



COMPETITION COMMISSION OF INDIA
(Combination Registration No. C-2015/01/241)

05.05.2015

Notice u/s 6 (2) of the Competition Act, 2002 given by

- **General Electric Company,**
- **GE Industrial France SAS,**
- **Alstom, and**
- **Alstom Holdings**

Order under Section 31(1) of the Competition Act, 2002

INTRODUCTION

1. On 14.01.2015, the Competition Commission of India (“**Commission**”) received a notice under sub-section (2) of Section 6 of the Competition Act, 2002 (“**Act**”), given by General Electric Company (“**GE**”), GE Industrial France SAS (“**GEIF**”); Alstom and Alstom Holdings (hereinafter GE, GEIF, Alstom and Alstom Holdings are collectively referred to as “**Parties**”).
2. The proposed combination relates to the (i) acquisition of Alstom’s thermal power, renewable power and grid businesses by GE and its group companies (“**Primary Acquisition**”), (ii) the formation of joint ventures (JVs) i.e. the Grid and Digital Energy JV, the Renewables JV and the Global Nuclear and French Steam JV, between GE and Alstom in which Alstom will hold a minority shareholding, and (iii) acquisition of the signalling business of GE by Alstom (“**Signalling Transaction**”).
3. For the purpose of the proposed combination, the Parties entered into the (i) Master Agreement with respect to the Primary Acquisition, (ii) Formation Agreement with respect to the Grid and Digital Energy JV, (iii) Formation Agreement with respect to the Renewables JV (iv) Formation Agreement with respect to the Global Nuclear and French Steam JV, and (v) Master Purchase Agreement in relation to the Signalling Transaction. All these agreements were executed on 04.11.2015.



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

4. In terms of Regulation 14 of the Competition Commission of India (Procedure in regard to the transaction of business relating to combinations) Regulations, 2011 (“**Combination Regulations**”), vide letter dated 16.01.2015, the Parties were required to remove certain defects and provide information/document(s) by 19.01.2015. The Parties filed their response through two separate submissions on 09.02.2015 and 11.02.2015 after seeking extension of time. Meanwhile, vide letter dated 30.01.2015, the Parties were required to remove certain other defects and provide information/document(s) by 04.02.2015. The Parties filed their response in this regard on 24.02.2015 after seeking extension of time. Further, the Parties were also required to file proper verification pages of the notice under Regulation 14 of the Combination Regulation vide letter dated 27.02.2015. The Parties filed their response in this regard on 02.03.2015. However, as the response dated 24.02.2015 submitted by the Parties had defects and was not complete, therefore, in terms of sub-regulation (3) of 14 of the Combination Regulations, vide letter dated 05.03.2015, the Parties were again required to remove defects and provide complete information. The Parties filed their responses in part on 17.03.2015, 26.03.2015 and 09.04.2015 after seeking extension of time. On 26.03.2015, the Parties were again required to provide certain information/details which were filed by the Parties along with the response submitted on 09.04.2015. The Parties also filed certain additional details / clarifications on 17.04.2015 and 05.05.2015.
5. It is noted that in relation to proposed combination, the Commission upon its own knowledge, took cognizance of the fact that GE Energy Europe B.V., GE and GEIF (hereinafter, GE Energy Europe B.V., GE and GEIF are collectively referred to as the “**Acquirers**”) made two public announcements (“**PAs**”) on 05.05.2014, both issued in terms of the relevant provisions of the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011 (“**Takeover Regulations**”), for acquisition of up to 26 per cent of the total paid-up equity share capital of the Alstom India Limited and acquisition of up to 25 per cent of the total paid-up equity share capital of Alstom T&D India Limited from their respective public shareholders. Accordingly, the Commission, in its meeting held on 20.10.2014, decided that in terms of the respective provisions of the Act and the Combination Regulations, the Acquirers ought to have given notice to the Commission within thirty



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

days of the PAs. Accordingly, vide letter dated 28.10.2014, in terms of Regulation 8 of the Combination Regulations, the Acquirers were directed to notify the said transactions in Form II, within 30 days of the receipt of the communication in this regard. GE, through their authorized representative, submitted its response to the said communication on 15.01.2015. The Commission in its meeting held on 05.05.2015 considered the response submitted by GE and noted that in view of the facts and circumstances of the case, the notification for the said transactions ought to have been filed by the Acquirers within thirty days of the PAs i.e., by 04.06.2014. The Commission therefore, decided to issue a show cause notice (“SCN”) to the Acquirers under Section 43A of the act read with Regulation 48 of the Competition Commission of India (General) Regulations, 2009 to show cause, in writing, within 15 days of the receipt of the SCN, as to why penalty, in terms of Section 43A of the Act, should not be imposed on them for failure to file the notice for the said transaction with in the time as prescribed under sub-section (2) Section 6 of the Act.

6. On 24.11.2014, the Commission received a notice filed by the Parties under sub-section (2) of Section 6 of the Act in relation to the proposed combination. However, it was noted that though the Parties filed the notice in Form II of the Schedule II of the Combination Regulations, however for certain market segments the Parties had not given information in requisite detail as required in Form II. Further, it was also noted that while Item 1.2 of Form II requires the Parties to provide an executive summary of the proposed combination which *inter alia* includes information with reference to the factors given in sub-section (4) of Section 20 of the Act, the Parties referred to the summary of the combination as prepared by them under Regulations 13(1A) of the Combinations Regulations which does not meet the requirement of information to be provided under Item 1.2 of Form II. The Commission in its meeting held on 12.12.2014 observed that whereas as per the provisions of the Combination Regulations, the Parties have the option to file the notice either in Form I or Form II, however, having decided to file the notice in Form II, the Parties must adhere to the requirements of Form II. It was observed that such a failure to provide information in requisite detail in the notice by the Parties could impede the proper assessment of the competition concerns of the proposed Combination. Accordingly, the Commission decided that the notice filed by the Parties on 24.11.2014 was not in conformity with



the Combination Regulations and therefore, not valid in terms of Regulation 14 of the Combination Regulations. The Commission further directed the Parties to file a fresh notice in Form II. Accordingly, the Parties filed the present notice on 14.01.2015.

PARTIES TO THE PROPOSED COMBINATION

7. GE is a company incorporated in New York, USA. It is stated to be engaged in various businesses including manufacture of appliances for business, appliances for consumers, aviation, consumer electronics, power, power project consulting services, energy management, healthcare, home, housewares, industrial solutions, intelligent platforms, lighting for business, lighting, etc. GEIF is a company incorporated in New York, USA and is a group company of GE. As per the information given in the notice, GE has presence in different sectors in India through its subsidiaries and joint ventures.
8. Alstom is a *société anonyme* incorporated under the laws of France and is stated to be engaged in various businesses in power, transport, etc. through its various subsidiaries. Alstom Holdings is also a *société anonyme* incorporated under the laws of France and Alstom holds 100 per cent of the share capital and voting rights of Alstom Holdings. As per the information given in the notice, Alstom has presence in different sectors in India through its subsidiaries and joint ventures.

PROPOSED COMBINATION

9. As already stated, the proposed combination comprises the Primary Acquisition, formation of JVs between GE and Alstom and the Signalling Transaction. Under the Primary Acquisition, GE along with GEIF and GE Albany Global Holdings B.V. (“GEAGH”)¹ will acquire the thermal power, renewable power and grid businesses of Alstom and Alstom Holdings.
10. Upon closing of the Primary Acquisition, the Parties will create three JVs i.e. (a) the Grid and Digital Energy JV in relation to the grid businesses of the Parties in which GE will hold 50 per cent plus one share (with equivalent voting rights) and Alstom will hold the balance share capital and voting rights; (b) the Renewables JV in relation to

¹ GEAGH is a newly established wholly owned subsidiary of GE. The acquisition of the non-US operations of ALSTOM Energy will primarily be carried out by GEAGH.



the renewables businesses of the Parties in which GE will hold 50 per cent plus one share (with equivalent voting rights) and Alstom will hold the balance share capital and voting rights; and (c) the Global Nuclear and French Steam JV in relation to certain businesses of Alstom pertaining to supply of equipment for nuclear power plants globally and steam turbines for power generation in France in which, Alstom will hold 20 per cent less one share which will give voting rights equivalent to 50 per cent less two shares and balance share capital and the voting rights will be held by GE.

11. Upon completion of the Primary Acquisition, Alstom and Alstom Transport Holdings B.V. will acquire the global signaling business of GE.

COMPETITION ASSESSMENT

12. It is noted that the businesses of the Parties involved in the proposed combination may be classified into (i) thermal power business; (ii) renewable energy business; (iii) grid business; and (iv) signalling business. The assessment of the proposed combination in terms of the provisions of the Act is provided in the paragraphs below.

THERMAL POWER BUSINESS

13. Within the thermal power business, GE and Alstom have overlapping activities in the supply of certain equipment to and services for the power plants. In this regard, it is noted that there are primarily two types of thermal power plants to which the Parties supply equipment (globally as well as in India). These are (a) gas based power plants which use natural gas for generating electricity and (b) steam based power plants which primarily use fossil fuel such as coal for generating electricity. A gas based power plant can be a simple cycle power plant which is driven by one or more gas turbines (“GTs”) or a combined cycle power plant (“CCPP”) which is driven by a combination of GTs and steam turbines (“STs”). CCPPs are generally considered to be more efficient in terms of producing electricity.
14. As per the information given in the notice, the main components of a power plant are (i) the power island which primarily comprises of turbines (GTs and STs), boilers / heat recovery steam generators (HRSG), generators and all associated systems such as boiler feed pumps, condensers, etc, and (ii) the balance of plant (BoP) and pollution



control systems. The BoP includes all the parts of the power plant outside the power island such as the cooling towers, plant cooling systems, water systems, plant piping valves and automation and control systems for the entire plant.

15. It has been stated in the notice that both GE and Alstom are engaged in the manufacture and servicing of turbines and generators included in the power island whereas, only Alstom is active in the supply of boilers, BoP equipment and pollution control systems. Thus, there is no overlap between GE and Alstom as far as boilers, BoP equipment and pollution control systems are concerned. In relation to generators, it has been submitted that GE and Alstom supply generators along with their own turbine equipment only and do not sell them for use with the GTs / STs of other Original Equipment Manufacturers (OEMs). Therefore, it is observed that the dynamics of the market for generators would remain unchanged, post combination.
16. In relation to GTs and STs, the Parties have submitted that on the basis of demand considerations (availability of fuel i.e. gas, fossil fuels, etc.) and supply considerations (i.e. gas or steam turbine technology, number of players offering these turbines, etc.), both constitute different relevant product markets.

Gas Turbines (GTs)

17. It has been submitted that there are two types of GTs: (i) frame GTs; and (ii) aeroderivative GTs (“**Aeroderivatives**”). Aeroderivatives are generally lighter-weight GTs derived from aircraft engines. Aeroderivatives generate outputs from approximately 15 megawatts (MW) to 100 MW, whereas frame GTs generate outputs ranging from 5 MW to above 400 MW. As far as their application is concerned, low output level turbines are primarily used by industrial customers for mechanical equipment drives, whereas higher output level turbines are used by utilities and independent power producers (IPPs) for power generation.
18. GE is engaged in the GT segment in India through GE India Industrial Private Limited (“**GEIPL**”), BHEL – GE Gas Turbine Services Private Limited {a joint venture between Bharat Heavy Electricals Limited (“**BHEL**”) and GE} and certain global entities whereas Alstom is engaged in the GT segment in India through Alstom India



Limited (“**AIL**”). Both GE and Alstom supply GTs for power projects covering varying power output. However, it has been submitted that Alstom does not manufacture Aeroderivatives and GTs supplied by Alstom cover power output ranging from 185 MW to 326 MW. On the other hand, GTs supplied by GE cover the power output ranging from 10 MW to 470 MW.

19. The Parties have further submitted that from the demand-side perspective, the smallest GT of GE that could potentially compete with Alstom’s smallest GT (i.e. GT with power output 185 MW) start at a minimum output of 90 MW. Therefore, the activities of the Parties overlap in relation to GTs with an output at or above 90 MW, in India. Further, GTs below 90 MW are more suitable for industrial purposes and do not compete with GTs with output at or above 90 MW which are primarily used for generating power. Accordingly, the Parties have delineated the relevant product market as the market for GTs at or above 90 MW output. However, the exact delineation of the relevant market in this regard is being left open as it is observed that the proposed combination is not likely to raise competition concerns in any of the alternative relevant product markets, in India.
20. The Parties have also submitted that the relevant geographic market for the above product market is global as customers regularly source GT equipment on a worldwide basis and are not limited to the region/country in which they are located. Further, as submitted by the parties, there are no technical or regulatory barriers between different geographies and the transportation costs are not significant. However, in this regard it is noted that out of five OEMs i.e. GE, Alstom, Mitsubishi Heavy Industries Limited (“**MHI**”), Siemens and Ansaldo who have the proprietary technology for GTs, Ansaldo is not present in the market for GTs in India. Thus, the conditions for competition as prevailing in India are considered to be different from conditions prevailing in the rest of the world. Accordingly, the relevant geographic market in the case of GTs ought to be defined as the territory of India rather than global.
21. The Parties have provided market share data on the basis of the number of projects, number of GTs ordered and total output capacity (in MW) of the GTs supplied, as per McCoy Power Reports, for the extended period 2009-2013, averaging out the



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

significant peaks and troughs in the demand for GTs. The market shares of GE and Alstom in the market for GTs are (a) on the basis of number of projects, 37 per cent and 5 per cent, respectively; (b) on the basis of number of GTs ordered, 48 per cent and 3 per cent, respectively; and (c) on the basis of total output capacity (in MW) of GTs supplied, 49 per cent and 4 per cent, respectively. Thus, it is observed that incremental market share due to the proposed combination in the market for GTs in India is not more than 5 per cent in each case. Further, there are other competitors present in the relevant market i.e. Siemens and MHI.

22. It has been further submitted that according to McCoy Power Reports data, in the past five years, nineteen projects have been awarded in India for the procurement of GTs. However, on account of shortfall in the natural gas supply in India and the consequent non allocation of gas for power projects, nine of the nineteen projects were cancelled (including the single order won by Alstom). Accordingly, if cancelled projects are excluded from the relevant market then on the basis of actual implemented projects, there would be no change or increment in the market share post combination in India, as the only project won by Alstom (in 2010) was cancelled.
23. The Parties have further submitted that procurement of GTs is primarily carried out through bids/tenders. In relation to the bidding markets, it is noted that in addition to the market share analysis, it is important to examine the competitive constraints faced by the players at the time of submission of bids. An analysis of bidding data may also provide valuable information with regard to the competitive constraint exerted by the parties on each other.
24. On the basis of the analysis of the bidding data submitted by the Parties for India, it is noted that there were twelve competitive bids for procuring GTs during the period 2009-2014. GE and Siemens participated in all these twelve bids, whereas MHI and Alstom participated in four bids each. Thus, out of the total twelve competitive bids, GE and Alstom competed with each other only in four cases, whereas GE and Siemens competed with each other in all the twelve bids. It is also noted from the bidding data, that in majority of the tenders floated for procurement of GTs, only two players submitted the bids i.e. GE and Siemens. Thus, it is noted that in the market for GTs in



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

India, GE and Siemens are the closest competitors, whereas Alstom is not a close competitor of GE.

25. In this regard, it is also noted that GTs are primarily used in gas based power projects and accordingly, demand for GTs is dependent on availability of natural gas in a region. The Parties have submitted that the shortage of supply of natural gas in India has not only resulted in non-commissioning of new gas-based power projects but has also stalled the existing gas-based power projects. In this regard, it is also noted from information available in the public domain that out of 24,150 MW gas based power generation capacity in the country, 14,305 MW of the capacity has currently no supply of domestic gas and is considered to be stranded at present. The balance capacity of 9,845 MW is also working at a sub-optimal level based on the limited quantity of domestic gas in the country. Thus, the shortage of gas may be likely to dampen any future demand of GTs in India.
26. In relation to the servicing of GTs and generator equipment, it has been submitted by the Parties that GE and Alstom offers after sales services only for their own equipment in India. The Parties do not separately compete with other OEMs for the servicing of their equipment in India.
27. In view of the foregoing, it is observed that that the proposed combination is not likely to result in an appreciable adverse effect on competition in the market for GTs in India.

Steam Turbines (STs)

28. STs are used where fossil fuel, primarily coal is readily available to generate steam which is then used to produce electricity. The energy required to produce steam can be generated from a large number of sources, including fossil fuel, nuclear source, biomass, etc. As stated by the Parties, STs with power output above 100 MW are used for power generation applications, whereas STs with power output below 100 MW are typically used for industrial applications or as a part of the CCPPs.
29. As already stated, both the Parties are engaged in supply of STs in India. GE is engaged in the ST segment through GEIPL, GE Triveni Limited (a joint venture



between GE and Triveni Turbines Limited) and certain global entities, whereas Alstom is engaged in ST segment in India through AIL and Alstom Bharat Forge Power Limited (a joint venture between Alstom and Bharat Forge Limited). GE has the capability to offer STs with power output ranging from 30 MW to 660MW, whereas Alstom offers STs with power output ranging from 100 MW to 1900 MW. Thus, the Parties have submitted that they have overlapping activities in supply of STs with power output ranging above 100 MW. However, the Parties have provided market share data on the basis of two alternative relevant market definitions i.e. (a) at the broader level, the market for all STs in India, and (b) at the narrower level, the market for STs with power output above 100 MW in India. However, the exact delineation of relevant market in this regard is being left open as it is observed that the proposed combination is not likely to raise competition concerns in any of the alternative relevant markets in India.

30. The Parties have provided market share data on the basis of number of projects, number of STs ordered and total output capacity (in MW) of the STs supplied as per McCoy Power Reports for the period 2009-2013. It is noted from the market share data provided in the McCoy Reports, that the combined market share of GE and Alstom is less than seven per cent both in the market for all STs and in the market for STs with power output of above 100 MW. Further, there are other significant competitors in the market i.e. BHEL, Siemens, Harbin, Dongfang, Toshiba, etc.
31. The Parties have also submitted that STs are sold primarily through competitive bids/tenders. Therefore, as already stated, the analysis of bidding data becomes important for a proper assessment of the competitive constraints prevailing in the relevant market. On the basis of bidding data submitted by the Parties for India (for the period 2009-14) it is noted that both the Parties have never competed with each other in the same bid, thus indicating that Alstom and GE are not close competitors in the market for STs in India.
32. In relation to servicing of STs and generator equipment, it has been submitted that GE offers after sales services only for its own equipment in India. Similarly Alstom, although, it has the capability to service equipment of other OEMs, primarily services



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

its own equipment. Since, the scope of GE's after sales servicing is confined to its own equipment and does not overlap with Alstom's activities in this regard (Alstom does not service GE's STs in India), there would be no change in the market post combination in relation to servicing of STs.

33. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in the market for STs in India.
34. It has also been submitted that apart from GTs and STs, the Parties are also engaged in supply of Machinery Protection and Condition Monitoring Solutions ("MPCMS") which are employed across a range of industries in plant asset management including in power plants to measure the vibration levels of rotating and reciprocating equipment to detect changes in the condition of the machinery parts and to predict potential failures. In India, GE provides MPCMS through GEIPL, whereas Alstom provides MPCMS in India through AIL. Alstom is stated to be a relatively new entrant in this market. In this regard, it is noted from the information given in the notice that in the market for MPCMS in India, the market shares of GE and Alstom, on the basis of sales value, during the year 2013-14, are [35-40] per cent and [1-5] per cent respectively. Thus, Alstom has limited presence in the supply of MPCMS in India. Further, there are many global players engaged in the supply of MPCMS in India, such as Shinkawa (along with Forbes Marshall), Meggitt Sensing Systems, Emerson, SKF, etc. Accordingly the proposed combination is not likely to result in an appreciable adverse effect on competition in provision of MPCMS in India, as the incremental market share post the proposed combination, is only [1-5] per cent.
35. In addition to MPCMS, the Parties have submitted that they also provide system(s) to control the entire power plant. With respect to such control systems for use in CCPPs, Alstom sells Distributed Control Systems ("DCS") in India. GE also sells DCS in India but not as a stand-alone component as it offers DCS along with its equipment offer (i.e. either as part of package of GTs/STs and generator set or of a broader engineered equipment package). The Parties have further submitted that Alstom is a small player in this market as its market share in India is negligible. Accordingly, the



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

proposed combination is not likely to result in an appreciable adverse effect on competition in provision of DCS in India.

36. The Parties have also submitted that within the thermal power sector, there will be a vertical relationship for downstream power generation in relation to supply of drives which are used primarily to change the frequency of electricity. GE manufactures and supplies drives that are used in a range of applications including for power generation, globally. Alstom also purchases these drives from GE globally but not in India. The drives supplied by GE include variable speed drives, start-up frequency converters and static excitation equipment. For each of these drives, it is noted that GE has insignificant or no presence in India and there are a number of other significant players including Siemens, ABB, etc. which are present in this segment in India. Accordingly, the proposed combination is not likely to raise any competition concerns in this regard.
37. In relation to the Global Nuclear and French Steam JV, it is noted that the part of the business of Alstom, which (i) designs, sells, manufactures, installs and services power island equipment for nuclear power plants globally and (ii) sells, manufactures, installs and services steam turbines (STs) for energy power generation in France, will be the subject matter of the proposed JV. Therefore, only the business related to the power island equipment for nuclear power plants may be relevant for assessment of the proposed combination, in India. The products sold for nuclear power plants mainly consist of STs and generators. In this regard, the Parties have submitted that GE does not manufacture or sell steam turbines or reactors for nuclear power plants in India. In relation to the business activities of Alstom, it has been submitted that Alstom is also not involved in the design, manufacturing and installation of the turbine island equipment for nuclear power plants in India. However, it has limited involvement in the project management, inland transportation and technical site advisory for nuclear steam turbine for certain power plants in India. Accordingly, it is observed that there is no overlap between the Parties in relation to supply of power island equipment for nuclear power plants in India.



38. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in the thermal power business in India.

RENEWABLE ENERGY BUSINESS

39. The Parties have submitted that the renewable energy sector can generally be split into wind energy, hydro energy, tidal energy and solar energy. In relation to tidal energy and solar energy in India, it has been stated that the Parties currently have no presence (either through sales, manufacturing activity or participation in the bids). However, Alstom holds a 20 per cent stake in Brightsource Energy Inc. (“**Brightsource**”), a US-based company having activities in the solar thermal power segment in India. Alstom and Brightsource plan to jointly participate in solar projects in India in the future, but currently, they do not have any project in India.
40. In relation to the wind energy segment, it has been stated in the notice that Alstom has no presence in this segment in India and GE has limited presence in this segment in India through its subsidiary i.e. GEIPL. In India, GE manufactures and supplies onshore wind turbines only. In this regard, it is also noted that GE’s renewables business in India is not to be contributed to the Renewables JV as the Renewables JV is for hydro, wind off-shore and other renewables activities, whereas GE’s renewables business in India pertains to the onshore wind segment, which is outside the scope of the Renewables JV. As such, GE would continue to operate its renewables business through GEIPL in India.
41. In relation to the hydro energy segment, it has been stated in the notice that GE has no presence in this segment in India and Alstom is present in this segment through its subsidiaries i.e. AIL and Alstom Hydro R&D India Limited along with certain global entities. In India, Alstom offers various components in the hydro energy segment including turbine, generator and electrical balance of plant in addition to refurbishment and modernization of hydro power projects and provision of maintenance services. It is also noted that hydro energy business is characterised by sales through bidding contests and the analysis of bidding data suggests that amongst the Parties only Alstom



is active in the hydro energy segment, whereas GE is not present in this market, in India.

42. It is noted that neither of the Parties have presence in the tidal energy segment in India and that there is no overlap between the products or services offered by GE and Alstom in the solar energy, wind energy and hydro energy segments in India. The proposed combination is therefore, not likely to result in an appreciable adverse effect on competition in the renewable power business in India

GRID BUSINESS

43. Electrical power generated in a power plant is delivered to the end users through transmission and distribution (T&D) networks. Both the Parties have presence in the supply of power T&D equipment or grid products/services, in India. As per the details given in the notice, Alstom is engaged in grid business in India through Alstom T&D India Limited, whereas GE is engaged in the grid business in India through GEIPL, Indotech Transformers Limited (“**Indotech**”)² along with certain global entities.
44. The T&D products/services may be divided according to their applications at different stages of the power transmission and distribution chain i.e. (a) High Voltage Products i.e. Transformers and Other High Voltage Products, (b) Flexible Alternating Current Transmission System, (c) Substation Automation System, and (d) Network Management Systems / software solutions i.e. Energy Management System and Distribution Management System.

Transformers

45. A transformer is an electrical device which transfers energy between two or more circuits through electromagnetic induction. Transformers are used primarily to change the AC voltage from one voltage level to another, within the power networks. Transformers may be categorised into low or high voltage transformers. Low voltage transformers are used in distribution networks where electricity is

² Indotech is a listed company, and a subsidiary of Prolec GE Internacional, S de R.L. C.V., Mexico (**Prolec JV**), which is a joint venture between the Xignux Group, Mexico and GE.



transported at lower voltages for delivery to end users and high voltage transformers are used in transmission networks in which electricity is transported longer distances at higher voltages levels.

46. Both GE and Alstom are present in the transformers segment in India. However, GE sells different types of low voltage transformers in the range of 3.3 kilovolt (KV) to 220 KV and Alstom sells high voltage power transformers in the range of 220 KV to 1200 KV in India.
47. In relation to transformers, it is observed from the information given in the notice that on the basis of the order intake in the financial year 2013-14, the combined market share of GE and Alstom in the market for transformers is less than [5-10] per cent and the incremental market share is less than [1-5] per cent. It is also noted that there are various other global as well as domestic players in the market for transformers in India such as ABB, Siemens, Schneider Electric, BHEL, Crompton Greaves, etc.
48. It has also been submitted by the Parties that the customers in the transformers segment primarily procure transformers through bidding contests. The analysis of the bidding data submitted by the Parties (for the period 2010-14) suggests that GE and Alstom have competed with each other only in a few instances in the market for transformers, thus indicating that they are not close competitors.
49. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in this segment in India.

Other High Voltage Products (“OHVP”)

50. The primary high voltage products other than transformers are switchgears, which can be air or gas insulated, and which themselves consist of a number of individual components including circuit breakers, disconnectors, instrument transformers, bushings and arrestors and are referred to as OHVP. In relation to OHVPs, it has



been submitted in the notice that amongst the Parties, only Alstom is present in this segment in India and GE has no presence in this segment. Thus, the Parties are not engaged in the production, distribution or supply of identical or substitutable products in this segment.

51. Further, as submitted by the Parties, the market share of Alstom in this segment, on the basis of number of projects, is [20-25] per cent and this segment is characterised by presence of other large players like ABB, Siemens, BHEL, Crompton Greaves, etc.
52. In view of the foregoing the proposed combination is not likely to result in an appreciable adverse effect on competition in this segment in India.

Flexible Alternating Current Transmission System (“FACTS”)

53. As per Parties, FACTS refer to a family of solutions that are capable of enhancing alternating current (AC) system controllability, stability and increasing power transfer capability on AC networks. FACTS devices are able to provide the transmission system with several advantages such as transmission capacity enhancement, power flow control, transient stability improvement, etc.
54. In relation to FACTS, it has been submitted in the notice that amongst the Parties, only Alstom is present in this segment in India. GE possesses the technical capacity to manufacture FACTS. However, in this regard, it has been submitted in the notice that the customers of FACTS in India (primarily state owned T&D utilities) have certain qualification norms which have to be satisfied by any company which seeks to participate in any bidding contest for supply of FACTS to such utilities. It is stated that one such norm/condition insisted upon by large utilities is the previous record of successful sale/supply of FACTS in India. Since GE has never supplied FACTS in India, such a condition renders it ineligible for supplying FACTS to most customers in India. Accordingly, the Parties have submitted that they are not



engaged in the production, distribution or trading of similar or substitutable products in this segment in India.

55. Further, Alstom has limited presence in this segment in India as its market share in this segment, on the basis of value of projects, is [5-10] per cent only. The market for FACTS is also characterised by presence of other large players like Siemens, ABB, Toshiba, BHEL, etc.
56. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in this segment in India.

Substation Automation Systems (“SAS”) and Network Management System (“NMS”)

57. It has been submitted in the notice that SAS consist of a variety of electronic equipment and software used to monitor, diagnose, protect and control high voltage products within the substation. SAS consist of a range of products including protection relays (high voltage and medium voltage), bay controllers, switches, clocks, relay panels as well as equipment monitoring and diagnostic products. Whereas NMS are software solutions for control rooms for the overall grid.
58. The Parties have submitted that a distinction could be made between SAS and NMS as from the demand perspective, these perform different functions. SAS are primarily used to electronically diagnose, monitor, protect and control power equipment within a substation and consist of hardware and some automation/software elements. On the other hand, NMS/software solutions are used in a central control room for the overall grid and perform a much broader and more sophisticated network management function, typically for a large number of substations. In the present case, both Alstom and GE are active in SAS as well as NMS/software solutions for all relevant voltage levels. In view of the foregoing, the relevant market may be defined as a broader market covering both SAS and NMS or separately for SAS and NMS, on the basis of demand side distinctions. As



per the Parties, relevant market should be defined separately for SAS in India. However, the Commission is of the view that the exact delineation of relevant market may be left open in this case, as the proposed combination is not likely to raise competition concerns in any of the alternative relevant markets in this segment in India.

Substation Automation Systems

59. Both GE and Alstom have presence in the SAS segment and offer SAS for all voltage levels globally, as well as India. It is noted from the information given in the notice that the market shares of GE and Alstom in this segment, on the basis of turnover, are [1-5] per cent and [30-35] per cent respectively. Thus, the incremental market share is less than [1-5] per cent. Further, SAS segment in India is characterized by presence of significant competitors such as ABB, Siemens, Schneider, Crompton Greaves, etc.
60. It has also been submitted that SAS are primarily procured by the customers through bids and therefore, bidding data analysis becomes important for the competition assessment of the SAS segment. It is observed from the bidding data that GE and Alstom have competed with each other in less than 10 per cent of total competitive bids over the period 2010-14, indicating that they are not the close competitors in the market for SAS. On the basis of the bid data, ABB and Siemens seem to be closer competitors to Alstom.
61. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in this segment in India.

Energy Management System (“EMS”)

62. NMS can be further categorised into EMS and Distribution Management System (“DMS”). EMS are software packages that help manage and monitor the transmission network from the power plants through (and including) the transmission substations, whereas DMS is a collection of applications designed to



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

monitor and control the entire distribution network efficiently and reliably. Accordingly, the customers of EMS are transmission utilities whereas the customers of DMS are distribution utilities.

63. The Parties have submitted that due to different applications of EMS and DMS from the demand side perspective and their different customer base, EMS and DMS constitute different relevant markets. However, the exact delineation of relevant market in these segments may be left open as the proposed combination is not likely to raise competition concerns in any of the alternative relevant markets.
64. In India, GE is stated to have the capacity to offer EMS solutions, however it has not been successful in winning contracts in the EMS segment in India during the last 4-5 years and currently, GE is only engaged in servicing and maintenance of its own EMS equipment. It has been stated that GE does not meet the local qualification requirement of the customers and as such is not qualified to participate in the bids since 2012. It has been stated in the notice that Alstom is engaged in the development of software for EMS and after developing the software, it procures the hardware from the independent vendors and combine the two to make the EMS equipment as per the requirement of the customers. Alstom is stated to be relatively more successful in winning contracts in the EMS segment in India.
65. In view of the foregoing, it is observed that though GE has the capability to offer EMS in India, at present, it is disqualified to participate in the tenders for procurement of EMS. Thus, there is no effective horizontal overlap between the Parties and they do not compete with each other in the EMS segment in India. It is further noted that the EMS segment in India is characterized by presence of competitors such as Siemens, Open Systems International Inc. (along with Chemtrol) and ABB.
66. It has also been stated in the notice that the customers of EMS generally procure these services through competitive bids. In this regard, it is noted from the analysis of bid data submitted by the Parties for the period 2010-14 that GE and Alstom have



competed with each other in around 10 per cent of total competitive bids indicating that they are not the closest competitors in EMS.

67. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in the EMS segment in India.

Distribution Management System (“DMS”)

68. As already stated, DMS are similar to EMS but are used for distribution networks. It has been stated in the notice that GE offers DMS solutions in India, however it has not been successful in winning any contracts in the DMS segment in India and accordingly, GE has no sales in the DMS segment. Further, though Alstom offers DMS solutions in India, its presence in this segment is very limited. It is observed from the data given by the Parties that the market share of Alstom and GE in the DMS segment, on the basis of revenue in the financial year 2013-14, was [10-15] per cent and Nil respectively. It is further noted that DMS segment in India is characterized by the presence of many competitors such as ABB, Schneider, Siemens, NR Electric, DongFang, Open Systems International with Chemtrol, etc.
69. It has been stated in the notice that customers of DMS generally procure these services through competitive bids. Accordingly, it is noted from the analysis of bid data submitted by the Parties for the period 2010-14 that GE and Alstom have competed with each other in around 8 per cent of the total competitive bids indicating that the Parties are not the closest competitors in DMS segment. Thus, the proposed combination is not likely to cause any competition concerns in this segment in India.
70. In view of the foregoing, it is observed that the proposed combination is not likely to result in any appreciable adverse effect on competition in the grid segment in India.

SIGNALLING BUSINESS

71. Signalling is a system used to direct the rail traffic safely in order to prevent the trains from colliding. It is considered to be critical to the safe and efficient functioning of railway networks. The Signalling Transaction involves the



- acquisition by Alstom and Alstom Transport Holdings B.V. of GE's signalling business, which provides signalling solutions to the passenger and freight rail systems globally.
72. In India, both GE and Alstom are engaged in the signalling business. GE conducts its signalling business through the transportation division of GEIPL along with certain global entities, which will be acquired by Alstom, whereas Alstom conducts its signalling business in India through Alstom Transport Limited ("ATL"), a wholly owned subsidiary of ALSTOM Transports Holdings BV. In India, the Signalling Transaction will be undertaken as an asset transfer of the signalling business housed in the transportation division of GEIPL to ATL.
73. The Parties have submitted that on account of significant differences in technology and specifications, size of the project, differences in customers and difference set standards of systems, the signalling projects can be sub-divided into two separate relevant market i.e. (a) Mainline segment consisting of heavy railways - national railways and freight corridors, and (b) Urban segment (i.e. mass transport/ light railway- metro rail, mono rail and trams). However, the Commission is of the view that the exact delineation of relevant market may be left open in this case as the proposed combination does not raise competition concerns in any of the alternative relevant markets.
74. It has been submitted in the notice that in India, Alstom is present in the signalling projects in Urban segment and not in Mainline segment, whereas GE is stated to be present in Mainline segment and not in Urban segment. Thus, there is no horizontal overlap between the Parties in India for the purposes of the Signalling Transaction.
75. It is observed from the data given by the Parties that the market share of GE in the Mainline segment, on the basis of revenue in the financial year 2013-14, was [0-5] per cent, whereas the market share of Alstom in the Urban segment, on the basis of sales value during the period 2009 – 13 was [15-20] per cent. It is further observed that there are other major players present in the signalling sector in India such as Bombardier Transportation, Ansaldo STS, Siemens (Invensys), Thales, Kyosan Signal, etc.



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

76. The Parties have further submitted that signalling systems are procured primarily through the competitive bids. The Parties have submitted bidding data for the period 2009-14 for the Mainline segment and for the period 2010-14 for Urban segment. The bidding data analysis suggests that GE is largely present in Mainline segment, whereas Alstom is present in the Urban segment. It is further observed from the bid data that even if the Mainline segment and the Urban Segment are considered to be in the same relevant market, GE and Alstom are not the closest competitors in the market as there is only one bid where both have participated out of more than eighty bids in the market.
77. In view of the foregoing, it is observed that the proposed combination is not likely to result in an appreciable adverse effect on competition in the signalling segment in India.
78. The Commission notes that the Parties have executed a Global Rail Alliance (“**GRA**”) agreement on 04.11.2014. In relation to the GRA, it has been stated in the notice that the GRA agreement does not involve any transfer of shares or voting rights or assets or control. It has been stated that the GRA is an agreement to discuss potential future cooperation in certain specific areas of railway transport and locomotives and there is no binding commitment or obligation on the Parties to pursue or implement any aspect of the envisaged cooperation. It has also been submitted by the Parties that any discussions pursuant to the GRA agreement will be in compliance with the law including competition law. Accordingly, the activities of the Parties covered under GRA agreement are not part of the present assessment of the proposed combination.
79. Considering the facts on record and the details provided in the notice given under sub-section (2) of Section 6 of the Act and the assessment of the combination after considering the relevant factors mentioned in sub-section (4) of Section 20 of the Act, the Commission is of the opinion that the proposed combination is not likely to have any appreciable adverse effect on competition in India and therefore, the Commission hereby approves the proposed combination under sub-section (1) of Section 31 of the



COMPETITION COMMISSION OF INDIA



Fair Competition
For Greater Good

- Act. This order is, however, issued without prejudice to the proceedings under Section 43A of the Act.
80. This order shall stand revoked if, at any time, the information provided by the Parties is found to be incorrect.
81. The Secretary is directed to communicate to the Parties accordingly.