EN

Case No COMP/M.5754 - ALSTOM HOLDINGS/ AREVA T&D Transmission activities

Only the English text is available and authentic.

REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION
Date: 26/03/2010

In electronic form on the EUR-Lex website under document number 32010M5754

Office for Publications of the European Union
L-2985 Luxembourg

EUROPEAN COMMISSION

Brussels, 26.3.2010
SG-Greffe(2010) D/4417
C(2010) 2148

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 Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying party:

Dear Sir/Madam,

Subject: **Case No COMP/M.5754 - ALSTOM HOLDINGS/ AREVA T&D Transmission activities**
Notification of 23.02.2010 pursuant to Article 4 of Council Regulation No139/2004

1. On 23 February 2010, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004[1] (the "EC Merger Regulation") by which the undertaking Alstom Holdings ("Alstom", France), controlled by Alstom SA ("Alstom SA", France), acquires within the meaning of Article 3(1)(b) of the EC Merger Regulation sole control of the High Voltage (HV) transmission business and certain assets of the Medium Voltage (MV) distribution business of Areva T&D Holding SA ("Areva T&D", France), controlled by Areva SA ("Areva", France) by way of purchase of shares ("the proposed transaction").

I. THE PARTIES

2. **Alstom** is a worldwide supplier of equipment and services for power generation and rail transport.

3. **Areva T&D** is active in the supply of products and services for the transmission and distribution of electrical power.

---

[1] OJ L 24, 29.1.2004, p 1. With effect from 1 December 2009, Articles 81 and 82 of the EC Treaty have become Articles 101 and, 102, respectively, of the Treaty on the Functioning of the European Union ("TFEU"). The two sets of provisions are, in substance, identical. For the purposes of this Decision, references to Articles 101 and 102 of the TFEU should be understood as references to Articles 81 and 82, respectively, of the EC Treaty where appropriate. The TFEU also introduced certain changes in terminology, such as the replacement of "Community" by "Union" and "common market" by "internal market". The terminology of the TFEU will be used throughout this Decision.

II. THE OPERATION AND THE CONCENTRATION

4. Alstom and Schneider Electric Industries S.A.S. ("Schneider", France) intend to acquire the entire share capital of Areva T&D (the transmission and distribution activities of the undertaking Areva) via an acquisition vehicle ("the SPV") set up by Alstom, which will be co-financed by Alstom and Schneider. Following this acquisition, the bulk of the distribution (MV) activities of Areva T&D will be divested to Schneider. Alstom will retain, via the SPV, the HV transmission business and some assets relating to distribution transformers ([…]). Alstom and Schneider have agreed to complete the division of the activities of Areva T&D between them within a period of 12 months.

5. Therefore, Alstom will acquire sole control of the transmission business and a limited number of other activities of Areva T&D. The parallel transaction by which Schneider would acquire the bulk of the distribution business of Areva T&D was notified on 22 February 2010.

6. It follows that the proposed transaction constitutes a concentration within the meaning of Article 3 (1) (b) of the EC Merger Regulation.

7. The activities of Areva T&D now being sold to Schneider and Alstom were originally part of the Alstom group, which sold them in 2003 to Areva.

III. UNION DIMENSION

8. The Parties' combined worldwide aggregate turnover in 2009 was more than EUR 5 billion (Alstom: EUR 18,739 million; Areva T&D Transmission activities: EUR 3,869 million). Alstom and the Areva T&D Transmission activities achieved each an Union-wide turnover of more than EUR 250 million in 2009 (Alstom: EUR […] million; Areva T&D Transmission activities: EUR […]million). None of the Parties achieved more than two thirds of its Union-wide turnover in any Member State. The proposed transaction therefore has a Union dimension pursuant to Article 1(2) of the EC Merger Regulation.

IV. COMPETITIVE ASSESSMENT

9. There are no horizontal overlaps arising from the transaction; however, the proposed transaction would give rise to a number of vertically affected markets, as shown below. As both the upstream and downstream products are used in various combinations, the competitive assessment that follows first deals with the product and geographic market definitions for the downstream markets where Alstom is currently active and then with upstream products that Alstom will acquire from Areva.

A. Downstream products

RELEVANT PRODUCT MARKETS

Turnkey solutions for gas and steam power plants

10. Generally, equipment for new power plants may be supplied in two ways:

    (a) individual items of equipment for power generation (e.g. turbines, generators, condensers, heat-exchangers) are supplied to large utilities, or independent power producers who integrate those items themselves; or

(b) the customer (a utility company or independent power producer) orders a 'turnkey solution' for a power plant from a general contractor or a general contractor consortium which will either manufacture itself, or sub-contract the manufacture of the equipment; afterwards it will perform the necessary integration and engineering in order to provide the customer with a complete turnkey solution.

11. Alstom purchases certain high voltage and medium voltage products from T&D suppliers, including Areva T&D, for inclusion in its turnkey power plant projects.

12. In case *COMP M.3653-Siemens/VA Tech*, the Commission's market investigation essentially confirmed Siemens' proposed market definition for turnkey gas-and-steam power plants, but ultimately the market definition was left open[2]. The Parties have indicated their agreement with the market definition considered. In *COMP M.3653-Siemens/VA Tech*, a narrower market for large gas turbines with an output of over 60MW was also considered, since turbines were key components for the turnkey projects. However, a large percentage of the respondents considered that steam and gas power plants constituted a relevant product market.

13. In any case, there is no need to conclude whether the market for turnkey solutions for gas and steam power plants could be further delineated, since in the present case a vertical link will only arise with the overall market for turnkey gas and steam projects. Therefore only turnkey solutions will be considered.

Equipment for hydro electric power plants

14. Alstom is active in providing equipment for hydro electric power plants. It purchases certain high voltage and medium voltage products from T&D suppliers, including Areva T&D, for inclusion in these projects.

15. In *COMP M.3653-Siemens/VA Tech*[3] the Commission considered a separate market for the equipping of hydroelectric power plants. In that case the Commission did not segment the market for equipping of hydroelectric power plants further, as from the supply side all the major manufacturers supply both mechanical and electrical components. Furthermore, the Commission did not divide the market for equipping of hydroelectric power plants according to the size class of the power plants because of the lack of a clearly defined dividing line for a possible distinction between size classes. The Parties agree with the market definition found in the Commission's decision.

16. The market investigation in the present case has largely confirmed this product market definition. The Commission therefore considers the relevant product market to be the equipment for hydro electric power plants.

Rail power supply systems

17. In order for an electrified railway to function, electricity must be transferred from the point of generation via the transmission and distribution networks to a train, where it is converted into rotary motion to drive the wheels. Rail power supply systems consist of

---

2 *COMP M.3653-Siemens/VA Tech* (see paragraph. 69).

3 *COMP M.3653-Siemens/VA Tech* (see paragraph 20).

catenary systems, traction power supply, including dispatching and remote control, and train control and protection systems.

18. In *IV/M.580 ABB/Daimler-Benz*, the Commission found that the rail technology markets could be broadly divided into stationary equipment and rolling stock. The stationary equipment was further divided into wayside systems (rail power supply systems) and miscellaneous.

19. Alstom is active in rail power supply systems, which include both catenary systems and traction power supply.

20. The large majority of the respondents in the market investigation have confirmed the above market definitions. However, for the purposes of this decision, there is no need to conclude on the product market definition, since no competition concerns could arise under any alternative market definition. Thus, the product market definition could be left open.

High speed trains and Electrical multiple units (EMUs)

21. Rolling stock generally includes powered parts and non-powered parts.

22. In *COMP/M.2139 – Bombardier/ADtranz* the Commission identified, among others, the following relevant product markets for rolling stock:

    a) high speed trains;
    b) electrical multiple units ("EMUs") for intercity and regional transport; and
    c) locomotives

23. Also in that case, high speed trains (HST) were defined as highly integrated self-propelled units or locomotive-hauled trains which are designed to travel long distances at speeds of more than 250 km/h on conventional tracks. In many cases, however, dedicated tracks are used which allow for very high speed travel (usually between 270 km/h and 300 km/h).[4]

24. Electrical multiple units (EMU) are multiple unit trains consisting of several passenger carriages, using electricity as motive power. No locomotive is used as electric traction motors are incorporated within one or a number of the carriages.

25. The Commission's market investigation has largely confirmed the above market product delineation for this transaction. In the present case, the market for high speed trains and EMUs would be affected markets as both require traction transformers, according to the Parties.

---

[4] COMP/M.2139-Bombardier/Adtranz, par.8.

RELEVANT GEOGRAPHIC MARKETS

Turnkey solutions for gas and steam power plants and equipment for hydro electric power plants

26. In *M.3148-Siemens/Alstom Gas & Steam Turbines*, the Commission considered that the market for turnkey solutions for gas-and-steam power plants was at least EEA wide, but ultimately left the geographic market definition open.

27. In *COMP/M.3653-Siemens/VA Tech*, the Commission considered the market for equipment for hydroelectric power plants to be EEA-wide. However in a later decision[5], the Commission left the market definition open.

28. Alstom considers that the market for both turnkey gas-and-steam power plants and equipment for hydro power plants could be considered worldwide because: (i) the major competitors of Alstom are all active worldwide; (ii) customers (mainly large utilities or independent power producers) source such solutions via competitive tenders which are open to all suppliers; (iii) the reputation and track record of suppliers are more important than geographic location and the historic domestic area of exploitation; (iv) the market is highly competitive and, due to the lumpy nature of demand, suppliers need to be able to participate in a wide range of tenders regardless of location.

29. Concerning turnkey solutions for gas-and-steam power plants, all the respondents to the market investigation in the present case indicated a worldwide scope. However it is not necessary to define the relevant market as no competition concerns arise under either an EEA or a worldwide geographic market definition.

30. A majority of respondents to the market investigation have also indicated a worldwide scope for equipment for hydroelectric power plants.

31. As far as the present transaction is concerned, the definition of the geographic market can be left open as no competition concerns arise under either an EEA or worldwide market delineation.

Rail power supply systems

32. In *COMP/M.3653-Siemens/VA Tech* the Commission considered the markets for catenary systems and traction power supply as national.

33. The Parties argue that the geographic market should be EEA wide for rail power supply systems. To support their claim, they provide the following arguments:

- The construction of high speed freight lines which cross Member States and the corresponding increasing manufacture of trains which can run through different Member States (multi-network trains);
- The existence of various packages of legislation and initiatives such as the European Rail Traffic Management System, the adoption of technical specifications for interoperability of rail networks, and the implementation of multi-country rail projects;

---

5 *COMP.5697-ALSTOM/ALSTOM Hydro Holding*

- Many suppliers of rail power supply compete actively on a European basis although there has not yet been entry into the market by non-European companies,
- Prices for rail power supply systems and components do not differ significantly between countries within Europe, which facilitates competition.

34. The majority of responses to the market investigation indicated a worldwide scope for railway supply systems and none of them considered the market for rail power supply systems as being national. The remaining respondents considered that the relevant geographic market is EEA in scope.

35. Given the above, it can be concluded that the market for rail power supply systems, or any of its further delineations, may be considered as, at least, EEA wide. However it is not necessary to define the geographic market as even on national markets the market shares will not exceed [0-5]%.

High speed trains

36. In previous decisions[6] the Commission did not conclude on the geographic scope of high speed trains and electrical multiple units.

37. The Parties consider that the markets for high speed trains should be considered EEA-wide due to the following factors: (i) the main global competitors for the provision of different types of rolling stock (into which HSTs are included) are present throughout the EEA and can offer a complete range of products that meet the different technical requirements present in each Member State; (ii) European contract award directives have promoted the activity of foreign manufacturers inside the EEA; (iii) the existence of European rail projects (Thalys, Eurostar, ICE) and the network interoperability.

38. A large majority of the respondents to the market investigation indicated a worldwide scope for high speed trains, since major suppliers operate on a worldwide basis (such as Bombardier, Siemens or Hitachi). In addition, the market for high speed trains is characterised by infrequent large orders, with major global players participating in tenders.

39. However, for the purpose of this decision is not necessary to conclude whether the market for high speed trains is EEA or worldwide wide, as no competition concerns would arise under any geographic definition.

Electrical multiple units

40. In *COMP/M.2139 – Bombardier/ADtranz* the Commission considered a national market for EMUs.

41. The Parties consider that the markets for EMU should now be considered EEA-wide. To support their claim, the Parties submit that the main competitors for the provision of EMU are present throughout the EEA and can offer a complete range of products that meet the different technical requirements present in each Member State.

42. Moreover, they cite the existence and promotion of European rail projects and the interoperability of networks which is already a reality, pointing towards the

---

6 *COMP/M.2139-Bombardier/Adtranz*

establishment of a European market. In addition, the national and international rail freight transport markets and the market for international rail passenger services have now been completely liberalised, opening up competition and giving rail operators the ability to run services through any country in the EU.

43. All respondents to the market investigation pointed towards an at least EEA-wide geographic market for electrical multiple units. However, for the purpose of the present transaction, the geographic market definition can be left open since there are no competition concerns under any alternative geographic market definition.

B. Upstream Products

RELEVANT PRODUCT MARKETS

High Voltage Products

44. High voltage products comprise high voltage switching and branching equipment, additional measurement, control and protection devices, as well as HV switchgears (which may be gas or air insulated), circuit breakers, instrument transformers and disconnectors, inter alia.

45. The Parties submit that high voltage products in transmission networks represent the relevant product market. They argue that, while from a customer's point of view these different products are not substitutable, almost all suppliers offer a complete range of high voltage products and customers will often purchase several high voltage products together. Customers therefore prefer that suppliers can provide the full range, which in turn means that ability to supply a full range of products makes such suppliers more competitive and successful in winning tenders. Therefore, the Parties submit that allocating each individual product to a separate market would not reflect the economic reality of high voltage activities, thus no further distinction between different high voltage products is necessary.

46. In cases *COMP/M.3296 – AREVA/ ALSTOM T&D* and *COMP/M.3653-Siemens/VA Tech*, the Commission discussed whether the individual products within the High voltage products category could constitute relevant markets. However, in both cases, the Commission left the product market definition open.

47. The proposed transaction will give raise to a vertical link between Alstom's activities and the following HV equipment:

48. Circuit breakers are devices used to stop the flow of electrical power in case the circuit becomes suddenly overloaded or otherwise abnormally stressed.

49. Switchgears are used for isolating electrical components and can use two alternative technologies: air and SF6 gas. Cubicles using air are referred to as Air Insulated Switchgears ("AIS"), whereas those using SF6 gas are called Gas Insulated Switchgear ("GIS").

50. Instrument transformers are used to scale down electrical power in order to measure the current and/or voltage, notably for protection and measuring purposes.

51. Disconnectors are safety devices used to open or to close a circuit when no current is running through them. They are used to isolate a part of a circuit, a machine, a part of an overhead line or an underground line so that maintenance can be safely conducted.

52. The results of the market investigation were inconclusive as to whether the individual components (GIS, AIS, instrument transformers, circuit breakers and disconnectors) belong to the high voltage product market or should constitute separate relevant markets.

53. In any case, for the purpose of the present case, the product market definition of the market for HV products can be left open, as no competition problems arise whichever of the possible product market definitions is used.

Power transformers

54. Power transformers change the voltage levels of electrical power. They are used to increase the voltage of power so that it can be transported efficiently on the transmission network, and subsequently to decrease the voltage of that power to the level required for distribution. Different types of power transformers are supplied for power generation, power transmission (high voltage applications) and electro-intensive industrial applications. Areva supplies all these categories of power transformers.

55. Power transformers for high voltage applications are used to convert high voltage power to medium voltage power for transfer to distribution systems or stepping up the voltage of electricity generated at power plants for transmission purposes.

56. The Parties submit that power transformers could fall within an overall market for transformers including both power and distribution transformers. The Commission has left the market definition open in previous decisions.[7]

57. The respondents to the Commission's market investigation expressed various opinions as to which product market power transformers should belong, with a majority favouring the overall transformers market. However, even on the (narrowest) market for power transformers, the proposed operation will not give rise to competition problems. Thus, the product market definition could be left open.

Distribution transformers

58. Distribution transformers are generally used for medium voltage applications connecting medium to low voltage networks.

59. The Parties submit that distribution transformers and power transformers could fall within the same overall market for transformers due to the similar functionality of such products and the supply-side substitutability. The Parties consider that distribution transformers could also fall within the market for medium voltage products[8], due to the fact that their primary function is to step down electricity from the distribution grid to lower voltages. The Commission has not concluded on the product market definition of the distribution transformers in any previous decisions.

---

[7] M.3296 Areva/Alstom and M.3653 Siemens/VA Tech,

[8] As proposed by Areva in case M.3296 Areva/Alstom T&D

60. The responses to the market investigation were not clear cut. However, given that the transaction will not give rise to any competition concerns under any alternative market definition, there is no need to conclude whether the market for distribution transformers constitutes a separate market, or whether it belongs to a wider market (i.e. an overall market for all transformers or a market for all MV products).

Transmission systems

61. Transmission systems integrate a number of T&D products and require a significant level of engineering skills and know-how. Such products may be supplied by the system provider itself or by third party producers. In fact, suppliers of transmission systems, including Areva T&D, often integrate competitors' products into their systems.

62. In *COMP/M.3296-Areva/ALSTOM T&D*, the Commission considered that transmission and distribution systems could constitute a single market comprising the design and installation of turnkey systems, either for transmission networks or for distribution networks.[9] However, in that case, the Commission ultimately left the market definition open.

63. In *COMP/M.3653-Siemens/VA Tech*, a tentative product market for high voltage turnkey projects (transmission systems) was identified, as distinguished from medium voltage turnkey projects (distribution systems).

64. In turn, the Parties consider that a market for transmission systems (HV turnkey projects) should be considered as a separate market.

65. In this regard, the opinions of the respondents to the Commission's market investigation diverged. However, given that the transaction will not give rise to any competition concerns, the question whether the transmission and distribution systems together constitute a separate market, or whether the market for transmission systems should be considered as a separate market, can be left open.

Traction transformers

66. Traction transformers are power transformers destined for railways. The Parties submit that on-board traction transformers which Alstom purchases for its activities in rolling stock may constitute a separate market due to the lack of demand-side substitutability.

67. On-board traction transformers are much smaller than 'industrial' power transformers and operate on different technology due to the specificity of their application within the railway sector.

68. The majority of the respondents to the market investigation indicated a separate market for traction transformers. Only some respondents considered traction transformers to belong to a wider market (i.e. to a market for power transformers or to an overall market for transformers). However, given that under any alternative geographic market definition the transaction will not give rise to competition concerns, the geographic product market definition could be left open.

---

[9] Alstom, after the transaction, will only supply transmission systems as the distribution system business will be sold to Schneider.

RELEVANT GEOGRAPHIC MARKETS

69. In previous cases[10], the Commission indicated that the market for T&D equipment was at least EEA-wide in scope. According to the parties, the markets for HV products and transmission systems should be considered worldwide; whereas the markets for power transformers (including traction transformers) and MV products (including distribution transformers), should be regarded as, at least, EEA in scope.

70. To support the above worldwide market delineation, the Parties argue: (i) there are few trade barriers, technical standards or customer certification, (ii) both customers and suppliers are likely to be active at an international level and (iii) transportation costs are relatively low compared to the products' overall value.

71. The market investigation confirmed the parties' views on the markets for MV products and power transformers. With regard to HV products and the possible narrower markets for circuit breakers, GIS, AIS, instrument transformers and disconnectors, the overwhelming majority of respondents to the Commission's investigation indicated that the relevant geographic market was at least EEA wide. Finally, concerning transmission systems and traction transformers, the market investigation pointed towards a market that is, at least, EEA wide.

72. In any case, as competition problems would not arise under either an EEA or a worldwide market definition, the relevant geographic markets can be left open.

Competitive assessment

73. For its assessment of the markets involving power plants and rolling stock, Alstom has submitted average market shares over a period of 5 years[11]. As the Commission has previously recognised, in bidding markets, annual market shares do not necessarily reflect the prevailing competitive situation[12]. By taking a longer period of time, the competitive situation may be more adequately reflected through average market shares[13].

---

[10] COMP/M.3296-Areva/Alstom T&D, para 17; COMP/M.3653-Siemens/VA Tech, para 82

[11] For hydro electric equipment the figures relate to Europe which includes, *inter alia*, Turkey and Switzerland.

[12] Case No. IV/M.2069, *ALSTOM/Fiat Ferroviaria*, 18 September 2000 (see paragraphs 23-25).

[13] Five year periods were taken as a basis for assessment of the rail transport and power generation markets in Case COMP/M.3653 *Siemens/VA Tech*, Decision of 13 July 2005 (at paragraphs 33, 71 and 122). Five year periods were taken as a basis for assessment in Case COMP/M.2139, *Bombardier/ADtranz*, 3 April 2001 (see paragraph 39), and Case No. IV/M.2069, *ALSTOM/Fiat Ferroviaria*, 18 September 2000 (see paragraphs 23-25).

Alstom's downstream market for:	Alstom's market share		Areva's upstream market for:	Areva's market share	
	EEA	global		EEA	global
Turnkey solutions for gas and steam power plants*	**[20-30]**% ***	[10-20]**%	High voltage products Circuit breakers[14]	**[30-40]**% **[20-30]**%	[10-20]% **[20-30]**%
			Power transformers	[10-20]%	[5-10]%
			Distribution transformers	[0-5]%	[0-5]%
			Transmission systems	[10-20]%	[10-20]%
Equipment for hydroelectric power plants*	[10-20]*** %	**[20-30]***** %	High voltage products Circuit breakers[15]	**[30-40]**% **[20-30]**%	[10-20]% **[20-30]**%
Rail power supply systems	[0-5]%	=[0-5]%	High voltage products GIS AIS Circuit breakers Instrument transformers Disconnectors	**[30-40]**% **[30-40]**% **[20-30]**% **[20-30]**% **[20-30]**% **[30-40]**%	[10-20]% [10-20]% **[20-30]**% **[20-30]**% [10-20]% **[20-30]**%
High speed trains	**[40-50]*****%	[10-20]**%	Traction transformers	[10-20]%	[5-10]%
Electrical multiple units	**[20-30]***** %	[10-20]**%	Traction transformers	[10-20]%	[5-10]%

* Figure for Europe, see footnote 11

** over a four year period

*** over a five year period

Turnkey solutions for gas and steam power plants (downstream) - High voltage products (upstream)

74. While Alstom is active in the downstream markets for turnkey solutions for gas-and-steam power plants, Areva is active in the upstream market for high voltage products.

---

14 Circuit breakers are the only HV products integrated into turnkey projects for gas and steam power plants

15 Circuit breakers are the only HV products integrated into equipment for hydroelectric power plants

75. In the EEA, Alstom has a market share of [20-30]% in the downstream market for turnkey solutions for gas and steam power plants. In the upstream market for HV products, Areva has [30-40]% market share.

76. Following the transaction, the combined entity will face strong competition in the upstream market for HV products from ABB ([25-35]%), Siemens ([20-30]%), and other smaller players. On the downstream market for turnkey gas and steam power plants, strong competitors will also remain on the HV products market after the transaction, such as: Siemens ([30-40]%), General Electric ([5-10]%), Ansaldo ([5-10]%), Metka ([5-10]%) and Mitsubishi Heavy Industries ([0-5]%) in the EEA.

77. The parties submit that in the market for turnkey solutions for gas and steam power plants, on the worldwide market, the merged entity will face competition from several strong competitors: the Indian company BHEL has a [10-20]% market share, Siemens [5-10]%, Black&Veatch [0-5]%, Doosan [0-5]% and Mitsubishi Heavy Industries [0-5]%. Among them, Siemens and Mitsubishi are well established companies with high reputation in the market, and the Korean player Doosan has significantly expanded its activities in the worldwide market over the last years.

78. Further, Chinese players such as HEC (Harbin Electric), SEC (Shanghai Electric), DEC (Dongfang Electric) or trading houses such as SEPCO recorded a significant growth in export orders in the turnkey gas and steam markets from 2007. Such players are already very successful in Asia and Africa and are aggressively approaching other regions. Korean companies such as Doosan, Daewoo and Hyundai (HHI and HDEC) have also been strongly expanding their export activities and entering onto the worldwide market.

79. In addition, in the HV product markets, there are several companies that recently expanded their activities in the EEA and on the worldwide level. For instance, regarding power transformers, Crompton Greaves, an Indian based company with activities in power generation, electrical transmission and distribution, has made several acquisitions in the EEA. In 2005, Crompton Greaves acquired Pauwels (a Belgium based power transformer supplier) and in 2006 it also acquired Ganz (a Hungarian based supplier of power transformers and HV products). In 2008, it acquired Sonomatra (a French based provider of maintenance and repair for power transformers). This company produces HV and MV Power & Distribution Transformers, HV Switchgear and Vacuum Interrupters.

80. Concerning circuit breakers, Tavrida, a player active in circuit breakers and protection relays, is now present in most of Eastern Europe. Also, Elimsan, a Turkish player active in the production of HV, MV and LV products, including circuit breakers**,** and Efacec, a Portuguese company active in the production of transformers, MV switchgears, and circuit breakers, are active in this market.

81. Finally, the parties submit, in addition to the above mentioned, that some emerging players are experiencing significant growth in the overall market for HV products. These players are, inter alia: Xi'an Electric Manufacturing Corp. and Tebian Electric Apparatus Stock Co in China, as well as Hyundai and Hyosung in Korea. These companies have won orders in the EEA (for example Xi'an Electric lists contracts in the UK, Greece, Albania, Estonia and Finland, and Hyundai has recently built a power transformer for EDF).

82. Moreover, the market for turnkey solutions for gas and steam power plants is uneven: orders are very large and infrequent and are the result of a bidding process. Therefore, competitors' market shares can and do significantly change in a short period of time.

83. In addition, and according to the parties, only circuit breakers, among all HV products, are integrated into solutions for steam and gas power station projects. In this regard, the combined entity will have a market share in the EEA market for circuit breakers that is substantially lower than its market share in the market for HV products as a whole ([20-30]% for circuit breakers).

84. The respondents to the market investigation indicated that the proposed transaction would have little or no effect on the market for turnkey solutions for gas and steam power plants and HV products. In fact, all the respondents to the market investigation indicated that HV products were not the main component in turnkey solutions for power plants. In that sense, the parties stated that circuit breakers account for less than [0-5]% of the total cost of the turnkey project.

85. Therefore, on an EEA level, market foreclosure (both input and customer) seems unlikely in the present case due to the following factors (i) the moderate market shares upstream and downstream, (ii) the existence of strong competitors in the relevant markets, (iii) the fact that the merged entity would not be able to use its entire circuit breaker production internally, but would have to sell in the merchant market where it would be unable to discriminate between customers and (iv) only a negligible part of the market for HV products (circuit breakers) is used in the downstream market for turnkey projects.[16]

86. On a worldwide level, the merged entity will have only comparatively modest market shares of [10-20]% on both the upstream and downstream markets, and would face significant competition on both markets[17]. The Commission considers that the comparatively low market shares make market foreclosure (both input and customer) appear unlikely.

87. In light of the above, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between HV products (circuit breakers) and solutions for turnkey gas and steam power plant projects.

Turnkey solutions for gas and steam power plants (downstream) - power and/or distribution transformers (upstream)

88. In the EEA, Alstom has a market share of [30-40]% in turnkey solutions for gas and steam power plants. Areva has [10-20]% market share in the upstream market for power transformers; its share of the EEA market for distribution transformers is lower than [0-5]%. It follows therefore that the combined entity's share of an overall market for power transformers will be lower than its market share in the market for power transformers. Therefore the combined market will not be further considered.

---

16 Circuit breakers are also used in equipment for hydro power plants and in rail power supply systems.

17 HV products: ABB ([15-25]%), Siemens ([15-25]%); Turnkey solutions: Siemens ([10-20]%), BHEL ([10-20]%), Black&Veatch ([5-10]%), etc.

89. The main competitors for Areva in power transformers are ABB, with a market share of [15-25]% in the EEA, and Siemens (which is vertically integrated) with a [15-25]% market share. In addition, many smaller players are active in this market: JST ([0-5]%), SGB-SMIT ([5-10]%), Crompton Greaves ([0-5]%), EFACEC ([0-5]%), Tamini Legnano ([0-5]%), Getra ([0-5]%), Incoesa ([0-5]%), Tironi ([0-5]%).

90. The respondents to the market investigation indicated that the proposed transaction would have little or no effect on the market for turnkey solutions for gas and steam power plants. As well, the majority of the respondents did not express concerns regarding the upstream market for power transformers. Power transformers, in addition to their use in turnkey solutions for gas and steam power plants where they step up the voltage of electricity generated, are also used to change the voltage of electricity in the transmission process.

91. In addition, the existence of a large number of alternative suppliers in the upstream market, and the moderate market share of the merged entity in the downstream market, mitigates against both input and customer foreclosure.

92. The situation in relation to distribution transformers is even less likely to raise competition problems. The merged entity's market share in the upstream market is even smaller ([5-10]% EEA) and the competitors are more numerous, such as Siemens, Schneider, ARD, Crompton Greaves, Efacec, etc. If a wider market for MV products were to be considered, the merged entity's market share would be even lower because the combined entity will only produce distribution transformers.

93. Alternatively, if an overall market for transformers were to be taken into account, the merged entity's market share would be below [5-10]%.

94. Finally, on a worldwide level the merged entity will have lower market shares ([10-20]% downstream and [5-10]% upstream). Moreover, other strong competitors would remain in the market.[18]

95. In light of the above, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between transformers (power and distribution transformers) and solutions for turnkey gas and steam power plant projects.

Turnkey solutions for gas and steam power plants (downstream) - transmission systems (upstream)

96. In the EEA, Alstom has a market share of [30-40]% in turnkey solutions for gas and steam power plants. In the upstream market for transmission systems, Areva has a market share of [10-20]%.

97. The main competitors of the merged entity upstream are ABB, with [25-35]% market share, and Siemens (vertically integrated), with [15-25]% market share. Between [35-45]% of the

---

[18] Power transformers: ABB ([15-25]%), Siemens ([10-20]%), BHEL, Chint, Crompton Greaves, Hyundai, Hyosung, etc.; Distribution Transformers: ABB ([10-20]%), Siemens ([5-10]%), Schneider ([0-5]%), SGB and ARD; Turnkey solutions: Siemens ([10-20]%), BHEL ([10-20]%), Black&Veatch ([5-10]%), etc.

EEA market is supplied by the smaller players. Also, in the downstream market for turnkey solutions strong competitors will be in the market post-transaction, such as: Siemens ([20-30]%), General Electric ([5-10]%), Ansaldo ([5-10]%), Metka ([5-10]%) and Mitsubishi Heavy Industries ([0-5]%) in the EEA.

98. The respondents to the market investigation indicated that the proposed transaction would have little or no effect on the market for turnkey solutions for gas and steam power plants. Concerning the market for transmission systems, the majority of the respondents stated that the transaction will not have a significant impact on the market.

99. Given the comparatively modest market shares on the upstream market for transmission systems, and the large proportion of that market which is supplied by the smaller players, it is unlikely that the merged entity would be able to foreclose the market, since strong competitors, as well as many independent competitors, will remain on the markets.

100. On a worldwide market, the merged entity will have significantly lower market shares ([10-20]% in turnkey solutions and [10-20]% in transmission systems). Also, strong competitors will be active in these markets.[19] As concerns an alternative market including both transmission and distribution systems, the market share will be much lower, since the merged entity will not be active in the market for distribution systems.

101. In light of the above, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between transmission systems and turnkey solutions for gas and steam power plant projects.

Equipment for hydroelectric power plants – High voltage products

102. In the EEA, Alstom has a market share of [20-30]% in the equipment for hydroelectric power plants, whereas in the upstream market for HV products Areva has a [30-40]% market share.

103. Post-transaction, the combined entity will face strong competition in the EEA market for HV products from ABB ([25-35]%), Siemens ([20-30]%) and other smaller players. The main competitors downstream are Andritz ([20-30]%) and Voith Hydro[20] ([40-50]%), with [10-20]% market share remaining for the smaller players.

104. In addition, on the worldwide market for <u>hydropower plants equipment</u>, Alstom faces competition from Asian players, including Dongfang and Harbin which have higher market shares than Alstom. Dongfang has entered the EEA market and therefore constitutes a competitive constraint on Alstom.

105. For HV products see paragraphs 79-81 above

106. According to the parties, only circuit breakers, among all HV products, are integrated into hydro electric power plants. In this regard, the combined entity will have a market

---

[19] Transmission systems: ABB ([20-30]%), Siemens ([15-25]%); Turnkey solutions: Siemens ([10-20]%), BHEL ([10-20]%), Black&Veatch ([5-10]%), etc.

[20] Voith Hydro is a joint venture of Voith and Siemens.

share in the EEA market for circuit breakers substantially lower than its market share in the market for HV products ([20-30]% for circuit breakers).

107. Regarding the market investigation, all the respondents indicated that HV products were not the main component in hydro electric power plants. Additionally, as in the case of turkey solutions for steam and gas power plants, the parties stated that circuit breakers account for less than [0-5]% of the total cost of the project. In this situation, even if prices were to increase or Alstom/Areva ceased to supply third parties, this would be unlikely to force competing hydro equipment manufacturers from the market, as sufficient other supplies exist and the circuit breakers represent only a small proportion of the total cost.

108. Moreover, the merged entity will face competition from strong competitors in the EEA market for circuit breakers: ABB, the market leader, with a market share of [40-50]%, Siemens, with [20-30]% market share, and a number of other small competitors.

109. Therefore, on an EEA level, market foreclosure (both input and customer) seems unlikely due to (i) the moderate market shares upstream and downstream, (ii) the existence of strong competitors in the relevant markets and, (iii) the fact that the merged entity would not be able to use its entire circuit breaker production internally, but would have to sell in the merchant market.

110. If the relevant geographic market is considered to be worldwide, the market shares of the combined entity will be lower ([20-30]% in the market for equipment for hydro electric power plants and [10-20]% on the upstream markets for HV products and circuit breakers). As well, other strong players will remain in theses markets worldwide[21]. The Commission considers that the comparatively low market shares makes market foreclosure (both input and customer) appear unlikely.

111. In light of the above, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between HV products (circuit breakers) and equipment for hydro electric power plants.

Rail power supply systems (downstream) – High voltage products (upstream)

112. The type of HV equipment that can be integrated in rail power supply systems are: gas insulated switch gears (GIS), air insulated switchgears (AIS), circuit breakers, instrument transformers and disconnectors. In the EEA and on any national market, Alstom has a market share of [0-5]% or less in rail power supply systems (or in any further segmentation of this market into catenary systems and traction power supply systems). Areva has a [30-40]% market share in the overall market for HV products.

113. If the upstream market for HV products would be further segmented by type of equipment, Areva's market shares will be also around [30-40]% (gas insulated switchgear [30-40]%, air insulated switchgear [20-30]%, instrument transformers [20-30]%, and disconnectors [30-40]%). However, in the last three years, Alstom has only integrated GIS and instrument transformers in its rail power supply systems

---

21 HV products: ABB ([15-25]%), Siemens ([15-25]%); Equipment for hydro electric power plants: Andritz ([5-10]%), Voith Hydro ([10-20]%), Dongfang ([10-20]%), Harbin ([10-20]%), Impsa ([0-5]%), with [10-20]% market share remaining for the smaller players.

114. Following the transaction, the merged entity will compete with strong players in the upstream market for HV products, such as ABB, with [25-35]% market share, and Siemens (vertically integrated), with [15-25]% market share. Between [35-45]% of the EEA market will be supplied by smaller players like Xian Xd (China) and Hyundai (South Korea).

115. For HV products in general see paragraphs 79-81 above.

116. Additionally, in the markets for HV switchgears, Crompton Greaves, an Indian player that is expanding its activities in the EEA, also manufactures HV switchgears. Moreover, Efacec, the above mentioned Portuguese manufacturer that has grown very rapidly over the last years, is active in HV switchgears.

117. Of all relevant HV products, only for GIS will the market share be higher than [30-40]%. In this segment, Areva has a [30-40]% market share in the EEA, while ABB has [25-35]% and Siemens [25-35]%.

118. As regards the market for rail power supply (and its further sub-segmentation between catenary systems and traction power supply) many suppliers compete actively on a European basis, for example: Efacec, Siemens, Cegelec, Semi, INABENSA, COBRA, ETDE, COLAS Rail, Vinci Energies, Eiffage, Ineo-SCLE, Balfour Beatty, CIET, SALCEF, GEMMO, BONCIANI, ANSALDO Energia, DB Bahnbau, Europten, Elpro, Faba, Powerlines, Carillion, Heitkamp, Amey, Grant Rail.

119. In turn, on a worldwide market, the parties' combined market shares will be lower ([10-20]% in the market for high voltage products, and ca. [0-5]% in rail supply or any of its alternative sub-segments).

120. Finally, the majority of the respondents of the market investigation indicated that the proposed transaction would have no effect or no significant impact on any of the markets concerned.

121. Given the above, market foreclosure (both input and customer) seems unlikely due to (i) the moderate market shares upstream in the various markets (ii) the negligible market shares in the downstream market(s) (iii) the existence of strong and numerous competitors in both upstream and downstream markets and (iv) the fact that for GIS, where the combined entity has the highest market share and the competitors are most concentrated, Alstom/Areva would have to continue to sell to the merchant market.

122. Therefore, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between HV products and rail power supply systems, or any of their further sub-segmentations.

High speed trains – traction transformers

123. Alstom has an average (see § 73) EEA market share of [40-50]% for high speed trains. In the upstream market for traction transformers, Areva has a [10-20]% EEA market share.

124. The main competitors in traction transformers are ABB, with 45-55% EEA market share, Siemens with 15-25% market share, and JST with [5-10]% market share, with [10-20]% of the market remaining for smaller players. Of the competitors only Siemens is

vertically integrated downstream into high speed trains. In the downstream market , Hitachi has [20-30]% market share, Siemens [20-30]% market share and Bombardier [0-5]% market share EEA wide.

125. As regards the market for rolling stock, the parties state that some newcomers are expected to enter into the EEA market. This concerns, in particular, Chinese players such as China North Locomotive and Rolling Stock Corporation and China South Locomotive and Rolling Stock Corporation. As regards EMUs, the parties submit that Rotem has recently entered the EEA market for EMUs, and Hitachi has been present on the EEA market for high speed trains over a number of years. Concerning high speed trains, it should be pointed out that bidding processes are very infrequent and involve high volumes/value. Therefore, a new entrant could obtain a significant market share by winning a single tender in the EEA.

126. A number of respondents to the Commission's market investigation were concerned that the proposed transaction would reduce the number of independent suppliers of traction transformers and lead to an increase in prices.

127. The market for high speed trains is uneven, orders are very large and infrequent and are invariably the result of a bidding process. Past performance is not necessarily a good guide to the future. Following the proposed transaction, the two high speed train manufacturers (Siemens and Alstom), which are also active in the production of traction transformers, will account for only 30-40% of the EEA market for traction transformers (and less than [10-20]% of the global market), while 60-70% will remain for the merchant market. Competing manufacturers of high speed trains for the EEA will have access to over [60-70]% of the market for traction transformers, including the leading supplier ABB (45-55% of EEA output), JST ([5-10]%) and smaller suppliers. In addition, in the last three years, Alstom has bought around [90-10]% of Areva's output in traction transformers. Therefore the market situation will change only marginally as a result of the proposed operation. Alstom's ability to foreclose (both input and customer) with regard to the market of traction transformers will be very limited since presently only about [5-10]% of Areva's supply of traction transformers is available for third party customers.

128. It should be noted that [a major] supplier of traction transformers, has excess capacity and would be able to increase its production of traction transformers significantly in the short term.

129. In addition, according to the Parties, a number of non-EEA traction transformers manufacturers could enter the EEA market. Such suppliers include: Crompton Greaves, Bharat Heavy Electricals and Mitsubishi.

130. On the world market, the combined entity would hold market shares of [10-20]% for high speed trains and [5-10]% for traction transformers. In turn, if a wider market for all transformers were to be considered, the merged entity's market share would be only [5-10]% in the EEA. These market shares are unlikely to give rise to competition problems.

131. Therefore, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between high speed trains and traction transformers.

Electrical multiple units – traction transformers

132. Alstom has an average market share of [20-30]% EEA wide in electrical multiple units. In the national markets, Alstom has [70-80]% market share in Luxembourg, [70-80]% in Sweden, [30-40]% in France, [30-40]% in Germany, and [30-40]% in Spain. In the upstream market for traction transformers, Areva has a [10-20]% EEA market share.

133. The combined entity's market shares are unlikely to cause competition problems on the EEA markets. Alstom/Areva will face significant competition in both the upstream and downstream markets. The main competitors in traction transformers are ABB, Siemens, JST and a number of smaller players. Downstream, the market leader is Bombardier, with [40-50]% market share EEA wide and [30-40]% worldwide, followed by Siemens, with [10-20]% market share EEA wide and [10-20]% worldwide.

134. In national markets, Alstom has high market shares in two EEA countries, Sweden and Luxembourg, with shares of [70-80]% and [70-80]% respectively. The relative high market shares do not reflect the market power of the merged entity, since they are the result of a bidding process that is infrequent and where major global competitors are present.

135. A number of respondents to the Commission's market investigation were concerned that the proposed transaction would reduce the number of independent suppliers of traction transformers and lead to an increase in prices.

136. Following the proposed transaction, the two EMU manufacturers (Siemens and Alstom) which are also active in the production of traction transformers, will account for only 30-40% of the EEA market for traction transformers (and less than [10-20]% of the global market), while 60-70% will remain for the merchant market. Competing manufacturers of EMUs for the EEA will have access to over [60-70]% of the market for traction transformers, including the leading supplier ABB (45-55% of EEA output) and JST ([5-10]%). In addition, in the last three years, Alstom has bought around [90-100]% of Areva's output in traction transformers. Therefore, following the proposed transaction, Alstom's ability to foreclose (both input and customer) with regard to the market of traction transformers will be very limited since presently only about [5-10]% of Areva's supply of traction transformers is available for third party customers.

137. Furthermore, traction transformers represent only a minor part of the EMU's overall value ([0-5]%).

138. Therefore, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical relationship between EMUs and traction transformers.

V. CONCLUSION

139. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EC) No 139/2004.

For the Commission
(signed)
Joaquín ALMUNIA
Vice-President of the Commission