (or the large customers and small distributors market). But this would not ultimately affect the structure of the large customers market and consequently its assessment for competition purposes, and if this segment is indeed assessed separately no competition concerns in fact arise.

(39) According to the information assembled by the Commission, supply to the large regional distributors or *Land* suppliers and supply to all other distributors must indeed be assigned to separate relevant product markets.

- (a) It need not be decided whether supply to small distributors, once distinguished from supply to large distributors, should be included in the market for supply to large final consumers, or whether it constitutes a separate market
- (40) The Commission's enquiries have established that demand for electricity from smaller distributors, including all the municipal and local utilities and private utilities ⁽¹⁴⁾, is clearly distinct from demand from large distributors or indeed from the trading market. Small distributors, whose annual turnover is in most cases well below 500 GWh, are usually supplied under annual or multiannual supply contracts, often coupled with a full supplier contract that makes it unnecessary to buy any additional energy and includes delivery of whatever balancing energy is required. Because of their small size these distributors have not got the financial and administrative capacities they would need in order to engage in active purchasing management on trading markets. They therefore depend on long-term, stable supply contracts, usually with just one seller, typically an upstream regional supplier. For the same reasons, separate purchase of balancing energy by these distributors is at present the exception rather than the rule. As the parties indicated at the hearing, full supply with electric power is a core element, linking supply to small distributors to the market for large customers.
- (41) However, there is also evidence to suggest that the terms of supply to small distributors are different from those of supply to industrial and large commercial consumers. The small distributors supply mainly to households and small firms, and given this customer structure their purchasing behaviour differs from that of large customers, as their power requirements are not the same ⁽¹⁵⁾. And unlike large customers, smaller distributors compete within their own supply areas with other, bigger distributors, including especially the members of EnergieAllianz, to supply to certain categories of final consumer (usually small customers with an annual consumption of less than 0,1 GWh and commercial customers with an annual consumption of 0,1 to 4,0 GWh).
- (42) For the purposes of this Decision, however, it is not necessary to reach a final judgment on the question whether supply to small distributors constitutes a relevant product market of its own, separate from the large customers market. It is clear that supply to small distributors, who depend on full supply contracts, is in any case not to be assigned to the same market as supply to regional distributors or energy traders. Whether we suppose that there is one market in supply to large customers and small distributors, or two separate markets, the transaction at issue would in any case create or strengthen a dominant position on both of these conceivable markets.
- (b) There is no need to decide whether supply to regional suppliers constitutes a separate relevant product market, or whether it should be included in the electricity trading market
- (43) Supply to the big Austrian distributors (*Land* suppliers, *Land* corporations), that is to say the members of EnergieAllianz and Stewag-Steg, Salzburg AG, Kelag, Tiwag and VKW, is clearly distinguished by a number of features from supply to smaller distributors.
- (44) Until the Austrian electricity market was liberalised, the *Land* suppliers drew their entire requirements of electricity, apart from what they produced themselves, from Verbund, to which they were bound by coordination contracts. When the market was fully liberalised on 1 October 2001, and the coordination contracts came to an end, the *Land* suppliers became free to choose their sources of supply. Given the volumes of electricity they need and their greater financial and administrative capacities, they are in a stronger position than the small distributors to take practical advantage of the scope legally open to them.
- ⁽¹⁴⁾ That is to say all Austrian distributors with the exception of the *Land* suppliers (the EnergieAllianz companies plus Stewag-Steg, Salzburg AG, Kelag, Tiwag and VKW) and the companies associated with them, and also excluding Verbund and EnBW Austria. In their reply to the Commission's statement of objections the parties to the transaction argued that the classification of some municipal utilities in *Land* capitals was not straightforward, because their purchasing behaviour was closer to that of the *Land* supplier than to that of the other small distributors. But this question is of no importance here, because the precise classification of these municipal utilities does not affect either the assessment for competition purposes of the market in supply to small distributors (or large customers and small distributors) or of the market in supply to large distributors (or the market in electricity trading including supply to large distributors).
- ⁽¹⁵⁾ This may be the reason why, as many small distributors have told the Commission, the terms that their suppliers give to small distributors are less favourable than those offered to industrial and large commercial consumers. This is contested by the notifying parties.

The regional suppliers take their electricity requirements, apart from what they generate themselves, partly from Verbund and partly from other *Land* suppliers, foreign electricity suppliers and the trading market. They do not usually conclude full supplier contracts, but conduct their own energy management and make their own arrangements to procure additional volumes and balancing energy.

smaller distributors. As already explained, the *Land* suppliers' customers usually take all of their electricity requirements (beyond what they generate themselves) from one and the same supplier. To guarantee their customers full supply of this kind, the regional suppliers depend on long-term fixed contracts for the greater part of their electricity requirements at least.

(45) The parties contend that supply to the Austrian regional suppliers forms part of the broader market in energy trading. But the Commission's enquiries provide clear evidence that the market in supply to the regional suppliers has to be distinguished from the electricity trading market proper.

(49) For this reason most of the electricity required by the *Land* suppliers cannot be met through short-term exchange dealings. Whether more long-term supplies purchased OTC on the open market would be sufficient is not clear from the Commission's enquiries; at least one regional supplier stated that the electricity trading markets had not got the necessary liquidity for this either.

(46) Electricity trading is to be understood as the buying and selling of electricity at one's own risk and for one's own account. In earlier decisions the Commission has found energy trading to be a market in the process of formation, which was made possible only by customers being given a free choice in the wake of liberalisation⁽¹⁶⁾. In addition to independent traders with no generating capacity or grid of their own, electricity traders include, on the supply side and to some extent on the demand side as well, electricity generators, distributors and importers.

(50) Although all this suggests that there is a separate relevant product market in supply to the large regional suppliers, the question can remain unanswered here, because the transaction would not create or strengthen a dominant position on such a market.

3. Balancing energy

(47) Electricity trading can be divided essentially into the following categories:

(51) The supply of electricity differs from most other product markets in that electricity cannot easily be stored and the amount of energy to be supplied is not known with any precision in advance. Consumption forecasts are incorporated into schedules and load profiles. But the forecasts do not as a rule coincide with actual consumer behaviour. Specially generated balancing energy is therefore needed to ensure that the difference between electricity output and load is always met.

(a) over-the-counter (OTC) trading, where individual bilateral contracts are negotiated and concluded outside any central exchange or marketplace;

(b) trade in physical electricity products on exchanges; on the recently founded Energy Exchange Alpen-Adria (EXAA) in Graz, spot deliveries are traded in the form of single-hour contracts, and beginning in 2003 dealing in electricity futures will also be possible;

(52) The balancing energy needed to maintain a balance between production and consumption in a control area is provided

(c) trade in non-physical financial derivatives, known as energy derivatives, which is only at its initial stages, and in Austria still plays only a minor role.

(a) by adjusting the volume of electricity generated inside the control area (this is known as secondary regulation);

(48) The *Land* corporations essentially supply final consumers (large customers and tariff customers) and

(b) by drawing on what is called the minute reserve, which is an additional regulatory instrument that can be called upon in the short term;

⁽¹⁶⁾ Decision of 28 September 1999 in Case IV/M.1557, *EdF/Louis Dreyfus*, paragraphs 16 to 18; decision of 13 June 2000 in Case COMP/M.1673, *VEBA/VIAG* (OJ L 188, 10.7.2000, p. 1), paragraph 18.

(c) if complete adjustment cannot be achieved either by secondary regulation or out of the minute reserve, by 'involuntary exchange' between a control area and the surrounding UCTE control areas.

(53) The parties take the view that the competitive conditions for the provision of balancing energy are so different from those of the other electricity supply markets that there is a separate relevant product market.

(54) The position of the parties in the provision of balancing energy, especially in the form of the minute reserve, is a factor that helps to create or strengthen dominant positions on several electricity supply markets. This is so whether or not the provision of balancing energy, and especially of the minute reserve, is itself a separate relevant product market. For purposes of this Decision, therefore, the precise treatment of the provision of balancing energy in the definition of product markets can remain open.

C. Relevant geographic market

(55) The relevant geographic market comprises the 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 homogenous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different within those areas. The main tests are demand substitution, supply substitution and potential competition ⁽¹⁷⁾.

(56) The notifying parties consider that in the case of supply to large customers, distributors and energy traders, the relevant geographic market reaches beyond Austria, while in the case of small customers it is confined to Austria. They take the view that the relevant geographic market in supply to large customers includes Austria and Germany, essentially because of the capacity of the interconnectors through which electricity can be imported especially from Germany. They also argue that the liberalisation of the electricity market pursuant to the Electricity Market Directive, which has been fully implemented in Austria, has opened the Austrian market to foreign suppliers, and that this liberalisation must be reflected in the definition of the relevant geographic market for purposes of merger control.

(57) The Commission's enquiries have established that, in accordance with the criteria for the definition of the geographic market, the geographic markets in the supply of electricity to large customers, small distributors and small customers do not extend beyond Austria. A possible market in supply to large regional distributors may be wider.

1. *The market or markets in supply to large customers and small distributors and the market in supply to small customers are purely domestic*

(a) *The structure and the legal framework of the electricity markets in Austria are fundamentally different from those of the neighbouring countries*

(58) The breakdown of market shares between the parties and their competitors on the electricity supply markets in Austria is fundamentally different from that in the neighbouring countries or in the EEA as a whole, and this in itself indicates that in geographic terms the relevant markets are confined to Austria ⁽¹⁸⁾. It will be enough here to point out that none of the main electricity suppliers at EEA level, such as EdF, E.ON, RWE or Enel, has a market share of 5 % or more of the market in supply to small customers, large customers or small distributors in Austria. The same applies to the main competitors on the German electricity markets, E.ON, RWE, EnBW and Vattenfall. And no Austrian electricity supplier has a share of 5 % or more of any electricity supply market in a neighbouring Member State or at EEA level.

(59) The legal framework in Austria is quite different from that in neighbouring Switzerland or Germany. In Switzerland the Electricity Market Directive does not apply. In Austria and Germany the Directive has been implemented in very different ways: in Germany, there is negotiated network access under what is known as an associations agreement, and competition supervision by the Bundeskartellamt; in Austria, network access is given against a 'postage stamp tariff', and an independent regulator has been set up.

(b) *Electricity imports are minor in the case of supply to large customers and smaller distributors*

(60) Imported electricity plays only a relatively small part in supply to Austrian electricity customers. At the level of energy trading there are substantial dealings in

⁽¹⁷⁾ Relevant market definition notice (see footnote 10), paragraphs 8 and 13 et seq.

⁽¹⁸⁾ Relevant market definition notice (see footnote 10), paragraph 28.

electricity, especially between Germany and Austria ⁽¹⁹⁾, but at the level of structured supply to final consumers and small distributors there are only limited exports of electricity from Germany to Austria.

(61) In 2002 total sales to large customers in Austria amounted to 25,6 TWh. The Commission's enquiries have established that deliveries to large customers by German suppliers (EnBW and E.On) ⁽²⁰⁾ amounted to less than 1 TWh. This is less than 3 % of total sales to large customers in Austria. The Swiss supplier Atel did not supply any large customers. The Commission's market investigation did not give any indication that this situation might change decisively in the near future.

(62) The same applies to small distributors. In the course of its investigations the Commission asked Austrian distributors to state their electricity suppliers. Out of 75 private, municipal or local electricity utilities only one customer, a purchasing association of smaller distributors, said it had been supplied by a foreign supplier. The total electricity supplied to the 75 distributors in 2002 was about 3 500 GWh. The amount supplied by the foreign supplier to the purchasing association of smaller distributors in that year was less than 200 GWh. This is less than 3 % of total sales to small distributors in Austria. Since then the foreign supplier has lost this customer, to Steweg-Steg, in which Verbund has a holding.

(c) Foreign suppliers have so far responded to Austrian invitations to tender only to a limited extent, and have practically never secured contracts

(63) Since the liberalisation of supply to large customers, those customers have changed their supplier in an appreciable number of cases. But as a rule the new supplier was Austrian. The same applies to small distributors, who have been less inclined to change than large customers. When tenders were called for, foreign suppliers put in bids only in a very few cases. The foreign suppliers involved were mainly EnBW in the

case of large customers and Atel in the case of smaller distributors. In invitations to tender for supply contracts since the liberalisation, the 123 customers questioned in the course of the enquiries (48 industrial and large commercial consumers, including big chain customers ⁽²¹⁾, and 75 smaller distributors) had asked foreign suppliers to submit a bid only in what was very much a minority of cases, and in almost all such cases the foreign supplier was EnBW. Only very rarely did foreign suppliers secure the contract. Once again the sole exception was EnBW: four of the 123 customers surveyed awarded the electricity supplier's contract to EnBW in the year 2000, eight in 2001, and 12 in 2002. The first and second alternative suppliers were as a rule Austrian suppliers too, with the exception of EnBW in a few cases. EnBW's share of the market in supply to large customers was similarly small, at well below 3 %. Atel's share of the market in supply to small distributors was always well below 5 %. Other foreign suppliers did not operate in Austria, with the exception of a marginal presence of E.On on the large customer market ⁽²²⁾.

(64) Thus foreign suppliers export mainly on a wholesale basis, but do not deliver to final consumers and supply smaller distributors only to a limited extent.

(d) Although there are no technical barriers to access that might prevent foreign suppliers from expanding their business in Austria, market access is rendered difficult by established customer relationships and preferences, distribution costs, and a price level lower than that in Germany

(65) The small part played on the market by foreign suppliers cannot be attributed to technical barriers to

⁽¹⁹⁾ Austria traditionally exports peak-load power to Germany and imports base-load power from Germany.

⁽²⁰⁾ In Austria RWE supplies final consumers only through its Austrian subsidiary Kelag. Vattenfall has no dealings with final consumers in Austria.

⁽²¹⁾ 'Chain' customers are customers that draw power from a large number of supply points. An example would be big retail chains.

⁽²²⁾ At a late stage in the proceedings the parties submitted figures for conduct in respect of bids made to large customers of EnergieAllianz, which suggest that conduct in respect of bids to these customers was somewhat different. But the sample submitted by the parties is considerably smaller than the sample used in the Commission's investigation. In addition, the sample, with very few exceptions, includes no small Austrian distributors. In addition, it is not clear how many bids attributed to foreign suppliers genuinely originated with those suppliers, or how many bids were competitive offers that would have been seen by customers as possible alternative sources of supply. The bulk of foreign bids came from EnBW. For the other German suppliers the parties' figures confirm the statements made here.

access. The parties rightly point out that there are no bottlenecks in the interconnectors between Germany and Austria or between Switzerland and Austria. The interconnectors have a capacity equal to some 25 % of Austrian electricity consumption ⁽²³⁾. In purely technical terms, therefore, substantial imports would be possible.

(66) Inside the eastern control area, however, there is a bottleneck between north and south. The two 380 kV grids are linked by lines with the lower 220 kV voltage level. Bottlenecks of this kind are ultimately barriers to imports. Large deliveries for consumption in areas beyond the bottlenecks can quickly overload the grid. The grid operator then has to intervene and manage electricity flows in order to restore the security of the grid.

(67) The transfer charge payable for through-transmission of electricity to another control area (the cross-border tariff, or 'CBT') acts as a barrier to entry only to a limited extent. As has already been said, Austria is divided into three control areas. In the eastern control area, comprising the entire country with the exception of Vorarlberg and the Tyrol, and in the east of the Tyrol too, Verbund operates the high-voltage grid and is responsible for maintaining the balance between production and consumption. The Vorarlberg and Tyrol control areas belong to the German control block. It is true that on electricity transmitted direct from Germany to the eastern control area there is a transfer charge of EUR 0,5/MWh ⁽²⁴⁾. But if the same electricity is routed through Vorarlberg and the Tyrol there is in fact no transfer charge to be paid. On legal grounds no transfer charges are payable on through-transmission between control areas inside Austria, and because the Vorarlberg and Tyrol control areas belong to the German control block there is no transfer charge for through-transmission from Germany to those areas either.

(68) Competitors have submitted, however, that there are a number of barriers to access that make it very difficult

for them to enter the market; these include:

- distribution and customer acquisition costs;
- the required minimum size of the balance group;
- the fragmentation of network operators; and
- the need for a large proportion of hydroelectric power in the electricity mix, especially in the case of small customers.

(69) The effect of these barriers to access is that the Austrian markets in supply to large customers, small distributors and small customers are still not integrated with the German markets, even though there are no major technical barriers. This is so despite the measures already taken or still to be taken in respect of the electricity market as part of the single market programme, and especially the new Electricity Market Directive shortly to be enacted ⁽²⁵⁾. These measures are intended to open up domestic markets that were previously isolated from one another, but the Commission's enquiries show that the sought-after results are not certain and immediate enough to justify the conclusion that the relevant geographic market is in fact larger. The same applies with respect to the forthcoming enlargement of the European Union, because for the integration of the electricity markets in Austria and those of neighbouring candidate countries, the Czech Republic, Slovakia, Hungary and Slovenia, the technical and economic requisites are satisfied to a far smaller extent than they are in the case of integration with the markets of Germany.

(70) Because of the distribution costs that have to be incurred, entry to the Austrian market with a view to long-term supply to distributors and large customers is worthwhile only if a certain minimum number of customers can be secured. As well as bearing the costs of establishing distribution arrangements, which are needed for any market entry, a new supplier entering the market has to set up a balance group which is big enough to keep the risk of having to pay for balancing energy within reasonable limits. The offset between unexpected consumption surpluses and deficits is easier within a big balance group than it is within the balance group of a new entrant, which is necessarily small: such competitors inevitably have a higher percentage requirement of balancing energy, involving a higher risk of increased costs, to make up what they cannot meet themselves for lack of generating capacity of their own in the control area.

(71) That the costs of balancing energy, and especially the cost risk they involve, form a very appreciable barrier to

⁽²³⁾ Source: UCTE, Statistical Yearbook 2001. The notifying parties quote a figure over 25 %, because they refer exclusively to the thermal transfer capacity of the interconnectors. But according to E-Control, only the net transfer capacity is relevant in practice, because that calculation takes account of the whole grid and makes projections on the basis of the weak points: it asks what capacities are in practice available on the interconnectors in order to ensure steady network operation in the event of the failure of a circuit or transformer.

⁽²⁴⁾ The European Association of Transmission System Operators, ETSO, is currently in the closing stages of discussion of a complete abolition of transfer charges with effect from 2004, and their replacement by other methods of setting prices for cross-border transfers of electricity.

⁽²⁵⁾ Relevant market definition notice (see footnote 10), paragraph 32. On the proposed amendment of the Electricity Market Directive, see paragraph 103.

entry was stated by the overwhelming majority of market participants in the Commission's market investigation.

- (72) A further cost factor in Austria is the fragmentation of network operators. At local level Austria is covered by more than 100 network operators, each with its own through-transmission costs. This makes market entry difficult for suppliers who do not possess a detailed knowledge of the market. Even though larger industrial firms often take electricity at higher network levels, and are consequently less affected by the number of operators at the lower network level, this fragmentation in the lower segments of the large customer market does have the effect of a barrier to market entry.
- (73) In addition, for marketing reasons, a new entrant has to have a sizeable hydroelectric component in the electricity mix in order to supply small customers. In Austrian electricity generation hydroelectric power plays a paramount role, accounting for more than 67 % of total generation. Especially in the case of supply to small customers, this has the effect of a further barrier to entry. A substantial proportion of small Austrian customers attach great importance to 'clean' electricity, that is to say electricity generated using domestic water power rather than fossil or nuclear fuels. On the small customers market, therefore, Austrian energy suppliers, whose capacity is mainly hydroelectric, have an additional advantage over foreign suppliers, who have to ensure that they have sufficient availability of hydroelectric power and build up an appropriate brand image for their small customer business.
- (74) A study commissioned by the parties from the firm Frontier Economics argues that a relatively small increase in electricity prices for large Austrian customers, of around [0 to 5 %]*, would be enough to make the investment in distribution costs and customer acquisition costs on entering the market profitable in the short to medium term. Applying the 'SSNIP' test, the conclusion is that the relevant market extends beyond Austria. The following points need to be made here.
- (75) The Frontier Economics study does not — as the SSNIP test would suggest — explain satisfactorily how an increase in the prices of the incumbent (regarded as a hypothetical monopolistic undertaking) and the subsequent movement of customers to one or more new market entrants would affect its profitability. Even if a new market entry coincides with a small but permanent price increase (in the range of 5 to 10 %) by the monopolistic undertaking and the undertaking loses market share as a result, this still does not prove that it would not profit from the price increase nevertheless, on account of a marked increase in the profit margin ⁽²⁶⁾.
- (76) Another crucial weakness in the Frontier Economics model is that it fails to take sufficient account of real competitive prices, basing itself on notional prices instead ⁽²⁷⁾. These notional prices are higher than the real prices for two reasons. First, the study erroneously equates 'opportunity costs' (which serve as a basis for the hypothetical calculation of the competitive price in the market for large customers) with (wholesale) trading prices, and in so doing fails to take account of the fact that the vendor on the (wholesale) trading market incurs (opportunity) costs over and above its production costs (i.e. the cost price) and the achievable profit margins ⁽²⁸⁾. If these are taken into account, it is clear that the sale of electricity on the (wholesale) trading market becomes less attractive for Austrian producers than direct sales to final consumers, and hence that the competitive price for large customers in Austria is overestimated ⁽²⁹⁾. Second, the Commission's market investigation revealed that retail prices in the Austrian market for large consumers are often lower than the (wholesale) trading prices. The study therefore overestimates the actual competitive prices in Austria and hence the scope for profit for a new entrant following a further price increase.
- (77) The statements made by market participants suggest that the parties' assumption regarding the acquisition discount to be granted by new entrants is also somewhat unreliable. On this evidence, it seems highly probable that the discount is in fact higher than assumed by the parties and that even according to the parties' model — which is based on hypothetical

⁽²⁶⁾ Relevant market definition notice (see footnote 10), paragraph 17.

⁽²⁷⁾ 'Since the market for service-oriented customers is in a transitional phase, and the historical prices for last year (2002) give little indication of the prices to be expected in this and subsequent years, we use a hypothetical approach as a basis for calculating the competitive price' (Frontier Economics, *Gutachten zur Frage der Marktabgrenzung*, p. 61).

⁽²⁸⁾ For more details see recital 89.

⁽²⁹⁾ Conversely, these costs, which — except for the CBT — also fall on the buyer, push up the possible arbitrage costs of a new entrant wishing to sell traded electricity to final consumers in Austria.

assumptions — entry would become profitable in the short term only after a price increase of well over 5 % ⁽³⁰⁾.

- (78) To sum up, there are serious doubts as to the practical relevance and hence the validity of the scenario

⁽³⁰⁾ For example, the Frontier Economics study bases its estimate of the short-term profitability of a new entrant — who retains customers for one year — on the assumption of a [$<1\%$]* acquisition discount for customers with an annual consumption of over 100 GWh and a discount of [$<5\%$]* for customers with an annual consumption of 4 to 20 GWh and 20 to 100 GWh. In their reply to the Commission's request for information of 2 May 2003, the parties extended this assumption of a [$<5\%$]* discount to large customers with an annual consumption of 0,1 to 4 GWh.

By contrast, the Commission's market investigation of undertakings whose competitive situation in the eastern control area is comparable to that of a new entrant came up with average values which, at the upper end of the scale, were 300 %, 63 %, 100 % and 183 % (for customers consuming >100 GWh, 20 to 100 GWh, 4 to 20 GWh and 0,1 to 4 GWh) higher than the assumptions made in the Frontier Economics study. Even at the lower end of the scale only one value, that of the 20-100 GWh customer group, fell within the range of the study's assumptions, whereas the other three values were in some cases much higher, by 50 % for the over 100 GWh group, by 25 % for the 4 to 20 GWh group, and by 133 % for the 0,1 to 4 GWh group. It is therefore impossible to argue that the study's assumptions correspond to the real market conditions on this crucial point.

In reply to the Commission's request for information of 2 May 2003, the parties presented a sensitivity analysis of the study's results in relation to higher acquisition costs. However, this analysis went no further than acquisition costs that were 50 % higher than the original estimates. As explained above, in some cases this lies well below the results of the market investigation. However, even on these assumptions a price increase of over 5 % was required to make a profit on customers with annual consumption of 4 to 20 GWh and 20 to 100 GWh. For large customers consuming 0,1 to 4 GWh the profit threshold of new entrants was a price increase of over 5 % even without any increase in the assumed acquisition costs in the context of a sensitivity analysis (no such analysis was undertaken by the parties). (For this group of customers the market investigation showed that acquisition costs were 133 % to 188 % above the value stated by the parties. This suggests that an increase in prices of well over 10 % would be needed before profitability could be reached in this customer group.)

So a critical view of the assumptions made in the Frontier Economics study leads to the conclusion that price increases of well over 5 % would be required to make market entry profitable in the short term under the Frontier Economics model.

Note on the market investigation: the Commission asked for the views of seven undertakings which are sufficiently familiar with the market in Austria and whose market position in the eastern control area is comparable to that of a market entrant, namely the German undertakings E.ON and EnBW, the Swiss firm Atel, the western Austrian suppliers Tiwag and VKW and two undertakings that are operate only in the lowest segment of the large customer market — MyElectric and Ökostrom. The Commission received replies from six of the seven undertakings, which in some cases quoted an upper and a lower limit on discounts for the one-year customer acquisition of market entrants. The question they were asked was, 'In your experience, what is the first-year acquisition discount which your firm may obtain from a supplier at present for the same electricity product in order to induce a customer in the APG area to switch supplier? Please give this discount as a % of the net electricity price (excluding through-transmission costs and extra charges).'

presented by the parties in the Frontier Economics study. Indeed, when other real factors are taken into account, the most likely conclusion appears to be that in some cases price increases of far more than 5 % would certainly be profitable for a hypothetical monopolistic undertaking in the market to supply large customers and small distributors in Austria.

- (e) The retail price level is lower in Austria than in the neighbouring Member States

- (79) In addition to all these barriers to entry, there is the decisive point that the level of the prices charged to large customers in Austria is well below the German level. According to information supplied by the parties, the gap in prices to industrial customers was about 20 % in 2001, and in the case of households it was twice as big ⁽³¹⁾.

- (80) In their reply to the statement of objections and at the hearing the parties claimed that there was already substantial convergence of retail prices in Germany and Austria. However, the parties failed to produce any concrete evidence to support this claim, which runs counter to statements by other market participants. The Commission has assessed the statements by large customers and small distributors regarding the net energy prices they have paid from 2000 to 2003. This statistical analysis shows that, overall, the prices paid in Austria by the market participants consulted appear to have remained at the same level since the end of 2001. On average prices fell substantially in 2001 — by around 15 % for large customers and by around 20 % for small distributors. After another slight drop in 2002 (around 0 to 5 % for large customers and around 5 to 10 % for small distributors), prices rose again slightly in 2003 by an average of around 2 to 5 % for large customers and small distributors. Combined with the abovementioned statements by the parties on price levels in Austria in 2001, this means that prices in Austria must still be well below those in Germany, especially as the parties do not assume a drop in prices in Germany.

- (81) A major factor in this difference in prices is the low average production costs of Austrian hydroelectric generators. Against this the parties argue that hydroelectric schemes do not necessarily enjoy a production cost advantage, because their capital costs are higher than those of other power stations. But this argument is not convincing, for the following reasons.

⁽³¹⁾ Presentation, 'Österreichische Stromlösung', January 2002, p. 9. Prices for consumption of 24 GWh per year. Source: Eurostat, international regulators.

- (82) A large proportion of Austrian electricity production is hydroelectric based. This applies especially to Verbund: hydroelectric power accounts for [about 90 %]* of its total electricity output. [More than two thirds]* of Verbund's hydroelectric power is generated in run-of-river power stations, and [less than one third]* in reservoir power stations. From information on the cost structure of hydroelectric stations supplied by the parties it appears that run-of-river power stations are written off over a period of [...] years. Of the electricity generated by Verbund in run-of-river power stations, [well over half] is generated in stations more than [...] years old; the bulk of Verbund's hydroelectric production is therefore extremely cheap. By [the year ...]* another [...] %* of Verbund's run-of-river capacity will have been fully written off. From information supplied by Verbund it also appears that the period of depreciation of reservoir power stations is [...] years. Of Verbund's reservoir station output, [...] is generated in stations more than [...] years old. By [the year ...]* another [...] of Verbund's reservoir station capacity will have reached the limit for full depreciation. Less than [10 to 30 %]* of Verbund's reservoir station output comes from power stations built in the last [...] years.
- (83) In the case of more recent run-of-river stations (and one thermal station) another cost factor of potential benefit to Verbund is the possibility of claiming compensation for 'stranded costs' ⁽³²⁾.
- (84) For these reasons it can be accepted that the largest Austrian electricity producer, Verbund, has a favourable production cost base. This finding can be extrapolated to Austrian electricity production as a whole.
- (85) However, the notifying parties submit that since liberalisation wholesale prices in Austria have tended to draw towards the German level. According to the wholesale prices recorded by Platts, the price differences shrank further in 2002 and came close to German prices. The parties conclude that the price level in Austria is not a barrier to entry.
- (86) When seeking to define the geographic market, however, one must not look at the cost price, that is to say the wholesale price. Although many electricity customers have a price adjustment clause in their contracts with their suppliers which refers to the level of wholesale prices, the final price is not identical to the wholesale price.
- (87) Since liberalisation, prices to final consumers in Austria have been well below prices in the neighbouring Member States, as shown above. In the case of prices to small customers, the parties do not dispute this fact. But retail prices to large customers in particular fell appreciably when liberalisation began. Although wholesale prices have risen in Austria in recent years, retail prices have not moved to the same extent. They continue to be below the level of prices in the neighbouring Member States.
- (88) The parties to the merger argue that this situation is explained by predatory pricing policies pursued immediately after liberalisation, and can only be a transitory phenomenon, as otherwise Austrian electricity producers would find it more economic — even in the short term — to sell electricity on the international markets instead of supplying it to final consumers in Austria at possibly lower prices (arbitrage).
- (89) First of all it must be pointed out that if markets had already been integrated the parties' explanation should also apply to Germany, and the price level on retail markets in Germany should therefore also have fallen temporarily below the market price. However, this is not the case, nor is any such claim made by the parties. With regard to likely developments in the near future, the parties' argument is not convincing, for the following reasons.
- (90) First, the sale of energy on the trading markets entails significant costs and risks. When exporting energy for trading purposes, Austrian electricity suppliers must factor in the transport costs, which consist of through-transmission charges, network costs and the CBT payable on electricity leaving Austria — currently EUR 0,5 per MWh. Selling electricity on the trading markets in, for example, Germany also involves administrative and other transaction costs (e.g. charges for trading on the stock exchange). Moreover, demand and prices are much more volatile on the trading
- ⁽³²⁾ In order to compensate for the higher costs of unprofitable power stations that were built in the expectation of continued monopoly rights and on the basis of obligations imposed and guarantees of operation given by the authorities (stranded costs), the Electricity Market Directive provides that aid may be granted for a limited time. By decision of 25 July 2001 the Commission authorised aid of EUR 560 million for a number of run-of-river hydroelectric stations and one thermal station belonging to Verbund (State aid measure No N 34/99, *Austria, compensation of stranded costs*). The parties point out that this decision is unlikely to be put into effect in Austria. Nevertheless, a partial limit on production cost risks is a beneficial cost factor.

markets than in the retail business, while the risk of default on the trading market is much higher, as the Enron case has shown. The notifying parties have clearly taken these points on board. At the hearing they cited as one of EnergieAllianz's main reasons for the proposed merger its efforts to reduce its dependence on the 'volatile international trading markets'.

(91) Second, according to the information available to the Commission, Austrian undertakings have a strong tendency to hold on to customers in their home supply area. This is explained by the fact that the Austrian *Land* suppliers are under the majority control of regional authorities. There is also an economic justification for this strategy in that the density of customers in a given area is a pertinent factor in calculating distribution costs. This basic corporate strategy of Austrian electricity suppliers, which is also pursued to a limited extent by Verbund vis-à-vis 'its' Austrian customers, will continue to exist after the merger and provide an incentive to keep Austrian customers even at very favourable prices. The Commission has even been told that this fact alone — and the close customer relations it generates — raises additional barriers to market entry.

(92) Finally, mention must also be made of the significant volume of low-cost in-house production in Austria, which rules out any clear correlation between the cost prices of Austrian electricity suppliers and prices on the trading markets.

(93) For the abovementioned reasons it cannot be assumed that developments in retail prices and in the prices for supplying small distributors in Austria and Germany will be driven by sufficiently homogeneous factors in the foreseeable future, even if the cost factor of trading prices were to behave in similar fashion. This is not belied by the fact that, because of commercial considerations, Austrian electricity suppliers, including the parties to the merger, are striving to increase profit margins by tying retail prices as closely as possible to developments in trading prices, which have risen sharply over the last two years.

(94) For the reasons set out, therefore, the lower price level in Austria acts as a barrier to entry. A significant number of the parties' current and potential competitors have confirmed as much in the market investigation.

(f) Special factors in defining the geographic market for small customers

(95) With regard to the relevant geographic market in supply to small customers, the notifying parties argue that in

Austria this market still has strong local and regional characteristics. It is true that it was not liberalised until October 2001, and the switching rates of small customers are still low, so that the overwhelming majority of small Austrian customers still obtain electricity from their original local and regional distributors. The parties therefore deduce that at present the traditional supply area of each Austrian distributor constitutes a separate relevant geographic market in supply to small customers.

(96) However, statements by the parties reveal that customers do switch to other Austrian regional suppliers, in particular new suppliers such as Switch (a subsidiary of EnergieAllianz), MyElectric and Unsere Wasserkraft, or other firms supplying environment-friendly electricity, whether nationwide or in the eastern control area. Small customers also come together to form supra-regional purchasing pools and organise their supplies of electricity at a level reaching beyond their region, though still within Austria⁽³³⁾. This is evidence of a definite trend towards the integration of small customer markets within Austria, without however extending the market beyond Austria's borders.

(g) Conclusion

(97) For these reasons, it must be supposed that the geographic markets in supply to large customers, small distributors and regional suppliers do not extend beyond Austria.

2. The market in supply to Austrian regional distributors could extend beyond Austria

(98) The parties express the view that the geographic market in supply to the large regional distributors does not extend beyond Austria. However, for the purposes of this Decision this question need not be answered.

(99) The fact that the Austrian *Land* suppliers traditionally draw most of their electricity requirements from Verbund, apart from what they produce themselves, does suggest a geographic market confined to Austria, as does the fact that significant volumes are also

⁽³³⁾ It is of less importance here whether these pools of small electricity consumers should already be classified in the lower segment of the large customer market or still in the small customer market. Internal documents of the parties suggest that the parties are trying to keep these customers associated with the market for small customers.

supplied between *Land* corporations. Only since liberalisation have foreign suppliers and electricity traders come into the picture as sources of electricity. Individual *Land* suppliers have argued that, because of the volumes of electricity required, the low prices in Austria and the need for a high proportion of hydroelectric power, they are very much dependent on supplies from Verbund in order to continue delivering power to small customers.

(100) On the other hand, there are signs of a geographic market extending beyond Austria. The parties have submitted that in 2002 the regional suppliers that were members of EnergieAllianz received [$>60\%$]* of their supplies from non-Austrian sources. Only around [$<30\%$]* of EnergieAllianz's requirements for bought-in electricity came from Verbund, while [$<15\%$]* came from other Austrian suppliers. Given that EnergieAllianz makes only relatively small purchases on the trading market, it can be assumed that a major share of the electricity it delivers to customers but does not produce itself comes from foreign suppliers. The Austrian regional distributors also draw a significant proportion of their electricity supplies from non-Austrian suppliers. This is particularly true of Tiwag and VKW, whose supply areas technically belong to the German control block and which traditionally obtain considerable amounts of electricity from Germany.

(101) Nevertheless, the question of the geographic market in the supply to regional distributors can be left open, as even if this market were confined to Austria, the proposed merger would not create or strengthen a dominant position on that market.

3. A conceivable geographic market in the provision of balancing energy would be confined to the eastern control area

(102) If the provision of balancing energy is taken to be a relevant product market, that market is geographically confined to the particular control area. Under the rules that govern European transmission grids, balancing energy can be provided in Austria only inside a control area. The minute reserve component in balancing energy, which is decisive for purposes of cost, cannot be transmitted over control area borders. Even taking into account the ongoing negotiations on opening up the eastern control area to Germany, this situation is unlikely to change in the short term. In the present case the relevant geographic market would therefore be the eastern control area, for which Verbund is the responsible control area manager.

4. Effects of liberalisation measures

(103) In all probability a new electricity market directive and a Regulation on cross-border energy exchanges will enter into force in the near future⁽³⁴⁾. Some major components in this legislative package are to take effect on 1 July 2004, and other aspects are to take effect by 1 July 2007. The package comprises a series of provisions that can be expected to make market entry by foreign providers considerably easier in the medium term. Most of these provisions are concerned with network access, tougher unbundling measures, and harmonised rules on cross-border transfers of electricity. This aspect is considered in section VIII, as part of the assessment of commitments.

D. Effect of the merger

1. The merger would create a dominant position on the market in supply to large customers and small distributors

(104) The proposed merger would place the firms concerned in a dominant position on the market or markets in the supply of electricity to large customers and small distributors in Austria.

(105) The Court of Justice of the European Communities has defined a dominant position as a position of economic strength enjoyed by an undertaking which enables it to

⁽³⁴⁾ Common Position (EC) No 5/2003 of 3 February 2003 adopted by the Council, acting in accordance with the procedure referred to in Article 251 of the Treaty establishing the European Community, with a view to adopting a directive of the European Parliament and of the Council concerning common rules for the internal market in electricity and repealing Directive 96/92/EC (OJ C 50 E, 4.3.2003, p. 15); and, most recently, European Parliament legislative resolution on the Council common position for adopting a European Parliament and Council directive on common rules for the internal market in electricity and repealing Directive 96/92/EC (15528/2/2002 – C5-0034/2003 – 2001/0077(COD)), 4.6.2003 (P5_TA-PROV(2003)0242). Common Position (EC) No 4/2003 of 3 February 2003 adopted by the Council, acting in accordance with the procedure referred to in Article 251 of the Treaty establishing the European Community, with a view to adopting a regulation of the European Parliament and of the Council on conditions for access to the network for cross-border exchanges in electricity (OJ C 50 E, 4.3.2003, p. 1); and, most recently, European Parliament legislative resolution on the Council common position for adopting a European Parliament and Council regulation on conditions for access to the network for cross-border exchanges in electricity (15527/2/2002 – C5-0036/2003 – 2001/0078(COD)), 4.6.2003 (P5_TA-PROV(2003)0244).

prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of consumers. Such a position does not preclude some competition, but enables the undertaking which profits by it, if not to determine, at least to have an appreciable influence on the conditions under which that competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment.

- (106) The existence of a dominant position may derive from several factors which, taken separately, are not necessarily determinative, but, among these factors, a highly important one is the existence of very large market shares. In addition, the relationship between the market shares of the undertakings involved in the concentration and their competitors, especially those of the next largest, is relevant evidence of the existence of a dominant position ⁽³⁵⁾.

- (a) The merger would give
Verbund/EnergieAllianz a very high
combined market share

- (107) The merger would result in very high combined market share for the firms involved, which, according to the case-law of the Court of Justice, is itself an indication of a dominant position ⁽³⁶⁾.

- (108) The structure of the market in supply to large customers is shown in the following table:

Table 2

Electricity sales to special customers 2001

Supplier	Supply (GWh)	Market share
Verbund	[1 500-3 500]*	[5-15]*
Bewag	[0-2 000]*	[0-10]*
Energie AG OÖ	[1 500-3 500]*	[5-15]*
EVN	[1 500-3 500]*	[5-15]*
Linz Strom AG	[0-2 000]*	[0-10]*

Supplier	Supply (GWh)	Market share
Wienstrom	[3 500-7 000]*	[15-25]*
Total EnergieAllianz	[10 500-13 000]*	[45-55]*
Steweag-Steg	[1 500-3 500]*	[5-15]*
Kelag	[0-2 000]*	[0-10]*
Salzburg AG	[0-2 000]*	[0-10]*
Tiwag	[0-2 000]*	[0-10]*
VIW/VKW	[0-2 000]*	[0-10]*
Other	[0-2 000]*	[0-10]*
Total	24 900	100,0

Source: Information from Verbund in response to request for information of 28 February 2003.

- (109) Verbund's share of the market in supply to large customers in 2001 was [5 to 15 %]*. The market share of the companies belonging to EnergieAllianz was [45 to 55 %]*. The direct combined market share of the parties to the merger was therefore [55 to 65 %]*. In addition, Steweag-Steg, which is jointly controlled by Verbund and Estag, achieved a market share of [5 to 15 %]*. All remaining competitors have market shares of less than 10 % ⁽³⁷⁾.

- (110) The Commission's investigations have established that the structure of the market in supply to small distributors is as follows:

Table 3

Electricity sales to small distributors

(in %)

	2000	2001	2002
Verbund	0-5	0-5	5-10
EnergieAllianz	40-50	30-40	30-40
Parties combined	40-55	30-45	35-50
Steweag-Steg	30-40	30-40	20-30
Salzburg AG	0-5	0-5	0-5
Kelag	0-5	0-5	0-5
Atel	0	0-5	0-5
Tiwag	10-15	15-20	15-20
	100	100	100

Source: Commission's market investigation (data from the parties and competitors). In order to avoid revealing any business secrets, only ranges are given.

⁽³⁵⁾ Court of Justice in Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461, paragraph 39; see also Court of First Instance in Case T-102/96 *Gencor v Commission* [1999] ECR II-753, paragraphs 201 and 202.

⁽³⁶⁾ *Hoffmann-La Roche* (see footnote 35), paragraph 39.

⁽³⁷⁾ On market shares in 2002, see recital 122.

- (111) In 2002, Verbund and EnergieAllianz had market shares of between 35 % and 50 %. Stewag-Steg's share was 20 to 30 %. The merged entity, including Stewag-Steg (jointly controlled by Verbund), would therefore have a market share of 70 to 80 %. Its remaining competitors, with one exception, have market shares of less than 5 % ⁽³⁸⁾.
- (112) Besides the parties, the remaining competitors in both of the markets affected are basically the *Land* corporations Salzburg AG, Kelag, Tiwag and VKW. The gap between their market shares and those of Verbund/EnergieAllianz will not be significantly narrowed in the foreseeable future. Moreover, the parties to the merger have holdings in two of their remaining competitors. As already mentioned, Verbund has a minority shareholding in Kelag, which is jointly controlled by the *Land* of Carinthia and RWE. Besides the *Land* and the City of Salzburg, Energie OÖ has a 26,13 % share in Salzburg AG. Energie OÖ's shareholding carries participation rights conferred by the articles of association, relating in particular to the appointment of the managing board and major energy transactions, which go beyond the statutory rights of a minority shareholder ⁽³⁹⁾.
- (113) Since the parties, with Stewag-Steg, have similar shares of the markets for both small distributors and large customers (in both cases over 70 %), and since the structure of the competition is similarly fragmented on both markets, the same applies if we assume only one market for the supply of large customers and small distributors.
- (b) The parties' pre-eminent position would be secured by their leading position in electricity generation
- (114) The parties' pre-eminent market position is primarily based on their position on the upstream electricity-generation market. Their position on this market has the direct result of increasing barriers to entry on the markets in supply to large customers and small distributors, and increases the risk that existing competitors will be marginalised still further. It is therefore unlikely that the parties' position on the relevant market will be disputed in the foreseeable future.
- (115) Verbund's share in gross electricity generation in Austria in 2001 was around [35 to 45 %]*. Its already pre-eminent position on this market prior to the merger would be considerably strengthened by the addition of EnergieAllianz's capability (some [10 to 20 %]* of generation in Austria), bringing the post-merger combined share of the parties to some [55 to 65 %]* of total electricity generation in Austria.
- (116) Verbund/EnergieAllianz's position would also ensure that they could improve the cost base of generation by closing down unprofitable thermal stations and could cover the generation costs of a considerable block of hydroelectric resources by claiming, depending on the market situation, compensation for stranded costs ⁽⁴⁰⁾.
- (117) Of particular significance in this connection is the parties' position on the market for hydroelectric power generation. In Austria, tariff customers in particular set great store by being supplied with 'clean' electricity, i.e. electricity which has not been generated by nuclear power and which to a large extent comes from local hydroelectric sources. In addition, electricity from hydroelectric sources is cheap to generate, especially where the power stations concerned have been written off ⁽⁴¹⁾.
- (118) This dependence of their competitors on the parties to the merger applies particularly to small local distributors, which often — despite the possibility of through-transmission — in practice cannot, for lack of their own resources, take part in the wholesale market and thus depend on Verbund/EnergieAllianz for their electricity supply. Numerous small private and municipal power utilities stated, in the course of the Commission's investigation, that their suppliers, with which they competed for delivery to large customers, supplied industrial and commercial customers at cheaper prices and on better terms than themselves.
- (c) The costs of balancing energy place the remaining competitors at a disadvantage vis-à-vis Verbund/EnergieAllianz and at the same time constitute a barrier to entry for new competitors
- (119) The Commission's investigations have shown that the risk of facing unplanned costs for balancing energy is greater for smaller market players than for large ones. This was the line taken by a majority of the competitors which provided the Commission with comments on the subject. Many of them consider balancing energy to be a

⁽³⁸⁾ Tiwag's market share falls to below 15 % if supply to the Innsbruck municipal plants, which are affiliated with Tiwag, is left out. At the same time, the combined market share of the parties would increase by a number of percentage points.

⁽³⁹⁾ Reply from Salzburg AG dated 27 February 2003 to a request for information from the Commission.

⁽⁴⁰⁾ See footnote 32.

⁽⁴¹⁾ See recital 82.

significant factor in the minimum size required for a new competitor to enter the market. The merger will make it even easier for the parties to achieve cost benefits through the coordination of their balancing energy costs and the fact that these costs will be easier to plan. The impossibility for remaining and new competitors to derive similar benefits from their size will help to marginalise remaining competitors even further and make market entry more difficult ⁽⁴²⁾. The merger will therefore raise the threshold for entering the markets in supply to large customers and small distributors, which is already high for small companies and new entrants given the difficulty of planning balancing energy costs.

- (120) This effect would be heightened by the parties' pre-eminent position in the provision of balancing energy. Verbund and EnergieAllianz are the largest suppliers in this area, with a combined market share, depending on the supply period, of between 60 % and 90 %.

(d) The merger would eliminate Verbund as a current and potential competitor and would thus remove a major competitive force in Austria

- (121) Following the merger, Verbund would cease to compete to attract customers, and will disappear as a current and potential competitive force. Following the liberalisation of the Austrian electricity market, Verbund, as the largest electricity generator, was the most important and active new entrant on the markets in supply to large customers and distributors.

- (122) Thus, it was able (without Stewag-Steg) to increase its share of the large-customer market from [5 to 15 %]* to [10 to 20 %]* between 2000 and 2002. On this market, it is by far the biggest competitor with EnergieAllianz, which increased its market share in the same period [by 0 to 5 %]*. One other company, EnBW, was able to

increase its market share, but still by significantly less than the parties.

- (123) The same is true of the market in supply to small distributors. Enquiries made by the Commission of small private and municipal power utilities in the course of its investigation revealed that, when power procurement contracts were put out to tender after liberalisation, in many cases competition for the contract was between EnergieAllianz and Verbund. The previous supplier (regional supplier) was often in a privileged position in these negotiations owing to the regional customer loyalty of the municipal utilities, and it frequently obtained the contract. This underlines the strong position of the regional suppliers in this respect.

- (124) As a result of the merger, therefore, Verbund would disappear as a competitive force from the market for large customers and the market in supply to small distributors. On both markets, Verbund was the biggest challenger to the already very strong position of EnergieAllianz. Given the combined pre-eminent position of Verbund/EnergieAllianz, therefore, the ensuing market structure is likely to be consolidated. The impact of the legislation discussed in recital 103 cannot be expected with sufficient certainty to counter such consolidation within a sufficiently short time.

(e) Conclusion

- (125) The merger would combine the existing generation and sales activities of Verbund and EnergieAllianz into a single economic entity, which would hold a pre-eminent market position compared with its remaining competitors. Verbund would be eliminated as a current and potential competitor, although prior to the merger it was a major competitive force in the only very recently liberalised Austrian electricity market. This would considerably worsen the structure of competition, and decidedly reduce alternatives for large customers and small distributors. The merger would thus create a dominant position on the Austrian markets in supply to large customers and smaller distributors.

2. The merger would strengthen a dominant position on the market in supply to small customers

- (126) The merger is likely to strengthen EnergieAllianz's dominant position on the market in the supply of electricity to small customers (households and small businesses) in Austria.

⁽⁴²⁾ This follows from the statistical fact that within the large-customer market the balancing energy risk — and with it the balancing energy cost risk — falls as the size of the balance group increases. Likewise, the parties' argument that very small balance groups had lower balancing energy costs, since they did not reach the threshold of energy deviation that triggered the minute reserve, is not convincing, at least as far as the large-customer market is concerned. This is because in the large-customer sector even a few customers can purchase significant amounts of energy.

- (a) Even before the merger, EnergieAllianz already has a dominant position on the market in the supply of electricity to small customers

- (127) The market in supply to small customers is structured as follows:

Table 4

Electricity supply to Austrian tariff customers in 2001

Supplier	Supply (GWh)	Market share
Verbund	[0]*	[0]*
BEWAG	[0-2 000]*	[0-10]*
Energie AG OÖ	[1 000-3 000]*	[5-15]*
EVN	[2 000-4 000]*	[10-20]*
Linz Strom AG	[0-2 000]*	[0-10]*
Wienstrom	[3 500-5 500]*	[15-25]*
Total EnergieAllianz	[10 000-12 500]*	[45-55]*
STEWAG-STEG	[0-2 000]*	[0-10]*
KELAG	[0-2 000]*	[0-10]*
Salzburg AG	[0-2 000]*	[0-10]*
TIWAG	[0-2 000]*	[0-10]*
VIW/VKW	[0-2 000]*	[0-10]*
Others	[3 000-5 500]*	[15-25]*
Total direct supply	22 992	100

Source: Information provided by Verbund in response to request for information of 28 February 2003

- (128) So, EnergieAllianz alone already has a market share of [45 to 55 %]*, which is sufficient reason to suspect the existence of a dominant position. That share is approximately eight times the market share of EnergieAllianz's nearest competitors Stewag-Steg and Kelag. A large proportion of the market ([15 to 25 %]*) is divided between numerous small and very small private or municipal distributors. The traditional supply area of the firms in EnergieAllianz, on the other hand, covers most of Austria.

- (129) Given the reluctance of Austrian final consumers to switch supplier, it is unlikely that this market situation will change much in the short to medium term. Only 1,9 % of small customers in Austria changed their

electricity supplier in the first 12 months after liberalisation⁽⁴³⁾. Switching rates collected by EnergieAllianz over a period of 14 months give a very similar figure⁽⁴⁴⁾. What is noticeable is that a significant proportion (between 20 % and 30 %) of these customers switched between suppliers within EnergieAllianz, and that consequently EnergieAllianz as a whole showed a switching rate that was below average. EnergieAllianz pursues a dual-brand strategy, whereby supply from the respective regional supplier belonging to EnergieAllianz is supplemented by a cheaper supplier from EnergieAllianz, Switch, in order to retain price-sensitive customers likely to be lost to new suppliers. Internal documents from EnergieAllianz show that only Switch positioned itself in price terms in relation to the new suppliers. It was therefore possible for EnergieAllianz to behave to an appreciable extent independently of its competitors and customers.

- (130) An overall assessment of these factors shows that, prior to the merger, EnergieAllianz already has a dominant position on the small-customers market.

(b) The merger would increase EnergieAllianz's already very high market share

- (131) Although Verbund's current share of the small-customer market is small, Stewag-Steg, which is jointly controlled by Verbund, has a [0 to 10 %]* market share. With Stewag-Steg, Verbund/EnergieAllianz's market share would come to [50 to 60 %]* and thus to approximately 10 times the market share of the nearest remaining competitor. Given the existing market structure, this addition of market share is strong evidence that the merger would strengthen a dominant position.

(c) The merger would eliminate Verbund as a current and potential competitor and thus a significant force for competition on the household customers market in Austria

- (132) A majority of household customers who have switched supplier since the start of liberalisation switched to a company in which Verbund had an interest, namely MyElectric or Unsere Wasserkraft (formerly RWA

⁽⁴³⁾ Figure based on amounts purchased; 0,8 % of households and 3 % of other tariff customers. E-Control, Annual Report 2002, p. 70.

⁽⁴⁴⁾ Annex 10 to EnergieAllianz's reply to the Commission's request for information of 28 February 2003. The data for WienEnergie have not been included, because the reply was incomplete in this respect.

Wasserkraft). More than [35 to 45 %]* of all customers who switched from the largest EnergieAllianz suppliers, EVN and Wienstrom, switched to one of these two companies. According to figures from EnergieAllianz, as much as [75 to 85 %]* of small customers formerly supplied by EnergieAllianz switched between July 2002 and March 2003 to MyElectric or Unsere Wasserkraft. While Verbund has reduced its share in Unsere Wasserkraft and while, as is clear from internal documents ⁽⁴⁵⁾, this was done in connection with the merger, this does not change the fact that, through its holdings, Verbund is still a challenger to EnergieAllianz on a market in which switching rates are still low. Further evidence of this is the fact that a significant proportion (more than [20 to 25 %]*) of those switching from EnergieAllianz switched directly to Verbund ⁽⁴⁶⁾.

(d) Existing links between Verbund/EnergieAllianz and their competitors, their position on neighbouring markets and specific barriers to entering the small customers market also contribute to strengthening their dominant position

(133) In addition to the links between Verbund/EnergieAllianz and their competitors already described in relation to the markets for large customers and small distributors, a further factor in supply to small customers is that such customers are often interested in being supplied with electricity and gas at the same time. For many customers who purchase both sources of energy, the annual costs of gas exceed those of electrical energy. Numerous suppliers of small customers, especially municipal utilities, are therefore active in both areas (multi-utilities).

(134) EnergieAllianz has a very strong position in natural gas in Austria as a supplier of gas to final consumers and as a gas wholesaler, the latter through a joint venture with OMV, Eongas, and a joint venture that its partner EVN

has with E.On. This also makes market entry and expansion more difficult for rival suppliers on the market in the supply of electricity to households, either because they themselves do not supply gas or because they depend on Eongas for their gas supply ⁽⁴⁷⁾.

(135) The barriers to entering the market in supply to small customers are high. This is because of the reluctance of small customers to switch supplier and the relatively high costs of advertising and other measures to attract and support customers. In this area, it is also necessary to invest considerable sums in building up brands. Suppliers without sufficient access to hydroelectric resources or similar 'ecological' energy are at a serious disadvantage in Austria.

(136) Generally, municipal utilities depend on supply in the form of what is known as 'full supply'. In addition to various technical and administrative services, full supply includes the supply of balancing energy. This increases the municipal utilities' dependence on the parties, who are large providers of such services.

(e) Conclusion

(137) The merger would strengthen and secure EnergieAllianz's existing pre-eminent position on the small customer market (or markets) by removing Verbund as a competitive force. It would thus strengthen a dominant position on the market in the supply of electricity to small customers in Austria.

3. *The merger would not create a dominant position on a supposed Austrian market in supply to regional suppliers*

(138) For the following reasons, the merger would not create a dominant position for the parties on a supposed Austrian market in supply to Austrian regional suppliers.

(139) Unlike small distributors and large customers, the Austrian regional suppliers can already buy to a significant extent from foreign companies. Unlike the former, they can more easily increase such purchases because they have their own energy purchase

⁽⁴⁵⁾ Verbund-Austrian Power Vertriebs GmbH (HGB) shareholders' committee, seventh meeting, 28 November 2002, agenda, item 3.

⁽⁴⁶⁾ Annex 10 to EnergieAllianz's reply to the Commission's request for information dated 28 February 2003. The data for WienEnergie have not been included, because the reply was incomplete in this respect. Switching rates submitted by EnergieAllianz at the hearing show that in the nine months between July 2002 and March 2003 it was Verbund which gained most small customers (network level 7) switching from EnergieAllianz, after MyElectric and Unsere Wasserkraft. Its percentage share of customers switching from EnergieAllianz fell in this period to some [$<15\%$]*, which is unsurprising in the light of the planned merger.

⁽⁴⁷⁾ Planned cooperation between Ruhrgas AG and Salzburg AG with a view to supplying final consumers on a multi-utility basis has not been realised to date. If such cooperation had come about, Ruhrgas AG would ultimately have been competing with of EVN, the EnergieAllianz member linked with E.On.

management and can thus purchase energy from suppliers which do not have their own sales set-up in Austria. It can therefore be expected that supply is sufficient for Austrian regional suppliers. As regards the *Land* corporations in the Tyrol and Vorarlberg, Tiwag and VKW, their supply areas form part of the German control block and they have therefore developed supply links with Germany over time which differ significantly from import business in a liberalised cross-border electricity market. In the eastern control area, Steweag-Steg has long-term supply contracts with its parent firm, Verbund. This would leave, after the merger, only the regional suppliers of Salzburg and Carinthia, Salzburg AG and Kelag as customers in the market for the supply of Austrian regional suppliers. It is expected that there would be sufficient potential competition for the supply of these two corporations.

- (140) Furthermore, all Austrian regional suppliers which are independent of the parties to the merger have a degree of self-generation capability, especially from hydroelectric resources ⁽⁴⁸⁾. Since hydroelectric supply is not a relevant purchase criterion for all customers (this applies to most industrial customers) and since hydroelectric power may at least to a limited extent be purchased outside Austria, the Austrian regional suppliers are not dependent on hydroelectric supply from Verbund ⁽⁴⁹⁾.
- (141) In summary, the results of the Commission's investigations have not produced sufficient evidence to conclude that the merger would create a dominant position on an Austrian market in supply to regional suppliers.

VII. COMMITMENTS ENTERED INTO BY THE NOTIFYING PARTIES

- (142) In order to overcome the competition concerns identified by the Commission, the notifying parties have submitted the commitments described below, the full text of which is set out in the Annex to this Decision.

- (143) Verbund undertakes:

- (a) to sell its 55 % holding in APC to an independent third party, to be approved by the Commission,

⁽⁴⁸⁾ See Table 1 in recital 20.

⁽⁴⁹⁾ It can also be presumed that the legislation discussed in recital 103 will make it easier to supply Austrian regional suppliers from abroad.

before the notified merger takes place;

- (b) to transfer existing contracts with final consumers, and any such contracts concluded prior to the transfer, held by APC in the name and for the account of Verbund, before the sale of its holding in APC;
- (c) to sell its 20 % holdings in MyElectric and Unsere Wasserkraft;
- (d) to refrain from exercising the voting rights deriving from its holding in Steweag-Steg until [...]*, wherever its vote could influence the competitive behaviour of the undertaking, particularly with regard to pricing and products, distribution and procurement, and to withdraw its members indefinitely from the Steering Committee that develops distribution policy for Verbund/APC and Steweag-Steg;
- (e) to remedy all the problems regarding the Austrian domestic grid (380-kV Styria line and if necessary the Salzburg line) and to develop the interconnectors to Italy and Slovenia as soon as the authorities have given the necessary authorisation and approval.
- (144) Energie OÖ undertakes to transfer to an independent trustee to be approved by the Commission the rights deriving from its holding in Salzburg AG (apart from its right to dividends) and the rights deriving from the shareholder agreement concluded with the *Land* and City of Salzburg, by [...]*.

- (145) Verbund and EnergieAllianz undertake:

- (a) to ensure that APT offers APC an electricity supply contract with a duration of at least four years in the first place, under the terms of which APC will be able to take 3 TWh of electricity per year in the form of more precisely described structured supplies, at the prices at which Verbund supplies the new E & S; the contract may be terminated after four years if requested and if the Commission concludes that at that time there are enough other sources;
- (b) to make available through APT 450 GWh of electricity per year, of which at least 50 % will derive from hydroelectric plants, satisfying the characteristics of the standard load profile, for

auction in lots of 20 to 40 GWh, to be supplied to Austria's high-voltage grid until 30 June 2008 under more precisely specified conditions for the supply of final consumers;

- (c) to implement measures described in greater detail regarding the provision of balancing energy; these primarily concern efforts to open up the eastern control area towards the Tyrol and Germany, an offer to Kelag to dissolve the storage partnership between Kelag and Verbund at no additional cost, and for a transitional period [pricing provisions for]* balancing energy provided by Verbund/EnergieAllianz as the market maker;
- (d) to allow customers who now find themselves with the new E & S a unilateral right to terminate their electricity supply contracts early, at a date six months following the conclusion of the merger, as long as they give three months' notice, and to ensure that in the first two years after it has started operating the new E & S offers its customers one-year electricity supply contracts;
- (e) to implement as quickly and comprehensively as possible the provisions regarding unbundling that will be enacted within the framework of Austria's implementation of the revised Electricity Market Directive.

VIII. APPRAISAL OF THE NOTIFIED OPERATION PURSUANT TO ARTICLE 2 OF THE MERGER REGULATION IN THE LIGHT OF THE COMMITMENTS ENTERED INTO

- (146) The commitments set out in recitals 143 to 145 will overcome the competition concerns regarding the Austrian markets for the supply of electricity to small distributors and large and small customers.

A. APC

- (147) The commitment to divest Verbund's controlling majority share in APC prevents the accumulation of the Verbund and EnergieAllianz shares of the market for supply to large customers that would have resulted from the merger. APC is responsible for all of Verbund's distribution activities in this field. The undertaking has all the necessary human and material resources, including know-how, a target group list, an e-commerce platform, back office and systems management to enable the purchaser to enter the market for large customers immediately. All of APC's existing customer relations

will be transferred to the purchaser; this represents a market share of over [5 to 15 %]* in terms of large customers. The purchaser must be an independent third party that can guarantee that APC will grow and continue to compete actively with the parties and other competitors in the large customer and distributor market.

- (148) The commitment to conclude a long-term contract with APC providing for the structured supply of 3 TWh/year on specified conditions will place APC in the same position with respect to that amount as the parties' own big-customer company E & S. The amount of power referred to in the commitment covers the bulk of what APC has been taking from Verbund/APT. This removes the electricity supply risk to APC's buyer, and the need for the buyer to structure the electricity supply itself. The commitment is therefore likely in the short term either to facilitate the entry of a buyer into the Austrian market, or to make it possible for a buyer substantially to expand its Austrian business. The buyer would be enabled to offer effective competition to the parties after the concentration, and effectively to restrict their market power. This commitment will last for four years in the first place. It may be extended if there are not enough alternative sources of supply available to buyers at the end of that time.

B. Steweag-Steg

- (149) Verbund's commitment to refrain from exercising its controlling rights in Steweag-Steg with regard to decisions concerning competition until [...] (50) neutralises existing structural links between Verbund and Steweag-Steg for a transitional period. This will have the effect that at least during this period Steweag-Steg's market share will not further reinforce the market position of the merged Verbund/EnergieAllianz.

C. Unsere Wasserkraft and MyElectric

- (150) Verbund's commitment to divest its minority holding in Unsere Wasserkraft and MyElectric will mean that these undertakings will be unaffected by any influence and financial interest on behalf of the merged entity and will be able to compete with it on the market to supply power to small customers. Unsere Wasserkraft and MyElectric have majority holdings in Estag and Salzburg AG respectively, which will be two of the most important remaining Austrian competitors for the

(50) This period is to be seen against the background of the legislation discussed in recital 103.

merged undertaking Verbund/EnergieAllianz. These have been the two companies most successful at attracting small customers since liberalisation and through them Verbund has ventured beyond Stewag-Steg's traditional supply market to operate on the small customer market. The Commission takes note of this commitment, without making it a condition or an obligation. The consortium agreement between Verbund and EnergieAllianz requires Verbund to divest these holdings in their entirety.

D. Salzburg AG

- (151) Obliging Energie OÖ to transfer the rights deriving from its minority holding in Salzburg AG to a trustee by the end of December 2007 ⁽⁵¹⁾ will ensure that at least for the foreseeable future there will be no danger that Energie OÖ's current rights to exert influence and obtain information might reduce the capacity of Salzburg AG to compete actively with the new merged undertaking. During a transitional period this commitment will help to ensure that the parties do not influence the competitive behaviour of Salzburg AG in its dealings with large customers.

E. Liquidity

- (152) The commitment to make available to third parties through auctions an annual supply of 450 GWh, of which at least 50 % derives from hydroelectric plants, thereby satisfying the characteristics of the standard load profile, in quantities suitable for the supply of small customers ensures that new competitors entering the market for the supply of small customers now and in the future will have access to additional capacity for power generated in Austria. Moreover, they will be able to supply any customers requesting hydroelectric power. This commitment will increase the liquidity available to facilitate new entries and the expansion of existing market shares by undertakings competing with the parties to the merger. Unsere Wasserkraft and MyElectric, who are already competing with the parties in the small customers market, will likewise be enabled to expand their market shares and to safeguard their supplies of power ⁽⁵²⁾.

F. Balancing energy

- (153) The commitments to make balancing energy available will ease access to balancing energy for third-party suppliers on electricity markets, particularly for new entrants. Kelag's position as an alternative supplier of

balancing energy in the eastern control area is strengthened by the possibility of being able to end the current storage cooperation arrangements with Verbund economically. At the same time, the price cap imposed on the balancing energy supplied by Verbund/EnergieAllianz during the period of transition until there is full competition on Austrian power-supply markets will limit the cost risk to potential customers for balancing energy. Furthermore, the opening-up of the eastern control area towards the Tyrol and Germany, which the notifying parties have undertaken to help bring about, will ensure more competition regarding the supply of balancing energy in the medium and long term.

- (154) The commitments relating to balancing energy were agreed between the notifying parties and the Austrian regulator E-Control. The plan is for E-Control to monitor fulfilment of the commitments as the Commission's trustee. E-Control has told the Commission that these commitments will suffice to solve the competition problems detected relating to balancing energy.

- (155) Improved access to balancing energy in the eastern control area, particularly for new entrants onto the market, will overcome or reduce what the Commission investigations revealed to be a key obstacle to entry onto the market. This will enable potential competitors in and outside Austria to enter Austria's electricity markets and compete with Verbund/EnergieAllianz.

G. Further commitments

- (156) The other commitments entered into by the notifying parties regarding the improvements to the Austrian domestic grid, the interconnectors to Italy and Slovenia, special rights to terminate contracts granted to Verbund's large customers who now find themselves with the new E & S and quicker implementation of the unbundling provisions contained in the amended Electricity Market Directive do not in themselves alter the structure of the competitive conditions brought about by the merger. Moreover, the implementation of some of them does not depend solely on the wishes of the parties, as it may require the involvement of third parties (approval by the authorities, the agreement of foreign transmission system operators and implementation by the appropriate Austria authorities of the Electricity Market Directive) or simply relate to the fulfilment of (future) legal obligations. However, they contribute to the gradual removal of current obstacles preventing entry onto the market and integrating Austrian electricity markets in relevant geographical markets stretching beyond national borders in the

⁽⁵¹⁾ This period is to be seen against the background of the legislation discussed in recital 103.

⁽⁵²⁾ This period is to be seen against the background of the legislation discussed in recital 103.

medium to long term. In this way, these commitments entered into regarding behaviour may help to ensure that the other obligations set out above, particularly those of a structural nature, succeed in fully restoring effective competition. Although they will not be made conditions attached to the exemption decision, they will help to ensure that the remedy package contributes to the real removal of the competition concerns noted.

H. Summary appraisal of the commitments

(157) The divestiture of Verbund's holdings in APC goes most of the way towards removing the market-share overlaps between Verbund and EnergieAllianz on the market for the supply of large final consumers. Selling APC to an independent third party creates the opportunity for a newcomer, e.g. a major power-supply company currently operating outside Austria, to enter and compete actively on the Austrian market for large customers. The parties have undertaken not to implement the merger before a Commission-approved disposal of APC has taken place, so that full implementation of this commitment is guaranteed. During the period from the opening up of the market and until full liberalisation⁽⁵³⁾ the positions of Stewag-Steg and Salzburg AG as competitors will be strengthened by the temporary freezing of their involvement with Verbund and Energie OÖ respectively. The vertical impact of the combination of Verbund's dominant power-generating capacity and EnergieAllianz's position as the leading electricity supplier in Austria will be offset at least in part by the fact that sufficient liquidity will be made available on competitive terms to APC and the suppliers competing on the market for small customers. The measures to improve access to balancing energy and the opening of Austrian markets to outside competition in the medium term will also help to overcome obstacles to access to the markets and to increase competition in the markets concerned. Were any competition concerns to arise relating to a conceivable market to the supply of regional distributors, they would be overcome by the remedies.

(158) The overall package of remedies submitted by the notifying parties and other commitments will therefore ensure that the notified merger does not create a dominant position on the markets for the supply of electricity to small distributors and large final consumers, nor will it strengthen the dominant position of EnergieAllianz on the market for the supply of electricity to small customers in Austria⁽⁵⁴⁾.

IX. CONDITIONS AND OBLIGATIONS

(159) The first sentence of the second paragraph of Article 8(2) of the Merger Regulation states that the Commission may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with the common market.

(160) Measures that effect a structural change to the market are to be imposed in the form of 'conditions'; implementing steps necessary to achieve this result are to take the form of 'obligations'. If a condition is not fulfilled, the Commission decision declaring the concentration compatible with the common market is null and void. Where the undertakings concerned commit a breach of an obligation, Article 8(5)(b) of the Merger Regulation empowers the Commission to revoke a clearance decision; Article 14(2)(a) and Article 15(2)(a) of the Merger Regulation empower it to impose fines or periodic penalties on the parties⁽⁵⁵⁾.

(161) In line with this fundamental distinction, the Commission should make it a condition of its decision that the parties comply in full with the commitments by which they undertake:

- (a) to sell their shares in APC to a third party approved by the Commission, to ensure that APT offers APC an electricity supply contract entitling APC to take 3 TWh a year, and to refrain from implementing the notified transaction until the sale of the shares in APC is effective (Annex⁽⁵⁶⁾, point A.1);
- (b) to make available through APT 450 GWh of electricity for auction each year until 30 June 2008, to be supplied to the Austrian high-voltage grid (Annex, point C);
- (c) not to implement the concentration before the necessary authorisations have been obtained (Annex, end).

(162) These commitments are intended to effect a structural change to the market. Of the other commitments, the details of the continued operation of APC, the terms of APC's electricity supply contract, the non-exercise of voting rights in Stewag-Steg, the transfer to a trustee of the shareholder's rights in Salzburg AG, the terms of the auction of electricity, the measures to ensure competition on the market in balancing energy and the grant of a unilateral right to early termination of the electricity supply contracts of large customers who now

⁽⁵³⁾ See recital 103.

⁽⁵⁴⁾ Remedies Notice, recital 30.

⁽⁵⁵⁾ Remedies Notice, recital 12.

⁽⁵⁶⁾ See footnote 8.

find themselves with the new E & S should be made the subject of obligations. Essentially they serve to ensure that the conditions already mentioned have the desired effect on competition, or that they are put into effect as planned.

X. CONCLUSION

- (163) For these reasons, provided the commitments entered into by the notifying parties are fully complied with, it can be accepted that the concentration does not create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it. Subject to full compliance with the commitments set out in the Annex, therefore, the concentration should be declared compatible with the common market and the EEA Agreement pursuant to Articles 2(2) and 8(2) of the Merger Regulation and Article 57 of the EEA Agreement,

HAS ADOPTED THIS DECISION:

Article 1

The notified concentration by which Österreichische Elektrizitätswirtschafts-Aktiengesellschaft, EVN AG, Wien Energie GmbH, Energie AG Oberösterreich, Burgenländische Elektrizitätswirtschafts-Aktiengesellschaft and Linz AG für Energie, Telekommunikation, Verkehr und Kommunale Dienste acquire joint control, within the meaning of Article 3(1)(b) of the Merger Regulation, of the undertakings E & S GmbH and Verbund Austrian Power Trading AG is hereby declared compatible with the common market and the EEA Agreement.

Article 2

Article 1 shall apply subject to the condition that the commitments entered into by the undertakings referred to in Article 1 and set out in point A1, clauses 1, 4 and 6, point C, clause 1, and the last sentence on page 6 of the Annex are complied with in full.

Article 3

This Decision is subject to the obligation that the other commitments entered into by the undertakings referred to in Article 1 and set out in the Annex, with the exception of points A2, A3, B and F, must be complied with in full.

Article 4

This Decision is addressed to:

Burgenländische Elektrizitätswirtschafts-AG
Kasernenstraße 9
A-7000 Eisenstadt

Energie AG Oberösterreich
Böhmerwaldstraße 3
A-4021 Linz

EVN AG
EVN Platz
A-2344 Maria Enzersdorf

Linz AG für Energie, Telekommunikation,
Verkehr und Kommunale Dienste
Fichtenstr. 7
A-4021 Linz

Österreichische Elektrizitätswirtschafts-AG
Am Hof 6a
A-1010 Vienna

Wien Energie GmbH
Schottenring 30
A-1010 Vienna

Done at Brussels, 11 June 2003.

For the Commission

Mario MONTI

Member of the Commission

ANNEX

The full original text of the conditions and obligations referred to in Articles 2 and 3 may be consulted on the following Commission website:

http://europa.eu.int/comm/competition/index_en.html
