



COMPETITION COMMISSION OF INDIA

Case No. 12 of 2016

In Re:

InPhase Power Technologies Private Limited

Informant

And

ABB India Limited

Opposite Party

CORAM

Mr. Ashok Kumar Gupta
Chairperson

Ms. Sangeeta Verma
Member

Mr. Bhagwant Singh Bishnoi
Member

Appearance during the hearing held on 05.09.2019:

Informant

Mr. Nitin K. Gupta, Advocate

Mr. Manish Sharma, Consultant

Mr. Panna Lal Biswas, Managing Director, Informant

Mr. Kamalakannan Elangovan, Director, Informant

Mr. Sanchay Mehrotra, Advocate

Mr. Anmol Joshi, Advocate

OP

Mr. Ramji Srinivasan, Senior Advocate

Mr. Samir Gandhi, Advocate

Mr. Anind Thomas, Advocate

Mr. Rahul Satyan, Advocate

Mr. Nitin Nair, Advocate

Mr. Shivam Jha, Advocate

Mr. Shreya Singh, Advocate

Mr. Nikhil Ramdev, Advocate

*Ms. Dominique Speekenbrink, Sr. Vice President, Head
Antitrust-Practise Group, OP*

Mr. B. Guru Raj, General Counsel & CS, OP



Order under Section 26(6) of the Competition Act, 2002

1. This order shall dispose of the case that has arisen from the information filed by M/s. InPhase Power Technologies Pvt. Ltd. (hereinafter, the '**Informant/ InPhase**'), under Section 19(1) (a) of the Competition Act, 2002 (hereinafter, the 'Act') against ABB India Ltd. (hereinafter, the '**OP/ ABB**') *inter alia* alleging contravention of the provisions of Section 4 of the Act.

Facts in brief

2. The Informant is stated to be a company set up in July 2014 under the Companies Act, 2013 in Bengaluru by two technocrats namely Mr. Kamalakannan Elangovan and Mr. Thiyaneshwar M. S., and later on joined by three other experts namely Mr. Panna Lal Biswas, Mr. Natesh Mayavel and Mr. Hasan Mydin J. The Informant is engaged in designing, developing and manufacturing of Power Quality and Power Conversion products indigenously in India and is supplying to various industries such as automobile, railways, steel, cement, IT parks, and office complexes *etc.* The Informant claims to have developed products such as solar inverter, active harmonic filters, power convertors and Static Synchronous Compensator (hereinafter, '**STATCOM**') panels for power quality improvement, indigenously in a span of one year.
3. The OP is stated to be a public listed company and a subsidiary of Switzerland based ABB Group, which is a global leader in power and automation technologies with presence in approximately 100 countries. The OP is stated to be engaged in the business of manufacturing of electrical equipment like switch gears, drives, automation *etc.* and also manufactures dynamic reactive power compensators and harmonic filters which are power quality and power conversion products.
4. The Informant claimed to have developed a STACOM, named as IPC-150 SCOM, which is averred to be more advanced and superior than OP's product in terms of technology and features. The Informant stated that its product addresses the power



quality problems arising out of dynamic reactive power, unbalanced loads and harmonics, and for which patent application was stated to be pending.

5. The OP, on the other hand, developed two STATCOMs namely, STATCON, which operates on dynamic reactive power and is a patented product in India (patent number 206766) and PQC STATCON, which is an advanced version of STATCON and which works on dynamic reactive power and unbalanced loads. The patent application of PQC STATCON was stated to be pending before the patent authorities.
6. The Informant stated that its product is technically superior to OP's product. The various features of the Informant's product, *inter alia*, are optional Supervisory Control and Data Acquisition (SCADA) connectivity (RS485 – TCPIP), higher reliability because of its in-built feature of Insulated Gate Bi-polar Transistor ('IGBT') capable of functioning and working at higher temperatures which increases the life of the product itself. IGBT is a three-terminal power semiconductor device primarily used as an electronic switch to combine high efficiency and fast switching. According to the Informant, this product has the capability to not only stop amplification of harmonics but also to compensate harmonics and has cloud connectivity and data storage capability.

Allegations

7. The Informant contended that since its product was unique, highly advanced and technologically superior in comparison to the product of the OP, it started getting positive response and attention of the customers and posed danger to the dominant position of the OP. Informant claimed that this positive response of the consumers towards its product prompted the OP to find ways to suppress the technological innovation/development and competition posed by the product of the Informant.



8. The Informant, in the information, suggested the relevant market to be ‘*manufacture and sale of Power Quality Compensators with IGBT technology for low voltage i.e. below 1000V in India*’. The Informant relied upon the report of Ken Research (2015) titled “*India Reactive Power Compensation Market Outlook to 2020*” (hereinafter, the ‘**Ken Research Report**’) and alleged that the OP was dominant in the relevant market with 32% market share which is almost double the next player *i.e.* Alstom which commands 18% market share. Further, the Informant also submitted self-compiled data on the basis of supplies made by OP to railways, automobile and steel sector, in support of its claim regarding the dominance of the OP.
9. The Informant alleged that the OP abused its dominant position by instituting civil and criminal litigation with *malafide* intention in order to stop the Informant from doing business. In the patent infringement suit (O.S. No.6254/2015) for infringement of patent with regard to STATCON (which is an outdated product as on date) instituted before the Court of the City Civil and Sessions Judge, Bengaluru, the OP is stated to have obtained an order of *ex-parte* ad interim injunction against the Informant dated 25.07.2015 which was made absolute *vide* subsequent order dated 20.02.2016.
10. The Informant further alleged that the OP distributed some letter(s) to customers and suppliers apart from making personal calls to them that the Informant is an illegal and sham company against which legal proceedings have been initiated. The Informant also alleged that owing to the wide product portfolio of OP, there was customer dependence on OP for procurement of products other than power quality products and that the OP used this to its advantage by compelling customers to purchase OP’s power quality products *i.e.* PQC STATCON and to stop dealing with the Informant.



11. Based on the above submissions and contentions, the Informant alleged that OP abused its dominant position by acting in contravention of provisions of Section 4(2)(b)(i), 4(2)(b)(ii), 4(2)(c) and 4(2)(e) of the Act.
12. In support of its aforesaid claims, the Informant, vide additional submissions dated 17.02.2016 and 17.03.2016, put on record: (i) a copy of the letter distributed by the OP to its various customers/suppliers (hereinafter '**Patent infringement letter**'), (ii) copies of two declarations one each from a customer/supplier and the distributor of the OP, and (iii) A compact disk (CD) containing recorded conversations with three persons and their transcripts. A certificate under Section 65B of the Indian Evidence Act, 1872 read with the provisions of the Information Technology Act, 2000 was also filed regarding the authenticity of the aforementioned CD.
13. The Informant had sought confidentiality over the identity of the persons who gave the aforesaid declarations on the ground that disclosure of their identity would seriously prejudice the inquiry and investigation process as the OP would influence them and remove all incriminating materials. It was further submitted that the disclosure of their identity would also lead to non-supply of certain products to the concerned consumer/distributor, adversely affecting their business.

Directions to the Director General (DG)

14. The Commission gave a careful consideration to the information, additional submissions and other materials available on record and had a preliminary conference with the parties on 17.03.2016.
15. The Commission observed that the gravamen of the allegations of the Informant was that the OP sought to restrain its suppliers and customers from dealing with the Informant. In addition, the Commission noted the contention of the Informant that OP had instituted civil and criminal litigation with a view to restricting competition and scientific development.



16. Based on all the material available on record and oral submissions made by the parties, the Commission *prima facie* found merit in the allegations of the Informant as the steps taken by the OP, during the pendency of the patent applications and litigations, to dissuade its suppliers and customers from dealing with the Informant, appeared to be anti-competitive in nature.
17. In addition, the Commission also observed that the Informant sought confidentiality over the name of the customers/ suppliers, who had come forward to report the anti-competitive conduct of the OP through letters/declarations and after duly considering the letters/declarations and oral submissions of the Informant, the Commission noted that the disclosure of the identity of such vendors/ customers may affect the business relationship between them and the OP, and may adversely affect their livelihood. Thus, the Commission granted confidentiality regarding the identity of these vendors/customers.
18. Accordingly, the Commission, *vide* order dated 09.06.2016, passed under Section 26(1) of the Act (hereinafter, '*prima facie* order'), directed the Director General ('DG') to cause an investigation into the matter and submit its report.

DG's Investigation and Findings in the Main Investigation Report

19. The DG submitted the Main Investigation Report (Confidential version) on 22.08.2017 and public version on 21.12.2017.
20. The DG, under the provisions of Section 4 of the Act, firstly made an assessment as to whether the OP meets the criterion of being an '*enterprise*' as defined in Section 2(h) of the Act. The DG found that the OP is a public listed company with primary business activity of development, manufacture, marketing and sale of electrical equipments, products, systems and also provision of solution for power and automation. Since it was rendering an economic activity and was involved in '*production and sale of goods and provision of service*', therefore, it was an '*enterprise*' as per Section 2(h) of the Act.



Issue 1: Delineation of relevant market

21. After concluding that OP is an enterprise, the DG delineated relevant product market and the relevant geographic market, in terms of Sections 2(r), 2(t) and 2(s) of the Act while taking into account factors enlisted under Section 19(6) and 19(7) of the Act.

Relevant Product Market

22. The DG observed that the products in dispute in the present matter are Informant's IPC-150 SCOM and OP's STATCON and PQC STATCON, all of which are power quality products. In power quality products, variants are available for different voltage levels, *i.e.* Low Voltage ('LV'), Medium Voltage ('MV') and High Voltage ('HV').
23. As per Section 2 (t) of the Act "*relevant product market*" means *a market comprising all those products or services which are regarded as interchangeable or substitutable by the consumer, by reason of characteristics of the products or services, their prices and intended use*'. Thus, the relevant product market comprises all those products which are regarded as substitutable by consumers by reason of characteristics, price and intended use. In order to delineate the relevant product market, the DG obtained the submissions of the Informant, the OP, various manufacturers, customers, think tanks and research firms.
24. The OP submitted before the DG that it agrees with the Commission's observation that LV power quality compensators are not substitutable with MV and HV products, due to increased product cost, maintenance cost *etc.* The OP stated that Dynamic Reactive Power Compensation Solutions ('DRPC'), whether it is Contactor Switched Capacitors ('CSC'), Thyristor Switched Capacitors ('TSC') or STATCON, are generally designed to operate at LV levels. The OP further submitted that STATCOM can be used for MV levels if combined with a step up transformer but reactive power solutions designed to operate at MV levels cannot be used in LV settings as it would not be cost effective to do so. The OP stated that



the core feature of DRPC products lies in their end use, which is to produce reactive power for the reactive power consumption of electrical devices so as to improve efficiency of electrical power usage. The OP stated that the end-consumer are solution-driven and could either opt for a standalone product or different types of combined solutions which are suitable from a technological as well as commercial perspective. There is significant interchangeability between Automated/Automatic Power Factor Correction ('APFC') *i.e.* non-IGBT based solutions and IGBT based solutions from the perspective of end-consumer. It was further asserted by the OP that there was an incremental increase in speed among CSCs, TSCs and IGBT based solutions, which is beneficial to certain industries such as steel that use a large amount of reactive power, but not enough to classify the two types of reactive power compensation product *i.e.* IGBT and non-IGBT in separate relevant product market. Therefore, as per the OP, various DRPCs are seen as substitutable from a demand-side perspective and should form part of one relevant market. Accordingly, the OP stated that the relevant market should be *manufacture and sale of Dynamic Reactive Power Compensations for LV setting i.e. below 1kV.*

25. During the investigation, the Informant submitted that IGBT based Power Quality Solutions (hereinafter 'PQS') is a different and unique product which is not interchangeable or substitutable with non-IGBT based PQS, as it is based on different technology, characteristics and intended use. Therefore, the Informant defined the relevant product market as '*Manufacture and Sale of Power Quality Compensator with IGBT technology for low voltage, i.e. below 1000V*' which was agreed to by the Commission in the *prima facie* order under section 26(1) of the Act.
26. The DG undertook a site visit at the facility of Informant on 29.01.2017 and discovered no available stock of IPC-150 SCOM, due to injunction from court against manufacture of said product. The process of manufacture of the said product which included preparation of design, fabrication, assembly, testing *etc.* was explained to the DG's inspecting team. Additionally, on 30.01.2017, the DG



inspected the OP's facility and discovered that the company is manufacturing only PQC STATCON, due to customer's preference and the older version *i.e.* STATCON was last sold in 2005 and had become an outdated product, which fact was also mentioned in the information filed with the Commission.

27. Based on the responses of witnesses representing various suppliers, customers, research firms *etc.*, the DG noted that:
- i) IGBT is a step-less technology whereas non-IGBT is a step/ stage-wise compensation product. An IGBT switches on/off at a very high speed and as a result it is possible to have a very fine control of reactive power which is not so precise in APFC or Static Var Compensator ('SVC'). In case of non-IGBT based power quality compensation products the performance deteriorates with change in input frequencies.
 - ii) IGBT based PQS are based on Voltage Source Converter ('VSC') technology wherein a microprocessor is used to generate different wave forms of current in order to compensate power quality issues. IGBT based PQS are active power solutions which enable smooth real time power quality correction with very high switching speed. Alternatively, Capacitor/ Reactor based solutions, *i.e.* non-IGBT based PQS are passive power quality control equipments.
 - iii) IGBT based PQS are used for power factor correction, unbalanced load and harmonic filtering whereas non-IGBT based PQS are only intended for power factor correction and harmonics to a limited extent.
 - iv) If IGBT based PQS is considered a substitute to non-IGBT based PQS for the purpose of power factor correction only, the cost to customer would be nearly three times for IGBT based solution, and the customers are well-aware about differences between the two products.



- v) It was also stated that theoretically, substitutability is certainly possible between the two but IGBT based PQS offer certain features which cannot be readily duplicated by substitutes such as fast change of harmonic correction as they can switch very fast. However, highly skilled manpower and large maintenance cost is required for servicing of IGBT based PQS in comparison with non-IGBT based PQS.
28. The DG observed that Active Harmonic Filters are also forming part of the relevant market as these are also IGBT based PQS used in less than 1KV application. The DG examined Mr. Panna Lal Biswas, MD and CEO of the Informant on this aspect, who admitted that active filters are also considered as power quality compensation products. The relevant part of his statement is reproduced below:

“Q3 Whether active filters are also considered as power quality compensation products?”

Ans. Active filters are one of the power quality compensation products. These are used for harmonic filtration.”

29. Further, the DG, based on the replies and depositions of various witnesses, discovered that the difference between non-IGBT based solutions and IGBT-based solutions was based on various factors such as technology, cost, intended use, performance required *etc.* and did not find merit in the submission of OP with respect to interchangeability between IGBT based PQS and non-IGBT based PQS. Therefore, keeping in view the apparent distinction between non-IGBT based Solutions and IGBT-based solutions from the consumers’ perspective, the DG delineated the relevant product market to be *“Manufacture and sale of IGBT based PQS for less than 1 KV usage”*.

Relevant Geographic Market

30. As per Section 2(t) of the Act *‘relevant geographic market’* means *“a market comprising the area in which the conditions of competition for supply of goods or provision of services or demand of goods or services are distinctly homogenous and can be distinguished from the conditions prevailing in the neighbouring areas”*.



The DG also considered the factors enlisted under Section 19(6) of the Act such as regulatory trade barriers, local specification requirements, national procurement policies, adequate distribution facilities *etc.*, and discovered that conditions of demand of IGBT based PQS were largely similar across India. The DG further observed that the demand for such products in any one region was not distinct from any other region with in India, showing homogenous conditions and, thus, the DG determined the relevant geographic market to be ‘India’.

Relevant Market

31. The DG, based upon above analysis stated the relevant market to be, “*Manufacture and sale of IGBT based PQS for less than 1 KV usage in India*”.

Issue 2: Whether OP is holding a dominant position in the said relevant market.

32. The DG found during investigation that IGBT based PQS is acquired by customers who intend to address all kinds of voltage fluctuations problems.
33. During investigation, the DG received the submissions of the Informant on the dominance of the OP. The DG noted that the Informant placed reliance on: (a) Ken Research Report, as per which ABB (OP) commanded a market share of 32%, followed by Alstom, which was pegged at 18% market share, (b) self-compiled data of tenders wherein OP secured 23 out of 25 tenders from Railways in the period 2005 to 2013, and (c) the list of various customers from auto industries, steel industries and others all over India, in which 38 out of 40 such customers were of the OP. It was further submitted by the Informant that OP had substantial control over customers and suppliers on account of its wide product portfolio and higher economic standing. The DG observed that the said evidences were also placed before the Commission at the *prima facie* stage, and the Commission, while passing order for investigation under Section 26(1) of the Act, had made an observation that data pertaining to relevant market was not filed by either party as it was not readily



available in public domain; however, data submitted by Informant led to inference of dominance of OP at that stage.

34. At first, the DG examined the veracity of the Ken Research Report and self-compiled data submitted by the Informant pertaining to the railway tenders and supplies made to customers in auto industries, steel industries *etc.* However, the DG found the aforesaid report and data insufficient and rather unreliable to arrive at the finding of dominance of the OP in the relevant market for grounds discussed in detail in the subsequent part of this order.
35. During the course of investigation, certain market players including the OP informed that Frost & Sullivan Limited ('**F&S**') has conducted some market study on the power quality compensation products in India. From the response of F&S, the DG came to know that F&S has conducted two studies, viz.: a) Strategic Analysis & Opportunity Assessment of Flexible AC Transmission Systems ('**FACTS**') Market in India (hereinafter, '**Facts Report**') in 2013 and (b) Market Opportunity Assessment of Thyristor Switched Capacitor Panels in India" (hereinafter, '**Thyristor Report**'). The former study was conducted for the OP while the latter was for Cummins. On perusal of the reports, the DG found that the Thyristor Report contained information regarding thyristor based capacitor panels and hence was discarded by the DG and the Facts Report was related to D-STATCOM but not limited to LV application. Accordingly, the DG concluded that the size of relevant market was not readily available.
36. In the absence of any precise and ready to use data, the DG proceeded to obtain the information about the market size of the relevant market. Based on the responses of the Informant, OP and third parties, the DG estimated the relevant market to be approx. Rs 100 crs. To ascertain the markets shares of various players in the relevant market, the DG collected the sales data of from different players for FY 2013-14 to FY 2016-17. Taking into account the market size of Rs 100 cr and average sales



figures of various manufacturers of relevant product, the DG calculated their respective market shares as under:

Table 1: Market Share of various manufactures based on average sales

S. No	Manufacturers	Average Sales (in Rs Crores)	Market Share (considering total market as Rs 100 Crs)
1	Consul-Neowatt	15.77	15.77%
2	Vertive	13.67	13.67%
3	P2Power	9.50	9.50%
4	OP (ABB)	5.80	5.80%
5	Delta	3.21	3.21%
6	Schneider	2.19	2.19%
7	Informant	2.06	2.06%
8	L&T	2.07	2.07%
9	EPCOS TDK	0.60	0.60%
10	Veeral	0.22	0.22%
11	Others	44.90	44.90%
	Total	100	100%

Source: Main Investigation Report

37. In view of the foregoing, the DG arrived at the finding that the OP is not dominant in the relevant market of manufacture and sale of IGBT based PQS for less than 1 KV usage in India.

Issue 3: Whether the conduct of OP, as alleged by the Informant and *prima facie* observed by the Commission, amounts to abuse of dominant position by OP in the relevant market.

38. Though DG arrived at a conclusion that OP was not dominant in the relevant market, nevertheless it examined all the Informant’s allegations with respect to alleged abuse by the OP. The Informant relied on (a) undated Patent Infringement Letter, circulated to potential customers by the OP (b) Two undated letters/declarations from customer/ suppliers (whose identities were granted confidentiality by the Commission at the *prima facie* stage) and (c) a CD containing



transcripts of conversation of the MD and CEO of the Informant with three individuals in support of the following allegations:

- (i) The OP abused its dominant position by instituting civil and criminal litigation with *malafide* intention to restrain the Informant from doing business.
- (ii) The OP had taken undue advantage of dependency of consumers on it as OP forced them to purchase OP's power quality product, *i.e.* PQC STATCON and not deal with Informant by threatening to stop supplies of other products to them.
- (iii) The OP circulated letters and other written material in addition to making personal calls to customers and suppliers, stating Informant is an illegal and sham company against which legal proceedings were being initiated.

39. At the outset, the DG obtained the details of pending litigations from the Informant and the OP and observed that the followings matters were pending in courts as a result of dispute between the Informant and the OP:

- a) Misc. First Appeal No. 3009 of 2016 in the Hon'ble High Court of Karnataka, filed by the Informant against the order of City Civil and Sessions Court, Bengaluru whereby the said Court had granted an interim injunction against the Informant. This appeal was dismissed by the Hon'ble High Court *vide* its order dated 14.09.2016. The Informant had conveyed to the DG that a Special Leave Petition had been preferred against the aforesaid order of the High Court of Karnataka before Hon'ble Supreme Court of India, which was yet to be listed.
- b) Criminal Petition No. 3278/2017 pending before the Hon'ble High Court of Karnataka from the order of ACMM, Bangalore. The learned ACMM in its order dated 08.07.2016 had directed OP to adduce evidence in support of complaint after police had filed a closure report in the matter. In response, the OP filed a criminal petition in the Hon'ble High Court of Karnataka, praying to



transfer its complaint to Cyber Crime Police, Bengaluru or any other appropriate authority. The said petition was pending hearing at the time of the Main Investigation Report.

40. The DG observed that the litigation between the parties is relating to alleged infringement of the patent of the OP by the Informant and misappropriation of data of the OP by the officials of the Informant. Since, the matters are sub-judice in various fora and have no relationship with the examination of the competition issue in this case, the DG did not comment upon the same and proceeded to examine the allegations/issues at (ii) and (iii) of Para 37 in light of the evidences relied upon by the Informant.

Examination of allegations regarding Patent Infringement Letter

41. The Informant had filed before the Commission an undated letter signed by Mr. Shylendra Kumar, CM, Local Product Line Manager and Mr. Rupinder Singh, Local Business Unit Manager, of OP, the relevant contents are reproduced for ease of reference:

"It has recently come to our notice that certain third parties have been claiming to be able to manufacture and sell products that are similar in specification and technology to our product 'PQC STATCON' for dynamic reactive power compensation and power quality improvement.

In this regard, ABB would like to inform you that ABB is the owner of Indian Patent 206766 and Indian patent application 4428/CHE/2011,.....

ABB has not authorized, licensed or permitted any person in India, to use ABB's intellectual property rights associated with the 'PQC STATCON' products in India in any manner, much less manufacture and sell products using ABB's intellectual property. ABB takes the violations of its intellectual property rights in India very seriously and especially in relation to the 'PQC STATCON' product, in the event any party claims to be the owner of or uses ABB's intellectual property in India,



ABB will take appropriate legal action to safeguard its intellectual property right in the 'PQC STATCON' product.
.....”

42. The DG examined on oath Mr. Rupinder Singh, and Mr Shylender CM of the OP, signatories to the aforesaid letter, about its contents and purpose. Mr. Singh stated that such letter was issued for customer awareness without naming the Informant in order to protect OP's Intellectual Property Rights, as developing a product similar to PQC-STATCON requires R&D of 2-3 years but Mr. Panna Lal Biswas, MD and CEO of Informant (and a former employee of the OP) started promoting similar product within few days after he left OP which showed that he stole OP's Intellectual property. Both of them admitted that the letter was sent to few customers, the details of which was subsequently made available to the DG.
43. The DG perused the contents of the letter and noted that the OP has neither mentioned the name of the Informant nor its product and the said letter was in the nature of a general practice by any patent holder to issue such letters or publications in newspaper for safeguarding their legitimate commercial interest. The DG observed that generally in the competition law, the act of a patent holder could qualify as an abuse of dominant position if such act cannot reasonably be considered as an attempt to establish its rights but only serve to harass the other party, and is conceived in the framework of a plan whose goal is to eliminate competition. Moreover, with the patent infringement suit before City Civil Court, Bangalore the Informant was restrained from infringing upon OP's patent, and the said letter was issued before the filing of such infringement suit. Thus, the issue of the said letter was not in the nature of harassment by the OP. The DG further noted that by the said conduct of the OP there was no elimination of competition as there are a number of players, including some new players, operating in the market. Thus, none of the conditions for establishing abuse is present here. However, the investigation proceeded to find out whether such letter created a favourable condition for the OP or unfavourable condition for the Informant in the relevant market.



44. The Informant had submitted the names of Mr. Naveen Gupta, Project Head, M/s JBF Petrochemical Ltd. (hereinafter, '**JBF Petrochem**') and Mr. P.P. Gopinath, Senior Manager (Project Electrical), M/s Tamil Nadu Newsprint and Papers Limited (hereinafter, '**TNPL**') to whom such letter was alleged to be issued and the Informant lost the orders on account of alleged abuse of dominance by the OP.
45. The DG examined Mr. Naveen Gupta of JBF Petrochem, who stated that his company had purchased hybrid system (combination of 33kV level capacitor bank, LC circuits, Static Compensation unit *i.e.* STACOM) from the OP in 2015. The process of procurement was handled by M/s Technip India Ltd. ('**Technip**') wherein quotes were taken from the OP, Informant and Schneider after preliminary screening. Mr. Gupta stated that the order was placed after recommendations from Technip who had recommended both the OP and the Informant as meeting the technical requirement. Mr. Gupta further stated that negotiations had been done with respect to price with both the OP and the Informant despite the fact that the Informant had never executed such kind of work. The DG confronted Mr. Gupta with a copy of the patent infringement letter, to which he claimed that he had no knowledge of such letter and the said letter must have been shown to Technip during technical evaluation and reiterated that his choice was unbiased. A perusal of the Technip Evaluation Report by the DG indicated that the OP had informed Technip about the legal notice sent by it to the Informant over patent rights. However, Mr. Gupta stated that dispute between the OP and the Informant was never a concern, and the order was placed with the OP due to '*lower price, past proven record and experience*' after price negotiations with both the OP and the Informant. He further stated that had the IPR related issue been a concern, the Informant would not have been called for price negotiations thrice. The DG observed that the final negotiated price of the OP was Rs. 4.65 Crore and that of Informant was Rs. 5.47 Crore. The DG further observed that the evaluation report was prepared in the month of December 2014 and Mr. Panna Lal Biswas of the Informant had left services of the OP in August 2014 and the patent infringement suit was filed on 17.07.2015 which confirmed that the OP did not write the letter after getting stay order from the court



and the purpose was to protect IPR and not to harass Informant or restrain competition. The DG further noted from the statement of Mr. Gupta that there was no material to suggest that the supply order was not awarded by JBF Petrochem to the Informant on account of coercion/ fear of the OP.

46. After examination of the allegation in relation to the JBF Petrochem tender, the DG went on to examine the allegation of abusive conduct in relation to TNPL tender. Mr. P.P. Gopinath of TNPL stated that four bidders viz. OP, Delta Power, P2Power and ICDPL participated in its tender dated 10.12.2015 inviting bids for designing, manufacturing, testing and supply of AHF (Active Harmonic Filter). He further stated that the OP was found to be L-1 with the necessary technical specifications after price and technical evaluation. It was also stated that the Informant was not a direct bidder in the said tender but had come jointly with ICDPL and their bid was L-4. Mr. Gopinath also stated that he didn't have any knowledge of Patent Infringement Letter issued by the OP and expressed that the same might have been disclosed to its consultant *i.e.* **SBP-PC**. The DG confronted Mr. Gopinath with the allegation by Mr. Panna Lal Biswas, MD and CEO of the Informant that he was forced to reveal its bid price and rating during a meeting. To this, Mr. Gopinath responded stating that TNPL enquired about the legal proceedings pending against the Informant which was clarified by the Informant stating that the litigation is with respect to STATCOM and not the product under tender. The same also finds mention in the minutes of the said meeting dated 19.04.2016. However, there is no iota of evidence supporting the allegation of the Informant that it or ICDPL was forced by TNPL or its consultant to reveal its price or rating. When the DG inquired from the Informant as to whether it or ICDPL filed any representation with TNPL challenging its decision to award tender to the OP, to which the MD of the Informant averred that *"No, I thought no point in pursuing the matter further"*. Accordingly, the DG concluded that the tender was awarded to the OP by TNPL on the basis of technical evaluation report and being L-1, and not account of any abusive conduct by the OP.



Examination of allegation regarding customers/ suppliers:

47. The Informant had filed 2 letters, one from supplier of OP and one from distributor of OP, whose identities were granted confidentiality by the Commission at the *prima facie* stage. Hence, they will be referred to as the Supplier and the Distributor for the purpose of the present order.
48. With regard to the Supplier, the Informant alleged that the OP called the Supplier in its office and insisted him not to give any support to the Informant. The DG examined the representative of the Supplier on oath and confronted him with a letter written by him on letterhead of his firm wherein it was stated that the OP does not consider his firm for business since the said firm is dealing with the Informant. To this, he stated before the DG that his firm assembled panels of PQC STATCON, AHF, CSC and TSC for the OP till Dec 2013. He stated that around the period Sep-Oct 2013, the Informant had approached his company for assembling and integrating AHFs, which activity it commenced in April 2014, and the OP had not placed any further orders with his firm since then. Thereafter, he approached the concerned official of the OP who conveyed to him that due to business dispute between the OP and the Informant, decision was not to give further orders to his firm for assembling of PQC STATCOM panels. However, he stated that his firm continued to get orders for assembling the TSC and CSC based panels from the OP. The DG confronted the assertions made by the said Supplier with Mr. Shylendra Kumar of the OP who stated that such discussion took place with few suppliers (which included the confidential supplier referred above) to check possible leakage of the trade secret and IPR of the OP.
49. The DG found that the OP had not discontinued dealing with the supplier in respects of the products other than STATCON/PQC STATCON. Taking the above into account, the DG concluded that the OP stopped dealing with the said supplier in order to protect its IPR and commercial interest. This according to the DG, demolished the allegation of the Informant that the OP insisted the supplier not to give support to the Informant and the OP continued to work with the said supplier



irrespective of the fact that the said supplier was executing the panel work for the Informant.

50. With regard to the Distributor, the Informant alleged that the OP called him (the Distributor) in a hotel and convinced him that the Informant's product was of poor quality and will not work for more than 6 months and at that time he (the distributor) will be in a big problem. So he had stopped procuring Informant's products for one year.
51. The DG summoned the representative of the Distributor and also confronted him with letter written by him stating that there were reservations in doing business with the Informant due to willfully wrong and unjust influences from the OP, to which he replied that the letter was issued on instructions of Mr. Panna Lal Biswas so that Informant could procure order from M/s. Orchid Laminates Pvt. Ltd and secure other future orders. With regard to allegation of the Informant that the OP influenced him against the Informant, he categorically stated that *"No, ABB employees never told me about the quality of InPhase products."* He also stated that *"During training/seminar in hotel Atria, Bangalore on 08.05.2015, one Sh. Ganesh of ABB told me that InPhase will not be able to execute the orders if an order for power quality compensation solution is given to them. He told me that ABB has a big set up as compared to InPhase. He did not tell me anything about the quality of InPhase product. After we had installed one of InPhase product in Wendt India in 2015, we monitored for 6 months for ensuring its performance because of feedback of ABB. Thereafter, being satisfied with set up of InPhase, we started promoting InPhase product. Our decision to monitor InPhase was not influenced by ABB and it was our internal decision because InPhase was a new entity and want to ensure its performance."* The said statement of this witness falsifies the allegations of the Informant that he was influenced by the OP against the Informant. He further clarified that no further order was given to the Informant for six months as it wanted to ensure the quality and performance of the product of the Informant. After being satisfied with set up of Informant, they started promoting



Informant's product and continued to have business with the Informant. He submitted before the DG that his decision to monitor Informant was not influenced by the OP and it was an internal decision as the Informant was a new entity and they wanted to ensure its performance. He further stated that they do not have any grievance against the OP and had approximately rupees 7 crore turnover from OP's products.

52. In view of the above, the DG concluded that there was no evidence to substantiate the allegations raised by the Informant regarding the supplier and distributor being influenced by the OP against dealing in Informant's product.

Examination of allegations based on telephonic conversation:

53. The Informant submitted three telephonic recordings along with transcripts in support of its allegation that the OP was circulating obnoxious information relating to the Informant to malign its reputation which amounted to abuse of dominance by the OP.

53.1 The first recording was between Mr. N. M. Ramadas, Senior Consultant, Jindal Steel Works (hereinafter, 'JSW') and Mr. Panna Lal Biswas of the Informant. Before the DG, Mr. Ramadas admitted to knowing Mr. Panna Lal Biswas as an employee of the OP. Mr. Ramadas recollected that such conversation took place when there was requirement of Active Filters at JSW Steel, wherein official of the OP informed him about ongoing litigation and use of the OP's technology by the Informant. Mr. Ramadas reiterated that discussion with the OP was on technical issues and no measure was taken against Informant and the OP has never indulged in any negative behavior against Informant even though recording was made without his knowledge. He stated that he had casually discussed with Mr. Pananalal Biswas about certain technical queries regarding active filter. The DG noticed that apart from the official of the OP informing Mr. Ramadas about the ongoing court case, nothing adverse was told by the said concerned official of the OP to Mr.



Ramadas about the Informant and the allegations of Informant that the OP put negative words about the Informant to Mr. Ramadas had been found not to be true.

53.2 For the second recording between Mr. M. S. Venkatesh Prasad, MD and CEO of M/s Lotus Power Gear Pvt. Ltd. (ex-employee of the OP) and Mr. Biswas of the Informant, the DG examined Mr. Prasad wherein Mr. Prasad stated that he and Mr. Biswas, were colleagues while working for the OP and admitted of having limited knowledge of the ongoing patent dispute between the Informant and the OP as it was a general news in the market. Mr. Prasad stated that his company had no dealing with the Informant but supplied switch boards to the OP and purchased components like breakers, capacitors, contactors *etc.* from the OP, which meant that his company was both a customer and a supplier to the OP. Mr. Prasad further stated that Mr. Shylendra of the OP had conveyed to him that Mr. Biswas was a competitor and did not tell anything negative about the Informant. The DG is of the opinion that the allegation of the Informant that the OP had spread bad words about it to Mr. Prasad had not been found to be true.

53.3 For the third recording between Mr. Sidharth Thareja, working with GE Power Conversion India Limited, (ex-employee of the OP), and Mr. Panna Lal Biswas, the DG examined Mr. Thareja who stated that he knew Mr. Biswas while working for the OP but they worked in different departments and admitted to being in touch with Mr. Biswas. He stated to have knowledge of an ongoing IPR dispute between the OP and the Informant. The DG confronted Mr. Thareja about a letter being circulated by the OP against Informant to Southern Railway and Mr. Thareja being aware about it to which he admitted to having received such information from Mr. Ajay Kumar, Lead Engineer of his company. Mr. Biswas was confronted with the aforesaid revelation about the letter given by the OP to Southern Railways to not allow Informant to participate in tender. Mr. Biswas stated that he did not enquire



from Southern Railways about any such letter given by the OP. Further, he had never participated in any tender for Southern Railways and had only given budgetary quote for AHF. The DG observed that communication between Mr. Thareja and Mr. Biswas regarding the purported letter was not established, rather based on hearsay evidence. Further, the DG took the view that since the Informant had not participated in any tender of Southern Railways, the question of submission of letter by the OP to restrain Informant's participation was of no consideration.

54. In view of the foregoing, with regard to allegations of abuse of dominant position, the DG concluded that the said allegations towards the OP were baseless and devoid of merit. The patent letter sent by the OP to parties was a precautionary step taken by the OP for safeguarding commercial and future interests before initiation of patent infringement proceedings, and such letter did not create any favorable condition for OP or unfavorable condition for Informant. The tenders of JBF and TNPL were also discovered to be awarded to the OP on merit and no evidence was found to substantiate the allegations of Informants. The DG also discovered that the OP continues to deal with the Supplier and the Distributor despite their business arrangement with the Informant. The DG also did not come across any incident, wherein, the OP forced its customers/ distributors/ third party from restricting or limiting business with the Informant.
55. The Commission considered the Main Investigation Report in its Ordinary Meeting held on 03.01.2018 and decided to forward the electronic copies of the public version of the report to the parties for filing suggestions/ objections by 09.02.2018 and fixed hearing in the matter on 22.02.2018 which was rescheduled to 03.05.2018 on request of the parties.
56. The OP and the Informant filed their respective submissions on the Main Investigation Report on 09.02.2018 and 19.02.2018, respectively. The Informant also filed additional submissions on 25.04.2018, which was duly allowed.



57. On 03.05.2018, the matter was listed for hearing the parties on the main investigation report. The counsel for the Informant, *inter alia*, raised an objection with respect to rejection by the DG of its application dated 21.07.2017 requesting to conduct cross examination of those witnesses whose statements have been relied upon by the DG. The Commission allowed the Informant to move a formal application for cross-examination detailing the list of the witnesses and grounds for seeking such cross-examination and, accordingly, fixed hearing in the matter on 18.05.2018. As directed, the Informant moved an application dated 10.05.2018 before the Commission for seeking cross-examination of certain witnesses (hereinafter, '**Cross Examination Application**') including two witnesses who were granted confidentiality over their identities.
58. On 18.05.2018, the Commission heard the Informant and the OP on the Cross Examination Application and decided to pass appropriate order in due course. The Informant had sought cross-examination of 13 witnesses and the Commission allowed cross-examination of 11 witnesses (including the two confidential witnesses) out of these 13 witnesses to the Informant, *vide* order dated 09.07.2018. Additionally, on request of the Informant, the Commission directed the DG to record the statements of two more witnesses' viz. consultants of TNPL and JBF Petrochem, and subsequently allowed their cross-examination to the Informant. Thus, the Commission, *vide* order dated 09.07.2018, referred the matter back to the DG for conducting cross examination and directed the DG to revisit its findings in case the cross-examination or recording of statements brought out any new facts in the matter and suitably modify its findings in the Investigation Report, accordingly.
59. Thereafter, the OP *vide* application dated 20.07.2018 sought cross-examination of all the witnesses (except its own employees) as allowed to the Informant and of Mr. Panna Lal Biswas, CEO of the Informant. On 02.08.2018, the Commission considered the said application of the OP and towards ensuring equal opportunity to the parties, the Commission allowed the OP's request. With respect to



maintaining confidentiality of the two witnesses, the DG was directed to take adequate measures to protect their identities while conducting cross-examination.

60. Later, the Informant moved an application dated 08.01.2019 requesting the Commission to direct the DG to conduct the cross examination of representatives of TNPL and its consultant on one day and that of representatives of JBF Petrochem and its consultant on another day. The Commission considered the said application on 09.01.2019 and directed the DG to take necessary action on the request of the Informant.
61. Subsequently, the DG moved a request dated 23.01.2019 expressing difficulty in maintaining confidentiality of two confidential witnesses while conducting cross examination. The OP also moved an application dated 04.02.2019 stating that confidentiality granted to those two witnesses would be a significant impediment to effectively cross-examine them, both logistically and substantively. The Commission in its Ordinary Meeting held on 05.02.2019 considered both the aforesaid requests and decided to hear the Informant and the OP on 14.02.2019.
62. On 14.02.2019, the Commission heard the parties separately on the aspect of cross examination of the two confidential witnesses. On careful consideration of the respective submissions of the parties and aforesaid request of the DG, the Commission directed the DG to seek the views of the confidential witnesses, if they still wish to claim confidentiality on their identities, since the fact that confidentiality was granted to them *vide* the *prima facie* order dated 09.06.2016 and considerable time had lapsed since then.
63. The DG, *vide* confidential note dated 11.03.2019, informed the Commission that both the witnesses had requested to keep their identities confidential. Accordingly, the Commission, in order to ensure equal opportunity to both the parties and in consonance with the principles of natural justice, disallowed the cross-examination of the said two witnesses both by the Informant and the OP. Further, the



Commission directed the DG to submit Supplementary Investigation Report without conducting the cross-examination of the said two witnesses.

Findings of the DG in the Supplementary Investigation Report

64. The DG submitted the Supplementary Investigation Report in the matter on 17.05.2019 after conducting the cross examination of the following witnesses

Table 2: List of witnesses cross examined by the parties

S. No.	Names of Witnesses
1.	Shri Shwetank Jain, Director, P2P Solution Private Limited
2.	Shri Raju Chaubey, DGM, Jindal India Limited
3.	Shri Varunesh Prasad, MD, Veeral Controls Private Limited
4.	Shri Vinayak Joshi, Sr. VP, Consul Neowatt Power Solutions Private Limited
5.	Shri PP Gopinath, Senior Manager, TNPL
6.	*Consultant of TNPL- Mr. S. Balasubramaniam, HOD (Electrical), SPB Projects and Consultancy Ltd.
7.	Shri Naveen Kumar Gupta, President, JBF Petrochem
8.	*Consultant of JBF Petrochem- Mr. Swagata Mukherjee, HOD (Technical), Technip India Limited
9.	Shri Rupinder Singh, Senior VP of OP,
10.	Shri Shylendra Kumar CM, VP of OP
11.	Shri Siddharth Gautam Thareja
12.	**Shri Panna Lal Biswas, MD & CEO of the Informant

*The statement of witnesses at Sl. No. 6 and 8 were recorded during the Supplementary investigation and thereafter, cross examination was allowed to the Informant and the OP.

** Witness at Sl. no 12 was cross examined by the OP and witnesses from Sl.no. 1-9 were cross examined by both the Informant and the OP; Witness no. 10 and 11 were cross examined by the Informant only.

65. During the cross examination of Mr. Shwetank Jain, it came to notice of the DG that he admitted that his company (P2Power) participated in the TNPL tender but denied of having been present in the discussion/meeting with TNPL in March-April 2016. This statement was found to be untrue as the Minutes of meeting dated 19.04.2016 of TNPL indicated his presence at the said meeting. However, the DG did not find such fact to have any bearing on the findings of the investigation.
66. During the supplementary investigation, the DG gave one more opportunity to the Informant to file any evidence or data on the relevant market. The Informant availed



the opportunity but instead of filing any data, reiterated its submissions of incorrect delineation of relevant market by including STATCOM and AHF in the same market, of not including traction market in the ascertaining relevant market size and alleging that the OP submitted incorrect sales figures to undermine its dominance.

67. The DG directed P2Power and Veeral to file the revised details of IGBT based PQS less than 1KV usage for FY 2013-2014 to FY 2015-16 as there were some contradiction in their figures which came to light during their cross examination. The DG noted that after taking into account the revised sales figures, the average sale of P2 Power changed from INR 9.5 Cr to INR 8.71 Cr. and for Veeral it changed from INR 0.22 Cr to INR 0.09 Cr. The DG further noted that the changes in the sales figures of P2 Power and Veeral were insignificant and did not have any considerable impact on the market share as well as their ranking in the total market size.
68. The DG also considered the sales of IGBT based PQS for less than 1KV usage of the OP to Indian Railways during 2013-14 to 2016-17 and observed that the OP has not made any supply to the Indian Railways for the period FY 2014-15 to FY 2016-17. The DG further observed that sale of relevant product to the Indian Railways during 2012-13 and 2013-14 is 4.07 Cr and 1.04 Cr, respectively. The DG also notes that the sales figures for FY 2013-14, 2014-15, 2015-16 and 2016-17 taken into consideration for the purpose of calculating the market share of the OP includes the sales made to the Indian Railways during that period.
69. The DG concluded that in view of the cross examination of the witnesses and the facts brought out, it is evident that there is no new fact which may require revisiting the findings of the DG on delineation of relevant market, assessment of dominance and or its abuse. Rather the cross examination corroborates the findings of the main Investigation Report on all the issues.



70. The Commission considered the Supplementary Investigation Report in its Ordinary Meeting held on 04.07.2019 and decided to send a copy of the same to the parties in electronic form for filing their respective suggestions/objections by 02.08.2019 and fixed hearing in the matter on 20.08.2019. However, on request of the OP, the Commission extended the time for filing the suggestions/ objections till 20.08.2019 and heard detailed submissions of the parties on 05.09.2019.

Reply/Objections of the Parties

Reply/Objections of the Informant in response to the Investigation Report and Supplementary Investigation Report

71. The Informant filed submissions to the Main Investigation Report on 19.02.2018 and additional submissions on 25.04.2018. The Informant filed its submissions to the Supplementary Investigation Report on 20.08.2019. After the oral hearing on 05.09.2019, the Informant also filed its synopsis of the oral arguments on 16.09.2019. Accordingly, by way of written and oral submissions, the Informant submits as under:

- 71.1. Informant did not agree with the ‘*relevant market*’ as delineated by the DG and strongly objected to classification of IGBT based STATCOM and IGBT based AHF as single ‘*relevant product market*’ by the DG and stated the same to be erroneous and against market practice. As per the Informant, AHF is not at all substitutable with STATCOM which was very clear from the inception of the case and the Commission also agreed with Informant’s submissions in this regard as find mention in the *prima facie* order.
- 71.2. The ‘*relevant product market*’ has to be delineated from the demand side perspective *i.e.* interchangeability and substitutability from the view point of the consumers, rather than the supply side *i.e.* manufacturers or suppliers. The DG erred in correctly ascertaining the relevant product market as



majority of the witnesses examined by the investigation were manufacturers/suppliers.

- 71.3. The DG completely ignored the crucial fact that AHF and STATCOM were two different products and are not substitutable based on characteristics, price and end-use as per Section 2(t) of the Act. Moreover, the DG has not taken any steps to collect the relevant data for obtaining the demand side view regarding interchangeability between STATCOM and AHF. The DG has misconstrued, misinterpreted and ignored the true interpretation and relevancy of the testimony of witnesses from supply-side manufacturers, in delineating the relevant market.
- 71.4. The DG has tried to defend its earlier findings in the Main Investigation Report and has not put any efforts to critically analyse the statements of witnesses and point out that the AHF and STATCOM are not substitutable and, hence, do not constitute a single relevant market.
- 71.5. The DG ignored the significant question of difference between STATCOM and AHF to be asked from the witnesses and instead kept asking difference between IGBT and non-IGBT product. The investigation was faulty as classification and categorization could not come out clearly. Informant also submitted that reactive power compensators based on IGBT technology are manufactured by only a handful of companies *i.e.* ABB, Dubas, Shreem, Schnieder, Veeral, P2P and Delta and, therefore, the OP has very limited competitors in this segment.
- 71.6. Informant disputed AHF's inclusion in the 'relevant product market' and submitted that the DG's conclusion with respect to market size and the OP's dominance were only based on estimates rather than on any conclusive and/or determinable data. The DG arrived at the relevant market size based on figures provided by the OP and other competitors.



- 71.7. The DG erred in not relying on Ken Research Report as it identified the difference between IGBT based STATCOM without including IGBT based harmonic filters while arriving at Rs. 135 crores as market size for RP.
- 71.8. The DG did not call for product wise sales data from the OP and its competitors to arrive at correct relevant market size.
- 71.9. The DG erred in obtaining Railway tender from the OP itself, which should have been procured from Indian Railways (Ministry of Railways).
- 71.10. The DG ignored the Informant's submissions that the OP is dominant in the traction market which can be deduced from the fact that there are only 3 manufacturers who have been listed as eligible by RDSO for filling up Railways tenders *i.e.* OP, Dubas and Shreem. The DG did not verify the authenticity of the Informant's claim from RDSO and instead only relied on the OP's submissions.
- 71.11. The DG failed to investigate OP's dominance in other industries like steel and automobile sectors, for which Informant had submitted self-compiled data and also failed to verify that data with the mentioned companies.
- 71.12. The DG accepted the OP's sales figures without verifying the authenticity of the same as DG failed to summon 'product wise sales ledger' as well as audited financial results for relevant products for FY 2013-14 till 2016-17.
- 71.13. There is a stark difference in the price (of STATCOM) offered by the Informant and the OP and this shows that Informant's product was more attractive, disruptive and more competitive as compared to the OP's product. The DG ignored this aspect also while assessing abuse of dominance by the OP.



71.14. Patent Infringement Letter issued by the OP was to influence customers with regards to Informant only and also to cut down any possibility of the Informant to obtain orders. The DG failed to appreciate the fact that two companies admitted receiving the patent violation letter by the OP which was concealed by the OP.

Reply/Objections of the OP to the Main Investigation Report and Supplementary Investigation Report

72. The OP filed submissions to the Main Investigation Report and Supplementary Investigation Report on 09.02.2018 and 20.08.2019, respectively. After the hearing on 05.09.2019, the OP filed public and confidential version of its synopsis of oral arguments on 20.09.2019. On the directions of the Commission, the OP also filed a copy of the document containing relevant turnover certified by a Chartered Accountant on 30.10.2019.
73. The OP submitted that generally it is in agreement with the findings of the DG concluding that the OP is not dominant in the relevant market and that it did not contravene any provisions of the Act. Notwithstanding the above, the OP is of the view that though the IGBT based PQS differs from non-IGBT products in respect of accuracy, cost, utility and underlying technology, but are substitutable from the view point of the consumer who looks for a solution for its power quality problem and makes a decision based on its need and budget. The key submissions of the OP are as under:
- 73.1. IGBT based PQS and non-IGBT based PQS are substitutable from the perspective of consumers as well as from manufacturers' perspective, and despite differences in product characteristics, IGBT based PQS and non-IGBT based PQS are part of the same 'relevant product market'.



- 73.2. Even if narrower market of only IGBT-based PQS below 1KV is considered, Active Harmonic Filters (AHF) are very much a part of such narrower market.
- 73.3. The traction market is not part of the Relevant Market in any manner. Regardless of the same, only one tender of Indian railways was won by the OP during FY 2013-14 to FY 2016-17. As per the Informant, the OP had installed PQC STATCON at 18 such substations, thus, giving the OP a market share of only about 4.5% given the fact that there are close to 400 traction sub-stations in India. Hence, even if the traction space were to be looked at specifically, the market share of the OP would be negligible in such market.
- 73.4. There are no regulatory barriers in this market, as evidenced by the presence of a large number of international and local players.
- 73.5. The OP is not dominant within the meaning of Section 4 of the Act as its market share is insignificant and no factor u/s 19(4) is made out.
- 73.6. The OP has not abused its dominant position as the SLP filed by the Informant in the Hon'ble Supreme Court was dismissed, demonstrating that the litigation initiated by the OP against the Informant was not with a *malafide* or frivolous intention as alleged by the Informant, but was a legitimate act to protect its intellectual property.
- 73.7. The Supplementary Investigation Report notes that the allegations of the Informant that the OP had influenced JBF and TNPL against the Informant in their respective tenders was unsubstantiated. Mr. Panna Lal Biswas himself admitted that the Informant was L4 (highest bidder) in the tender issued by TNPL. Mr. Biswas also stated that he did not challenge the tendering process of TNPL in any way. Further, he has also



admitted that the last offer made to JBF by the Informant was higher than the one made by the OP. This clearly demonstrates that the Informant would not have won either tender in any case.

ANALYSIS

74. Stated briefly, the matter involves technical aspects related to power quality issues and the products required to address these issues. Accordingly, it is useful to be acquainted with these issues and products to address them before analyzing the relevant market in the instant case.
75. The generation of electricity is done at MV level in a power generation plant. At lower voltages, more of the electric power is converted to heat and lost to the atmosphere. Therefore, the voltage level of electricity is increased ("stepped up") to HV by a power transformer in a substation located at the power generation plant to allow for efficient transmission of the electricity over the transmission network. At its destination, the voltage of electricity is then brought down ("stepped-down") by a power transformer in successive substations to MV level for transmission over the distribution network and ultimately stepped-down to medium or low voltage levels for industrial or household use. Generally, end-customers such as homes and shops are connected to a LV network, which in turn is linked to a distribution network. Certain industrial customers with a higher usage of electricity (*e.g.*, process industries, automotive industries, steel plants) or railway network operators may be connected directly to a distribution network (*i.e.*, at MV level).

Power quality problems: Reactive power and harmonics

76. In an AC electricity network, the generation, transmission and distribution of electricity produces and uses two types of power-(a) real power or active power and (b) reactive power. The combination of active and reactive power represents the apparent power and is measured in kilovolt-amperes ('KVA'). By contrast, reactive



power does not do any real work by itself but it exists in an AC circuit when the current and voltage are not in phase. Reactive power is the power needed to generate the magnetizing current to start a motor or charge a capacitor and is measured in kilovolt-amperes-reactive ('KVAR'). Reactive power is important to an AC electricity network because it sustains the magnetic field needed by certain types of electrical devices (such as electrical motors, furnaces, welders and transformers) and ensures a continuous and steady flow of active power on electricity networks. However, if an electrical device does not receive the reactive power it needs from a nearby source, the device will pull the necessary reactive power from the wider network through power lines thereby leading to higher cost, less capacity on the network to transport electricity and, in the worst case, destabilizing the power grid. The relationship between the active and reactive power represents the "power factor", which is simply the measure of how effectively electrical power is being used. A perfect/ideal power factor is a unity *i.e.* 1, but this is practically impossible to attain as the power factor on a network is in constant flux depending on the different types of electrical devices connected to the network, which consume or generate reactive power. A "bad" power factor, usually below 0.95, suggest that use of the electrical power is very inefficient or wasteful and more reactive power is required. Penalty is imposed on the consumer in case of low power factor. Therefore, to avoid the penalty and to make power factor good, the role of reactive power compensation products comes to picture. The basic function of a Reactive Power Compensation product/solution is to produce reactive power to compensate for the reactive power consumption of electrical devices such as electrical motors, furnaces, welders and power transformers.

77. LV Reactive power compensation solutions can be used in MV setting by combining it with a step-up power transformer. Solutions for a low power factor have applications across geography and industries whether using high, medium or low voltage power. There are various methods for dynamic compensation for the reactive power and to improve the power factor, voltage regulation, reduction of flicker *etc.*



78. Next, it is noted that Harmonics are simply called as pollutants in the power system and they produce electrical 'noise' which can result in fires/equipment burnout, intermittent or mal-operation of sensitive electronic equipment, failure of capacitors and other problems. These are currents which flow back into the network and distort the supply waveform, thereby, increasing network losses and reducing the reliability of equipment and, thus, these harmonics need to be compensated or filtered.

Power Quality Products

79. There are different types of power quality products available in the market for reactive power and harmonics compensation depending upon the need and requirement of industry or consumer which are discussed as under:-

A. Fixed Capacitors (FC) and Fixed Capacitor Banks:

This is the earliest, simplest and most economical form of power factor correction and designed solely for the purpose of providing a constant, fixed amount of reactive power to meet predetermined system goals. Multiple fixed capacitors can be put together to form Fixed capacitor bank in order to achieve a higher amount of power factor correction. This is a passive solution as it provides fixed amount of reactive power and, thus, can overcompensate or undercompensate and disturb the equilibrium in the grid.

B. Automatic Power Factor Corrector (APFC):

When additional load is created by reactive power, it results in frequent changes in power factor and FCs are at disadvantage. This led to the development of APFC which could dynamically ensure that the necessary reactive power is inserted into the electrical system to balance the Power Factor correctly (without over or under-correcting). Initially, the contactor switched capacitors (CSC) and subsequently, the thyristor switched capacitors (TSC) based



products were developed, both of which in essence are FCs connected to on/off switches.

- In CSC, electrically controlled switches called contactors are used to switch the capacitor on or off. It often provides marginally more or less reactive power than what is actually required as it takes 1-2 minutes to switch on or off.
- The TSC were developed to address the customer need for a higher speed to bring capacitor on- or off-line. Thyristor, a diode based semiconductor device, is used in TSC for on/off. TSC respond faster than CSC *i.e.* in milliseconds instead of 1-2 minutes.
- Passive Harmonic Filters are used to provide low impedance path for harmonics currents so that they flow in the filter and not in the supply. These are series reactor and capacitor tuned to the individual harmonic frequencies and connects in shunt with network to reduce the harmonic distortion. Passive filters are economical but if load changes then passive filters are not so effective in filtering harmonics due to variation in network frequency and network parameters.

It is to be noted that CSC, TSC and Passive Harmonic filters are collectively referred to as Non-Insulated Gate Bipolar Transistor-based ("**Non- IGBT**") based PQS.

C. Static Synchronous Compensators (STATCOM) and Active Harmonic Filter ('AHF'): STATCOM and AHF are the most recent generation of APFC, which utilize IGBT technology to allow for even quicker reaction time and are also called IGBT based PQS or Active Solutions.

- STATCOM are based on IGBT technology which does not use embedded fixed AC Capacitor and instead uses DC Capacitors. These solutions use VSC technology which works by pulling power from a grid and with the help of an electronic circuit, creates a lead (or lag) between the applied voltage and injected current into the network. In other words, IGBT based PQS generates (capacitive) or absorbs (inductive) reactive power



without any passive (capacitor) elements. An IGBT based PQS is able to provide instantaneous and step-less compensation for dynamic reactive power (inductive as well as capacitive) and unbalanced loads. It functions in real-time and more accurately matches the required power factor. This incremental increase in speed and accuracy is beneficial to industries, such as steel, which requires bursts of reactive power for smelting, or for automotive industries where welding occurs intermittently, but which use a large amount of reactive power which could disrupt the line. The IGBT based PQS comes at a higher cost than CSC or TSC based solutions or APFCs.

- Active Harmonic Filters are IGBT based solutions which produce equal and opposite of each harmonic current that are generated by loads and brings down the Total Harmonics Distortion (THD) to within the set standard limit. Most of the demerits of Passive filters are overcome by Active Filters.

D. Hybrid System: This is a combination of Active and Passive power quality products.

Analysis by the Commission

80. Having been acquainted with the power quality problems and need for power quality solutions to address such problems, the Commission proceeds to examine the issues at hand in the present case.
81. On a perusal of the information, Main Investigation Report, Supplementary Investigation Report and the replies/objections filed by the Informant and the OP, submissions made by the parties during the oral hearing and other material on record, the following points arise for consideration and determination in the matter:



Issue No. 1: What is the relevant market in this case?

Issue No. 2: Whether ABB is dominant in the said relevant market?

Issue No. 3: If finding on Issue No. (ii) is in the affirmative, whether ABB has abused its dominant position in the relevant market(s)?

Issue No. 1: What is the relevant market in this case?

82. The Commission notes that the relevant product market comprises all those products which are regarded as substitutable by the consumers, by reason of characteristics of the products, their prices and intended use. Thus, at the *prima facie* stage, considering the fact that the impugned products of both the Informant and OP were low voltage variant and given the fact admitted by both the parties that low voltage power quality compensators were not substitutable by high voltage power quality compensators on account of increased product cost, maintenance *etc.* the Commission agreed with relevant product market as delineated by the Informant which was “*Market for manufacture and sale of Power Quality Compensators with IGBT Technology for low voltage i.e. below 1000V.*”
83. During investigation, the DG examined various third parties which included Research Firms and Think Tanks, customers and manufacturers of power quality products apart from the Informant and the OP. In order to determine whether customers of IGBT based PQS will consider non- IGBT based PQS as substitutable, the DG examined various end-users, manufacturers of PQS and research firms. The crucial extract of the witnesses whose statements were recorded by the DG are as below:



Table 3: Extract of statements of witnesses relating to relevant product market

S. No	Persons deposed	Extract of statements of the witness
Manufacturers		
1	Mr. Amit Chadha, AGM-Power Solutions, Schneider Electric India Pvt. Ltd.	<p><i>“Active power solutions includes IGBT based solutions which uses IGBT at the core that enables smooth real time power quality correction with very high switching speed. On other hand, capacitor/reactor based solutions which are non IGBT solutions are passive power quality control equipment. The two are different in terms of technology, application as well as budget involved. IGBT solutions also provide harmonic filtering which is not that precise in passive power solution”</i></p> <p>.....</p> <p><i>“If we consider an IGBT solution for only power factor correction and non IGBT based solution, to the best of my knowledge, the cost to customer would be nearly three times for IGBT based solution.”</i></p> <p>.....</p> <p><i>“...at present, due to information availability to the customers, the customers are very much aware about the difference between the two products.”</i></p>
2	Mr. Shwetank Jain, Director, P2Power Solutions Pvt. Ltd.	<p><i>“IGBT based solutions are basically Voltage Source Converter (VSC) technology where a microprocessor is used to generate different wave forms of current in order to compensate power quality issues. The power quality constitutes power factor correction, harmonics and unbalanced loads. Non IGBT solutions even though which carry out dynamic power compensation such as CSCs and TSCs are different from IGBT solutions in terms of their basic hardware topology. In case of non IGBT they utilize AC capacitors and switch then fast by utilizing TSCs. The two are different in terms of technology, application as well as budget involved. IGBT solutions can also provide harmonic filtering which is not that precise in other types of dynamic based power solution such as CSCs/TSCs. For our company a typical IGBT solution would be twice as costly.”</i></p> <p>.....</p> <p><i>“In case, a customer has problems like harmonics, power factor, unbalanced loads and also require faster switching etc., it prefers IGBT based solutions whereas the customer only having problem of power factor go for non IGBT based solutions due to cost factor.”</i></p>
3	Mr. Varunesh Prasad, MD,	<p><i>“Theoretically, substitutability is certainly possible but IGBT based solutions offers certain features which cannot be readily duplicated by substitutes such as fast change of harmonic correction because they can switch very fast. Theoretically</i></p>



	Veeral Controls Pvt. Ltd.	<i>means steady loads are easy to compensate by substitutes whereas as dynamic loads used in steel, forging, cement, automobile industry cannot be compensated by substitute.”</i>
4	Mr. Vinayak Joshi, Sr. VP, Consul Neowatt Power Solutions Pvt. Ltd.	<i>“The said IGBT based power quality compensation products are mainly known as active solutions wherein with these active solutions power factor compensation, harmonic corrections and load unbalance correction can be achieved as against without IGBT compensation products which are known as passive solutions, principally used for power factor correction only. In passive solutions, either a contactor or thyristor is used for switching between the capacitors depending upon the level of power factor correction required. In IGBT based power quality compensation product, IGBT chip is used for faster switching..... Generally cost to consumer for IGBT based solution is double as compared to non-IGBT solutions”</i> <i>....</i> <i>“Based on my experience in the power quality solution products, I can say that IGBT-based solutions cannot be substituted with non-IGBT based solutions”</i>
5	Mr. Rishi Gulati, Business Development Manager, Cummins India Ltd.	<i>“IGBT-based power quality compensation solutions are high end solution in terms of technology as compare to non IGBT which our company manufacturing. As per my market experience, I can say that approximately IGBT based power quality compensation solution cost double to the customer as compare to non IGBT base solutions. Switching speed is in nano seconds in IGBT based solutions whereas switching speed is in milliseconds in TSC or non-IGBT solutions.”</i> <i>.....</i> <i>“As per my market experience, the customers having all the three problems, as stated above, will prefer IGBT based PQS which can take care of the said issues. In view of same, IGBT based PQS is not substitutable as non IGBT based solutions. It has happened many times that on the basis of power quality analysis of a particular customers (facing all the aforesaid three problems), our company decline to offer TSC based solution.”</i>
6	Mr. Deepak Sharma, Director, Delta Power Solutions (India) P Ltd.	<i>“IGBT based PQS is devised for dynamic power correction. The compensation can be done for reactive power, unbalanced load and harmonic filtration. IGBT stands for Insulated Gate Bi-polar Transistor which is used as a switching device in these products. The system is comprised of many other electronic components like capacitors, PWBAs etc. IGBT based has been colloquially used for STATCON. With IGBT based PQS we can get dynamic response/switching time in less than 20 milliseconds to correct the load power factor. From my experience the cost of IGBT based PQS less than 1 kV will be 2-3 times more than non-IGBT PQS. The non-IGBT based</i>



		<p><i>PQS (Passive Filter) is used for reactive power compensation. The non IGBT based products would response in longer time and correction time would also be higher. Further, non IGBT based products also compensates the reactive power in steps.”</i></p> <p>...</p> <p><i>“Our company is producing two types of active IGBT based PQS i.e Active Power Filter (APF) and SVG (Static VAR Generator). APF takes care of problems of reactive power, unbalanced load and harmonic filtration whereas SVG is used for reactive power and unbalanced load only”</i></p>
7	Mr. Nagesh Dhang, Sr. Manager, (LV Power Quality) Shreem Electric Ltd	<p><i>“No, it cannot be substitutable because non IGBT based PQS only provides power factor correction and harmonic filtration to some extent. Whereas IGBT based PQS can provide power factor correction, unbalanced load and harmonic simultaneously.”</i></p>
8	Mr. Ajay Kumar, Lead Engineer, GE India Industrial Pvt. Ltd.	<p><i>“Based on my experience, I can point out that there are number of difference between the said two products. The IGBT based solutions provides faster switching, better short circuit solution. The precision of unbalanced load correction, harmonic filtration and power factor correction is seen in the IGBT based PQS which is not upto that mark in non-IGBT based PQS. There is cost difference between the said two products for example the IGBT based PQS is approximate 1.5 times costlier than non-IGBT based PQS.”</i></p> <p>.....</p> <p><i>“...technology used in these two products in different therefore, their uses depends upon power quality audit and requirement of a particular entity. The industries having all the said issues will prefer IGBT base PQS.”</i></p>
9	Mr. Gopa Kumar, Director-Product Management Vertive Energy Pvt. Ltd. (formerly Emerson Network Power P Ltd.)	<p><i>“.....In case of non-IGBT based power quality compensation products the performance deteriorates with change in input frequencies. The reactive power compensation can be dynamically controlled in IGBT based solution. In case of non-IGBT based power quality compensation products, it will give fixed reactive power support by way of step switching. IGBT based solutions are smaller in size and data can be remotely seen and transferred which is not there in non-IGBT. The IGBT based solution in costly compared to non-IGBT based solution by 2-3 times.”</i></p>
10	Mr. Sushil Wadhwa, Director, Neptune(India) Ltd.	<p><i>“In non-IGBT based PQS we are suppressing the harmonics in current upto some extent whereas in IGBT PQS we are mitigating harmonics upto 90-95%. In non-IGBT PQS a single product can maintain the power factor and suppressing the harmonic. For unbalanced load we have to design a separate system. While in IGBT solution a single system can meet the requirements of harmonics, unbalanced loads and power factor..... As compared to Non-IGBT solutions, IGBT solutions</i></p>



		<p>are costlier by 2-3 times due to their ratings as it solves all the three problems of harmonics, unbalanced loads and power factor. Further, highly skilled manpower and large maintenance cost is required for servicing of IGBT based PQS in comparison with non-IGBT based PQS.”</p> <p>....</p> <p>“No, non-IGBT based solutions cannot be substituted with IGBT based solutions since in non-IGBT PQS we can provide the solution for power factor and harmonics only. Whereas for unbalanced load we have to design separate solution.”</p>
11	Mr. S. Seetharaman General manager, BHEL	<p>“Conventional power quality solutions (APFC) mainly operate on the principle of switching small banks of AC capacitor in steps, to achieve the desired power factor by supplying capacitive reactive power locally. In some cases, by combination of some fixed capacitor banks tuned to some particular frequency, some amount of harmonics filtration can be achieved. Conventional power quality solutions (APFC) mainly use contactor or thyristors as switching device for the capacitor banks.</p> <p>IGBT based solutions rely on a form of PWM (pulse width modulation) control to generate a wave form which simulates a capacitor to achieve the compensation functions. The wave form is generated from a DC link capacitor bank. These type of products also take care of harmonics if designed for that purpose specifically”</p>
12	Mr. A.K. Pradhan Sr. General Manager, Universal Cables Ltd.	<p>“...STATCON are generally used for power quality improvement under unbalanced dynamic loading conditions. Our APFCs and capacitors cannot perform the same task. In STATCON electronic power circuits are being used for feeding the reactive power in the difference phases as per the requirement of the respective phase which cannot be done by conventional system like APFCs using power contractor and thyristor.”</p>
Customers		
1	Mr. Sushil Kapoor DGM, Maruti Suzuki India Ltd.	<p>“From the perspective and requirements of the company, IGBT based PQS less than 1 kV, as the company uses said products for LV only, are not substitutable with non IGBT based solutions. IGBT based capacitors have faster switching as compare to non IGBT based capacitor panels. The cost factor also plays major role while purchasing different PQS as IGBT based are approximate two times costlier than non IGBT based solutions.”</p>
2	Mr. Raju Chaubey, DGM (Electrical) Jindal (India) Ltd.	<p>“As per requirements of the company, we are using IGBT based PQS for LV uses and the same is not substitutable with non-IGBT based solutions. IGBT based capacitors have faster switching as compare to non-IGBT based capacitor</p>



		<i>panels.....The cost factor also plays major role while purchasing different PQS as IGBT based are approximate 5-6 times costlier than non IGBT based solutions. For example, the company is recently intending to purchase 1000 Kvar TSC based compensator from Schneider Electric India Pvt Ltd which will approximately cost to company for Rs. 8.00 lakh whereas the company earlier purchased IGBT based PQS in 2015 from ABB for 300 Kvar which cost Rs. 16.00 lakh approximate.”</i>
3	Mr. Sandeep Hui, GM(E&I), Hira Steels Ltd.	<i>“At present, none of the company of Hira group who are in the business of steel rolling, power generation, sponge iron, ferro alloys. Induction Furnace etc., are using IGBT based PQS. However, as per my experience and knowledge, I can say that IGBT based PQS are not substitutable with non-IGBT based solutions. IGBT based capacitor panels have faster switching as compared to non-IGBT based capacitor panels. IGBT based PQS also cures unbalanced loads, reactive power, which is not available in non-IGBT solutions. The cost factor also plays major role while purchasing different PQS as IGBT based are approximate 4-5 times costlier than non IGBT based solutions.”</i>
4	Mr. Shailendra Pandey, R. Manager- Utility and Infra- Supply Chain Engineering, Pepsico India Holdings Pvt. Ltd.	<i>“...In simple words I can say that IGBT solutions provide faster switching as compared to TSC and CSC.....As per my experience and the requirements of the company, IGBT based solutions cannot be substituted with non IGBT based solutions like TSC/CSC.”</i>
Research Firms and Think Tanks		
1	Mr. Manas Kundu, India Coordinator, Asia Power Quality Initiative	<i>“IGBT based solution can handle higher capacity of current and its response time is very minimum. Wherever the rate of change of load is very rapid, IGBT based technology can offer a fast response based solution. Whereas non-IGBT based technologies can too handle the problems for correction provided appropriate application engineering based design are adopted.”</i>
2	Mr. Amol Ramesh Kotwal, Director, Frost and Sullivan India Pvt. Ltd.	<i>“The IGBT based power quality compensation solutions offer improve range of operational voltage, a faster response time and smaller site area than the non-IGBT based power quality compensation solutions. Based on my experience, in terms of cost IGBT based power quality compensation solutions will be more than two times costlier than the non-IGBT based power quality compensation solutions.”</i>



84. The DG considered the submission of the OP that FC, TSC and CSC are based on capacitor technology whereas IGBT based PQS of the Informant (IPC 150 SCOM) and of the OP (STATCON/PQC STATCON) are based on VSC technology. The OP contended before the DG that the customers do not distinguish between IGBT based DRPCs (PQS) and non-IGBT based DRPCs (PQS), which was rejected by the DG as statement of various manufacturers clearly reflected that there many differences between IGBT and non-IGBT based PQS in terms of cost, technology, intended use, performance *etc.* and delineated the relevant product market as “*Market for manufacture and sale of IGBT based PQS for less than 1kV usage*”, where PQS stands for Power Quality Solution. Thus, the DG delineated the relevant product market based on Power Quality Solution as opposed to power quality compensator as was being sought to be done by the Informant.
85. During the hearing before the Commission, the Informant vehemently argued that the DG incorrectly delineated the relevant product market based on power quality solution *i.e.* PQS instead of Power Quality Compensator and in fact diluted the relevant product market by including AHF along with STATCOM. The counsel for the Informant vehemently submitted that the DG ignored its written submissions dated 01.03.2019 on the relevant market wherein it is stated that power quality solutions can be divided into two types: Active (IGBT based) and Passive (non-IGBT based). It is further stated that Active solutions include AHF, STATCOM (IGBT based DRPC), Dynamic Voltage Restorer and Static Var Restorer (SVR) whereas Passive solutions include FC and DRPCs such as APFC, TSC and SVC. These power quality solutions were used to address power quality issues such as Reactive Power, voltage, harmonics, unbalanced load and transient. Thus, the DG while including AHF and STATCOM in IGBT based PQS has left out DVR and SVR which should have been included in the relevant product market. The DG only collected turnover data pertaining to AHF and STATCOM. The counsel for the Informant relied upon the cross examination of Mr. Raju Chaubey of Maruti Suzuki P. Ltd, Mr. P.P. Gopinath of TNPL, Mr. Vinayak Joshi of Consul Neowatt, Mr. Swagata Mukherjee of Technip, Mr. Naveen Kumar Gupta of JBF Petrochemicals



and Mr. Rupinder Singh of OP to assert that AHF are predominantly used to correct harmonics and automatically do some power factor correction, whereas, STATCOM is used for power factor correction and load balancing as per the specific requirement of customer. To assert this contention, the counsel for the Informant relied on the following testimonies of the witnesses:

Mr. Raju Chaubey, Jindal India Ltd. (statement of cross examination by the Informant)

“Q2. Can you please explain the problem faced by your company due to which your company wished to purchase this product?”

Ans. I joined the company in June 2011 and after my joining I saw that there was a problem w.r.t. power factor and unbalanced load in the unit. In the electricity bill, I saw that there was notional economic loss due to lower power factor and fluctuating load. I would like to clarify that if the power factor is above 0.88 upto 0.99 then the distribution company gives rebate in electricity bill and if it is below 0.88 then distribution company imposes penalty.

Q3. Whether there was any problem w.r.t. harmonics or not in your unit?”

Ans. No. There was no problem w.r.t. harmonics.

.....

Q5. If in the above scenario you would have installed a product which predominantly resolves ‘harmonics’ whether it would have solved your problem or not?”

Ans. No.”

Mr. P.P. Gopinath, TNPL: (statement of cross examination by the Informant)

“Q1. Can you please specify the requirement for which the subject tender (dated 10.12.2015) was issued by TNPL?”

Ans. The requirement was to bring down the harmonics level in the electrical system of TNPL unit I.

Q2. Can you please specify, which all products could have met your subject tender requirements?”

Ans. It could have been resolved with a harmonic filter only.”

Mr. Naveen Kumar Gupta, JBF Petrochem (Statement recorded during Main Investigation Report)

“Q2. Have you ever purchased any power quality compensation solutions from ABB or InPhase or some other vendor, if yes, provide details of the same.



Ans. In 2015, the company purchased a hybrid system (combination of 33kV level capacitor bank, LC circuits, Static Compensation Unit) from ABB. For the Mangalore PTA plant of the company, there was a requirement for such type of product. Our company entered into a EPCM (Engineering, Procurement, Construction Management) contract with M/s Technip India Ltd. for the said project. Technip requested for the quotes of the said product from ABB, InPhase and Schneider. The bids of all the bidders were evaluated by Technip and a recommendation was sent to company for procurement products from ABB as its product was technically sound.

Q3. What do you mean by Static Compensation unit as mentioned by you in your answer above?

Ans. Static Compensation unit mean power compensation solution required for power factor correction. ABB supplied us PQC STATCON which is a static compensation based on IGBT. The company was looking for power factor correction based only on our technical evaluation and requirement of the distribution company (KPTCL & MESCOM). The company was not looking for any solution for harmonic filtration and unbalanced load.”

Mr. Vinayak Joshi, Consul Neowatt (Statement recorded during Main Investigation Report)

“Q2. Please clarify what are the different types of power quality compensation solutions manufactured or marketed by your company?

Ans. The main business of the company is manufacturing and marketing of uninterrupted power supply solutions (UPS). However, the company is also manufacturing Active Harmonic Filters from 30 amps to 600 amps. The company is not manufacturing any product which consists of solution for unbalanced load plus power factor corrections plus harmonic filters. The company is manufacturing harmonic filters individually which are based on IGBT chip. The said harmonic filter primarily suits for correction of harmonics in the power supply.

Q7. Please clarify whether Active Harmonic Filter alone, as manufactured by your company, can be substitutable with Static Compensators (STATCON).

Ans. No, because Active Harmonic Filter only corrects the harmonics in supply whereas Static Compensators takes care of unbalanced loads, power factor correction and unbalanced loads correction. Active Harmonic Filter also corrects the power factor to some extent but in case of major problem of power factor plus unbalanced loads plus harmonics, Active Harmonic Filter alone is not recommended.”

Cross examination of this witness by the Informant

“Q1. Does your company manufacture any product which can provide solution for unbalance load + reactive power + harmonics filter in one single product?

Ans. No.



Q2. Is the technology used to manufacture IGBT based AHF and IGBT based STATCOM different?

Ans. In the STATCOM usage is for controlling the power factor along with unbalanced load and harmonics, whereas AHF is primarily used only for suppressing the harmonics. In case AHF is removed and STATCOM is installed in its place, it will not solve the purpose of the customer. The true power factor is displacement power factor multiplied by distortion power factor and AHF is primarily responsible to mitigate the distortion due to harmonics. As a result of usage of AHF, the customer could also derive the benefit of true power factor correction to some extent, due to mitigation of distortion.

Q3. Is it true that IGBT based AHF and IGBT based STATCOM cannot be substituted?

Ans. Partial purpose of harmonic suppression will be corrected by AHF. However, load balancing and power factor correction cannot be done 100%. So, it cannot be said to be a substitute as STATCOM will not serve the 100% utility as AHF otherwise AHF and STATCOM would have been the same thing."

Cross examination of this witness by the OP

"Q1. In response to Q4 asked in your cross examination by InPhase, you have stated that Schneider manufactures products that are only AHF. I put it to you that Schneider's AHF also helps with power factor correction and load balancing.

Ans. I'm not aware about the technical details of Schneider's product.

Q2. Is it true that when you are mitigating harmonics there will automatically be some amount of power factor correction and load balancing?

Ans. Yes, there will be some amount of power factor correction. I am not sure whether there will be any load balancing.

.....

Q5. Are you aware that Epcos claims that its AHF also does load balancing and power factor correction?

Ans. Yes, there will be some amount of power factor correction. I'm not sure whether there will be any load balancing.

.....

Q7. In response to query 3 in your statement provided on 16.05.2017, you mentioned that there are certain all in one products which do harmonic filtration + power factor correction + load balancing. Can you name some of these products?



Ans. Yes. To my knowledge ABB STATCOM does this. There may be certain other products that I cannot recollect at this stage.”

Mr. Varunesh Prasad, Veeral Controls Pvt. Ltd. (Statement of cross examination of the witness by the Informant)

“Q1. What is the main/predominant function of IGBT-based active harmonic filter?”

Ans. As the name suggest, it is a harmonic filter. Harmonic filters reduce or eliminate harmonics in the grid as caused by non-linear loads. ‘Active’ means it is non-passive and is IGBT-based hence the main/predominant function of IGBT-based active harmonic filter is to reduce or eliminate harmonics.

Q2. What is the main/predominant function of IGBT-based STATCOM?

Ans. Full form of STATCOM is static compensator. Compensation can be 2 types 1 is VAR (reactive part) and the other is harmonics so STATCOM caters to both.

.....

Q7. What is the difference of the cost to customers of both the said products of your company?

Ans. Our selling price is same for both the products. However, for unbalanced load, we have a four wire solution which is little more expensive in comparison to AHF and STATCOM. The four wire solution is also a STATCOM.

Mr. Rupinder Singh, Senior Vice President, ABB (OP) (Statement of cross examination of the witness by the Informant)

Q10. I am putting to you the statement of Shri Shylendra Kumar CM, local product line manager of your company recorded by DG office on 11.07.2017 (Q6). Is it correct that your company was providing STATCON and AHF together for power factor correction, unbalanced load correction and active harmonic filtration instead of PQC STATCON and STATCON?

Ans. It is correct, there is no doubt about that.

Voluntarily stated: Originally, it was STATCON and Passive Filter. The company was selling depending upon the budget of the customer and whenever customer was ready to pay for AHF, we were sourcing it from Belgium. Now this PQC-Plus has all the features.”

86. Thus, as per the Informant, the DG overlooked the testimony of consumers/demand side for assessing the substitutability of AHF and STATCOM while delineating the relevant product market. It was contended that the DG erred by ignoring the crucial fact that AHF and STATCOM were two different products and not substitutable



based on characteristics, price and end-use as per Section 2(t) of the Act. Even in its *prima facie* order dated 09.06.2016, the Commission had agreed with the submissions of the Informant on this aspect.

87. In response to this, the OP while continuing to maintain that the relevant product market should be *manufacture and sale of dynamic reactive power compensators (DRPC) solutions for low voltage (LV) settings*, contended that PQS are offered based on specific need of a customer/s who may choose from one of the many solutions depending on need and budget and, thus, no single factor determines the solution that the customer opts. The counsel for the OP stressed that the instant matter pertains to a solution-oriented market and not a product-oriented one. It was further asserted that certain differences in these two products did not necessarily render them distinct from the perspective of consumer and in fact IGBT based PQS and non-IGBT based PQS were substitutable from the viewpoint of customers. Nevertheless, the OP agreed to the relevant product market delineated by the DG and averred that the Informant agreed to AHF and STATCOM being part of the same relevant product market at the time of filing of information and during the initial investigation. To buttress this averment, the OP relied on the Information dated 01.02.2016 filed by the Informant. The same is reproduced below for ease of reference:

“It is submitted that the Opposite Party Company is dealing in the business of electrical equipment like switch gears, drives, automation and others. It also manufactures dynamic reactive power compensators and harmonic filters which are power quality and power conversion products. These products in general are called as STATCOM (Static Synchronous compensator) which is a technology. The Opposite Party is the market leader in the power quality compensators in India.

.....

....

The Informant company on the basis of the experience and expertise of its core team of 5 members developed various products out of which one is IPC-150 SCOM, which is technologically and feature-wise more advanced and superior to the product PQC -STACON of Opposite Party, as the IPC-150 SCOM product of the Informant Company is based on the applications of Dynamic Reactive power, unbalanced load and Harmonics. Whereas the product of the Opposite



Party is based on the applications of Dynamic Reactive power and unbalanced load.”

88. The OP further relied on the statement of Mr. Panna Lal Biswas, MD of the Informant recorded during the main investigation and stated that Mr. Biswas himself admitted that *“active filters (AHF) are one of the power quality compensation products”* and Informant’s STACOM performs all the three functions namely, reactive power correction, load balancing and harmonic filtration. Moreover, the OP relied on the cross-examination statement of Mr. Biswas recorded during supplementary investigation that one of its products which it offers for power factor correction and load balancing is an AHF. The Commission took note of the argument of the OP that if harmonic filtration is so distinct a feature that it should constitute a separate relevant market, then Informant’s product which does all the three functions will not be a competing product with OP’s STATCON/PQC STATCON. The OP further highlighted that the MD of the Informant in his personal capacity, recently published a technical paper in an IEEMA industry journal titled *“Case study: Meeting Power Quality Requirements At Light Load Conditions (Floating Grid) Of Cement/Steel Industries Is A Big Challenge!”* published in February 2019 where he documented in detail how an AHF of the Informant was used for power factor correction and the conclusion of the paper reads *“the ACL case study demonstrates that it is easily possible to overcome poor power quality issues ...by properly studying, designing and installing the 3-level IGBT based AHF.”*
89. The Commission notes that both in the information filed with the Commission and the statement of the Informant’s MD, the Informant maintained that STATCOM and AHF are power compensation products. The Commission further notes that post main investigation, when the DG did not find the OP dominant in the market for IGBT based PQS for LV setting, the Informant wanted to narrow down the market and restrict the same to STATCOM only and, hence, was making efforts to create an artificial distinction between AHF and STATCOM. The Commission notes the cross examination statement of the Mr. Biswas, MD and CEO of the Informant,



wherein he stated that “based on the onsite measurement our R&D team decided the correct power quality solution to meet the client’s requirement... Inphase [Informant] has its own R&D team and we are capable to develop customized solution to meet the client’s site performance requirements”. The Commission observes that as a general industry practice, power quality issues are assessed from on-site evaluation of the power quality problem faced by a customer and then a solution is provided to address such problem. The Commission further observes that the solution for the power quality problem is not limited to a single product only, rather is a combination of products which requires careful commissioning and after-sales support. However, the Commission does note that technology is an apparent distinguishing factor as IGBT based power quality solutions are effective, fast and costlier as compared to non-IGBT based power quality solutions. The Commission notes from the testimonies of the witnesses such as P2Power, Vertive, OP, Informant *etc.* engaged in the business of manufacturing/ providing power quality solutions that every manufacturer has a set of products which caters to power factor correction arising out of any or all of these factors -reactive power or unbalance load or harmonics *etc.*

90. The Commission also notes that the Informant relied upon two tenders namely TNPL and JBF to bring forth the abuse aspect in the matter, where the TNPL tender was for procuring Active Harmonic Filter for harmonics application and JBF tender was for a combination of IGBT and non-IGBT (Fixed capacitor) products. The Informant also admitted during cross examination that it develops customized solutions to meet the clients’ site performance requirements. During the hearing, the Informant cited an example of smartphone and Digital Single Lens Reflex (‘**DSLR**’) camera to illustrate that STATCOM and AHF are distinct products and cannot form part of same relevant market. He stated that if Statcom and AHF are substitutable, then a smart phone with a good camera should also be seen as a substitute for DSLR. To this the OP submitted *vide* written submissions dated 20.09.2019 that the example is fallacious as DSLR cannot do the function of a smartphone such as calling, web browsing, music and video player, social media



communication *etc.* and the correct analogy should be a smartphone with good camera and another smartphone with better user interface. The Commission agrees with the submission of the OP.

91. The Commission also notes that during supplementary investigation, the DG also researched in the public domain regarding the application and usage of AHF to address the issue of substitutability of AHF and STATCOM. The DG found that suppliers in India and around the world sell their AHF or STATCOM describing the same for application in the issue of harmonics, unbalanced load and reactive power compensation, like Captech Power Quality Solutions (Australia), Merus Power (Finland), Schaffner Group (Switzerland) and certain other domestic companies such as Amtech Electronics India Ltd. (Gandhinagar, Gujarat), Clariant Power System Ltd. (Pune, Maharashtra), Tas Powertek Ltd. (Nasik, Maharashtra).
92. The Commission notes that during the cross examination of Mr. Varunesh Prasad of Veeral Controls by the Informant, Mr. Prasad stated that both STATCOM and AHF are called power quality compensation solutions. On being asked about whether a customer facing the problem of unbalanced load and reactive power (power factor) can get solution by installing only AHF, he stated that “...*It depends upon how the AHF is made. If it is made to compensate reactive power and unbalanced load than, it will suffice the purpose*”. On being questioned about the difference in the nomenclature of AHF and STATCOM despite the fact that both resolve similar issues, Mr. Prasad stated that STATCOM is an academic term while industry is more familiar with the term *harmonic filter* which was earlier made passively but now made using Transistor/IGBT and named ‘Active’ to distinguish from earlier passive filters.
93. The Commission further notes that during cross examination of Mr. Shwetank Jain, Director, P2 Power Solutions, by the Informant, on the issue whether AHF is as effective as STATCOM, Mr. Jain stated that “*it depends on the features being offered by the manufacturer ... there is minor modification in the codes as per user*”



requirement. It is just a marketing tactic adopted by manufacturers”. Mr. Jain confirmed that AHF and STATCOM panels of his company were almost identical in terms of technical, hardware and software features and the difference lay in the application of the product by users. He voluntarily stated that depending on the application for the consumer, if it is power factor correction then P2 Power calls it as STATCOM else in case of harmonic compensation, P2 Power names it as AHF.

94. In the supplementary investigation, the DG has highlighted that STATCOM/AHF are sold by different manufacturers for addressing issues of unbalanced load, harmonic mitigation and reactive power compensation, and that while some sell it in the name of STATCOM others do it in the name of AHF. Thus, the Commission finds merit in the observation of the DG that the Informant has claimed that AHF and STATCOM are different products with STATCOM addressing reactive power and unbalanced load, and AHF removing undesired harmonics only for the purpose of narrowing the relevant market.
95. The Commission has taken note of its assessment of the relevant market in Case No. 24/2011 titled *Sonam Sharma v. Apple Inc. & Others*, in which the Informant raised similar contentions with respect to the relevant market that apple iphone constitutes a separate relevant market given its advanced features and is not substitutable with other smartphones. The Commission, in the *supra* case, while delineating the relevant market to be *market for smartphone in India*, had held that:

“From the public documents available on the internet as also from the Information and the DG Report, it is apparent that products of Apple have been defying the conventional norms – they come with innovative features that offer qualitative leap over their rivals. No doubt, some people might have a preference for Apple products like iPhone but to qualify it as a niche segment, it is required that no other competing products offer similar products and that the target customers perceive it as being the ‘only’ product in the market. If it were so then, the relevant market would have been that of



iPhones. The Commission finds it difficult to define the relevant market as just consisting of iPhones. Such single-brand markets are rarely tenable. Relevant markets generally cannot be limited to a single manufacturer's products. The Commission views reasonable interchangeability between iPhones and other smartphones. iPhone is a part of bigger segment of mobile handset i.e. the smartphone market. Comparisons of features and prices of different smartphones are done and referred to that includes iPhone along with other smartphones. Apparently, Apple views Samsung, Nokia, Blackberry etc. as its competitor in the smartphone market in India and similarly other smartphone manufacturers also offer their products in direct competition with iPhones.”

96. The Commission notes that while defining the scope of relevant product market, only such goods will form part of the same relevant market if they are perceived as sufficiently close substitutes. The rationale for this is to assess the strength of competition faced by one or more firms in such market. If a producer of a product raises prices and accounts for only a small share of the total product in the market, then its price hike is unlikely to bring about adverse effect, as buyers have the option to switch to alternatives or close alternatives. By contrast, a monopoly, such as electricity or water provider, faces little or no competition because its customers have few or no close alternatives.
97. The Commission notes that market definition is an analytical tool that assists in determining the competitive constraints upon incumbent undertakings and provides a framework within which the assessment of the critical question of whether a firm possess market power takes place. It is difficult to define the relevant market with mathematical precision due to less precise boundaries of relevant market, and an element of subjectivity which may persist but which needs to be carefully sifted to arrive at an objective picture. Some products may be 'in the market' while others may be 'outside the market' however, the products that are 'in the market' may not necessarily be a perfect substitute for one another. In the present case, the ability



of the manufacturers to customize their products, irrespective of the nomenclature (STATCOM or AHF), to suit the on-site requirements of the customers highlights that they are interchangeable and form part of the same relevant market. There can be some product markets as has been seen in the present case where the end solutions determine the nature of the product for the customers, rather than the customer upfront being able to identify a product to satisfy its inherent needs. This solution can be in the form of a particular product or in the form of combination of products which may cater to two or more needs of the customer of which some needs may be patent and some may be latent. Moreover, apart from demand and supply substitutability, countervailing power and ability to create barriers to entry are critical factors in assessment of market definition in terms of Section 19(4) of the Act. In the instant case, the ability of the buyers to choose from various suppliers based on their requirements indicates the existence of countervailing buyer power. Further, the presence of various manufacturers catering to the need of power quality products of the Industrial consumers also points to the low entry barriers in the market for IGBT based PQS.

98. From the material available on record, the Commission observes that power quality products are used to resolve power quality issues, most of which are caused by reactive power, loads, harmonics *etc.* Furthermore, the Commission observes that customers (mostly industrial) approach the manufacturers with their power quality problems/issues to avoid penalties from the power distribution companies for which they want cost-effective solutions. The Commission finds that the aspect of substitutability between IGBT based PQS and non-IGBT based PQS is no more a bone of contention between the Informant and the OP based on the facts such as advanced features, cost involved, customer need *etc.* The Informant and the OP have admitted to have customized their power quality products keeping in view the on-site requirement of customer in their statement and submissions, respectively. Both the Informant and the OP along with other manufacturers offer their respective products/customized products/solutions (which can be a combination of two or more products) to resolve the issue.



99. Given the composite nature of the product offering, where one feature may be predominant and while the others not so, does not warrant delineation of distinct heterogeneous product market such as one for STATCOM and other for AHF. The Commission also notes that a standalone power compensator may not fully address the requirements of a customer, which may vary from industry to industry, based on the nature and type of problem faced by such customers. Thus, a power quality solution will have to be designed to address the specific problem and a ‘one size fits all’ approach may not be appropriate. In so far as the contention with regard to concurrence of the Commission with the relevant product market put forth by the Informant at the *prima facie* stage is concerned, such a view is only tentative at that stage and the Commission is not bound by the same and it is open for the Commission to reach a different view based on the facts and evidence unearthed during the investigation and inquiry. Therefore, in view of the foregoing discussion, the Commission agrees with the relevant product market delineated by the DG- “Market for manufacture and sale of IGBT based PQS for less than 1kV usage”, where PQS stands for Power Quality Solution. Further, the Commission notes that conditions of competition for supply power quality products are homogenous throughout the country, and therefore, the relevant geographic market is India. Hence, the Commission delineates the relevant market in the instant matter as *Market for manufacture and sale of IGBT based PQS for less than 1kV usage in India*”

Issue No. 2: Whether ABB (OP) is dominant in the said relevant market?

100. After delineating the relevant market as above, the next step is to assess the dominance of the OP *i.e.* ABB. The Informant relied upon the Ken Research Report and certain self-compiled data to assert that the OP is dominant in the relevant market.
101. The DG first ascertained the veracity of the Ken Research Report. The DG noted that the said report is a privately funded report wherein revenue-wise Reactive Power Compensation Market size in India from 2010-2015 has been analysed and



an upward trend is indicated in the size of the market for reactive power compensation due to factors like increased industrialization, huge penalties and losses in the transmission and distributions network. The year-wise breakup of Reactive Power Compensation Market for the period of 2010 to 2015 in the Ken Research Report is as follows:

Table 4: Reactive Power Compensation Market

Sr. No.	Financial Year	Revenue (Rs. in Crores)
1	2010	283.3
2.	2011	332.8
3.	2012	398.4
4.	2013	478.1
5.	2014	567.7
6.	2015	750.0

Source: Main Investigation Report (also at Pg24 of the Ken Research Report)

102. The DG observed that as per Ken Research Report, OP held 32% market share followed by Alstom which had 18% market share. The DG had observed that Alstom had been taken over by GE and that it did not operate in IGBT based power quality solutions anymore. The DG further observed that as per Ken Research Report, the Conventional (non-IGBT based) PQS segment comprises 82% of the total market of PQS whereas the Non-Conventional (IGBT based) PQS comprises 18% of the total market of PQS for FY 2015. In terms of revenue, for the year 2015, the total market for PQS had been reported to be about Rs. 750 crores in which the conventional segment amounted to Rs. 615 Crores whereas the non-conventional segment *i.e.* IGBT based PQS (STATCON only) was about Rs. 135 Crores. This market size included products used for application of LV and MV, and the same was admitted by Informant before the Commission as well. The DG further took into account submissions of the OP that Ken Research Report substantially overstated its revenues for FY 2014-15 (*i.e.* INR/Rs. 240 crores instead of INR/Rs. 147 crores) and that the OP had not reported any of its sales figures to Ken Research. This was also corroborated by the statement of the representative of Ken Research, wherein he stated that “...the primary and secondary research to collate



*information and opinion about the sector. This includes computer assisted telephonic interviews with industry veterans like ABB India Ltd. Shreem Electric Ltd., Siemens..... report is not based on actual sales of the parties. The overall market for FY was taken around 750 crs on the basis of estimated domestic demand I(n) terms of MVAR (13500), as told by industry veterans and the average price of approximately Rs 555000 per MVAR. The overall revenue was then further segmented into conventional and non-conventional technology related components". Thus, the DG noted that not only were these figures mere estimates and not actual sales but also that the market size of Rs. 135 Crores of IGBT based PQS included both LV and MV applications and, therefore, such data was not exclusive to the IGBT based PQS less than 1 KV *i.e.* the relevant market as delineated by the DG. Resultantly, Ken Research Report could not be relied upon to determine the market share/revenue to assess dominance of the OP.*

103. The DG proceeded to examine the other evidence submitted by the Informant pertaining to alleged dominance of the OP *i.e.* the self-compiled data submitted by the Informant indicating that 23 out of 25 orders (92%) were placed with the OP by the different railway zones during 2005 to 2013. The DG observed that the said data of the Informant wherein 25 tenders were issued in various railway zones in a span of 9 years and the OP having secured 23 orders out of the said 25 could not be relied upon to assess the dominance of the OP as this data could not reflect total number of tenders issued by the railways with regard to the said product during the relevant period. Further, the DG observed that aforesaid data, relied on by the Informant, was very old *i.e.* from 2005 to 2013. The DG noted that the said data was not complete as it contained details of only 25 railway traction substation tenders out of 400 sub-stations.
104. The DG obtained the details of the supplies made by the OP to the Railways during the preceding five years *i.e.* 2012-2017 and found that the OP had made only two supplies of STATCOM, as part of complete engineering project in the traction substations during 2012-14 and had not made any supply to the railways from 2014



to 2017. This further negated the assertion of the Informant that OP was dominant in the relevant market.

105. Other evidence submitted by the Informant with respect to dominance of the OP was self-compiled data of different orders received by the OP for STATCON during the year 2005 to 2014, to show that the OP obtained 95% orders (38 out of 40 orders) from different industries while he was working with the OP. The DG analysed the said data and enquired from Mr. Panna Lal Biswas, the MD and CEO of the Informant about the veracity of the said data. From the statement, the DG noted certain inconsistencies such as the orders could not be bifurcated year-wise, including STACONS supplied by OP for LV as well as MV applications/usage, and above all, the said data did not reflect the total number of orders placed by automotive, steel and other industries for STATCON during 2004-2015. Beside these, the investigation showed that the total sales of the relevant product made by the OP during 2012-17 does not substantiate the assertion of the Informant. Hence, the DG discarded this evidence for want of relevance in showing position of strength of the OP in the relevant market.
106. The present matter involved a niche market for which data was not readily available in public domain, thus, the DG required the industry players, research firms apart from the Informant and the OP to depose before it and determine the market size and sought details regarding total size of relevant market. The Informant stated that no relevant data was available in the public domain and expressed inability to file any material to ascertain the size of relevant market of IGBT based PQS.
107. During the course of investigation, the DG made efforts to obtain information regarding size of approximate market from all possible sources such as multinational companies, Indian Companies, Research Firms, think tanks, consumers, OP and Informant. The DG tabulated their responses regarding the estimated market size in the table below:



Table 5: Approx. Market size of IGBT based PQS less than 1kV usage

S. No	Name of the entity	Approx. Market size of IGBT based PQS less than 1kV usage
1	P2Power	75 Crore
2	Veeral	100 Crore
3	Delta	100 Crore
4	Vertive	100 Crore
5	Neptune	100-150 Crore
6	BHEL	100 Crore
7	Shreem	No figures given
8	Siemens	No figures given
9	L&T	150 Crore
10	Informant	No figures given
11	OP (ABB)	Around 100 Crore
12	Ken Research	135 Crore for FY 2014-15 excluding Active Filters (AHF)
13	Frost & Sullevian	40-50 Crore for LV and MV application
14	Asia Power Quality Initiative	100-150 Crore

Source: Main Investigation Report

108. Based on the above extensive exercise, and relying on the statements of representatives of manufacturers of different types of PQS, the DG was of the view that the market for IGBT based PQS less than 1 KV usage in India can be considered to be in the range of around INR 100 crores.
109. During the main investigation, the DG collected the data from various manufacturers in respect of their sales of IGBT based PQS less than 1 KV for FY 2013-14, 2014-15, 2015-16 and 2016-17. The sales figure of manufacturers of different types of IGBT based PQS less than 1KV are as under:



Table 6: Annual Sales of IGBT based PQS (less than 1kV) of various manufacturers

S. No	Manufacturers	Sales of IGBT based PQS less than 1kV (in Rs crore)				
		2013-14	2014-15	2015-16	2016-17	Average
1	Informant	Nil	0.98	3.93	1.26	2.06
2	OP (ABB)	6.99	7.14	4.62	4.44	5.8
3	P2Power	4.72	10.85	12.92	-	9.5
4	Schneider	0.40	3.73	2.44	-	2.19
5	Veeral	No sales	0.39	0.05	No sales	0.22
6	L&T	0.76	0.62	4.40	2.50	2.07
7	EPCOS TDK	-	0.14	1.06	-	0.60
8	Consul-Neowatt	-	8.62	26.69	12.01	15.77
9	Vertive*	15.00	18.00	08.00	-	13.67
10	Delta	0.52	2.79	6.33	-	3.21

* Financial year is Oct-Sep and not Apr-Mar.

Source: Main Investigation Report

110. During the supplementary investigation, P2Power and Veeral submitted their revised figures which are included in the following table:

Table 7: Average Annual Sales of IGBT based PQS (less than 1KV) of various manufacturers

S. No	Manufacturers	Sales of IGBT based PQS less than 1KV (in Rs crore)				
		2013-14	2014-15	2015-16	2016-17	Average
1	Informant	Nil	0.98	3.93	1.26	2.06
2	OP (ABB)	6.99	7.14	4.62	4.44	5.8
3	P2Power*	4.03	9.49	12.62	-	8.71
4	Schneider	0.40	3.73	2.44	-	2.19
5	Veeral**	No sales	0.13	0.05	No sales	0.09
6	L&T	0.76	0.62	4.40	2.50	2.07
7	EPCOS TDK	-	0.14	1.06	-	0.60
8	Consul-Neowatt	-	8.62	26.69	12.01	15.77
9	Vertive***	15.00	18.00	08.00	-	13.67
10	Delta	0.52	2.79	6.33	-	3.21

*there is change in sales value of P2Power for the period 2013-14 to 2015-16, hence its average sale value changed from Rs. 9.5 cr in Main IR to 8.71 cr in Suppl IR.

** the average sales value for Veeral changed from Rs 0.22 cr in Main IR to 0.09 crs in Suppl IR.

***Financial year is Oct-Sep.

Source: Supplementary Investigation Report



111. Further, based on the total market size of INR/Rs 100 crores and the average annual sales figures of various manufacturers including the Informant and the OP referred *infra*, the market shares of the parties for respective financial years were calculated by the DG in the Table 8 below. The Commission observes that the ranking of P2Power and Veeral did not undergo any change even after taking into account the revised sales figures. Thus, during supplementary investigation also, the DG did not reach a different outcome.

Table 8: Market Share of various manufacturers based on average annual sales of IGBT based PQS (less than 1KV)

S. No	Manufacturers	Average Sales (in Rs Crores)	Market Share (considering total market as Rs 100 Crs)
1	Consul-Neowatt	15.77	15.77%
2	Vertive	13.67	13.67%
3	P2Power*	8.71	8.71%
4	OP	5.80	5.80%
5	Delta	3.21	3.21%
6	Schneider	2.19	2.19%
7	Informant	2.06	2.06%
8	L&T	2.07	2.07%
9	EPCOS TDK	0.60	0.60%
10	Veeral*	0.09	0.09%
11	Others	45.83	45.83%

**After taking into account the revised figures submitted by the parties during the supplementary investigation. The changes are insignificant and does not have any effect on their ranking.*

Source: Supplementary Investigation Report

112. Based on the above, the DG concluded that Consul Neowatt, Vertive and P2Power are the top leading players in the relevant market with market share of 15.7%, 13.67% and 8.71 %, respectively. OP is at fourth position and the Informant stands at seventh position. The DG noted that other players such as Schneider and Delta were imposing a competitive constraint on the OP.



113. The DG further observed that only around 55.1% of the market was accounted for amongst the aforementioned players and remaining 45% of the market could be dealt with by other players in the relevant market which might be giving good competition to the top players.
114. Before concluding the assessment of dominance, the DG also examined the annual reports of the OP and observed that the relevant product comprised less than 1% of the total revenue of the OP. Also, the sales of the OP for the relevant product for FY 2013-14 to 2016-17 were very low as compared to the other players. Moreover, there was no information to substantiate the assertion of dependence of customers on OP. During investigation, the DG examined some representatives of the customer of the OP, including one Mr. Sushil Kapoor, DGM (EM-M1) Department, Maruti Suzuki India Ltd. who stated that neither there had been no instance of his being approached by the OP to not purchase PQS from an unapproved supplier nor had they faced any constraints as a procurer. The DG, therefore, concluded that there was no evidence to establish the dominance of OP in the relevant market.
115. During the hearing, the counsel for the Informant stated that the DG reached the figure of Rs 100 Cr based on rough estimates given by the witnesses examined by the DG and the same was liable to be rejected being unsubstantiated and unfounded. The counsel for the Informant submitted that the Ken Research Report stated the relevant market to be around Rs. 135 crores excluding traction market. The Informant further submitted that the DG should have collected the sales data of the traction (Railways) market for including it in the market size before ascertaining the dominance of the OP. The counsel for the Informant relied upon its submissions dated 19.02.2018, the cross examination statement of Mr. Varunesh Prasad of Veeral Controls and Mr. Shylendra Kumar of the OP to put forth its contention that IGBT based LV STATCOM is used in the railway traction substations. The counsel for the Informant pointed out that Mr. Shylender Kumar of the OP also admitted during the cross examination that the OP installed its IGBT based LV STATCOM



in the railways sub-stations. In its written submissions, the Informant submitted that only 3 manufacturers *i.e.* OP, Dubas and Shreem were listed as eligible by the RDSO for filling up Railways tenders. In this regard, the OP contended that firstly, market size as delineated in the Ken Research Report included both IGBT and non-IGBT based solutions, secondly, this report was not based on actual sales figures of the OP, thirdly, OP's market shares provided in the report were in relation to IGBT and non-IGBT products and, hence, the DG correctly concluded that the said report could not be relied upon to determine the relevant market size and OP's dominance. The OP further contended that the DG determined the market size based on the statements of 12 manufacturers and two research firms and the computation of market size was a reasoned exercise and could not be called arbitrary in any manner. Regarding the inclusion of traction market in the relevant market, the counsel for the OP contended that as per a document titled "*Mission 4IK*" prepared by Ministry of Railways in 2017, there are 376 traction sub-stations in India. Therefore, the Informant's contention that the OP is dominant on account of supplying LV power quality solutions to 18 substations of Railways is misleading. Moreover, with respect to the contention of the Informant that the fact that STATCOM for LV was used for MV applications by using a step up transformer (as per RDSO guidelines) justified the inclusion of traction market in the Relevant market size, the OP submitted that it only made two supplies of LV IGBT based solutions to the Indian railways during the relevant period of investigation and the said sales have already been included in the sales figure provided to the DG. The OP further contended that if one were to include the traction market in the overall market size, OP's market share would further reduce as the size of the market would expand significantly, while the revenue would remain the same. It was also submitted by the OP that Mr. Pannalal Biswas, MD of the Informant admitted during his cross-examination statement that he submitted incorrect data to demonstrate OP's dominance in this traction market.

116. The Commission notes the statement of cross examination of the Informant by the OP wherein, in response to a query whether IGBT products and TSC based products



are substitutable in relation to traction market, the Informant stated that “*No, it is not always correct as it is based on the requirement of Power quality of individual traction substation. Hence, the zonal railway decides at the time of tender to specify the ratings or type of technology.*” This indicates that all the traction substations use a mix of IGBT based and non-IGBT based solutions based on the respective individual requirement. The Commission observes that it is a matter of fact that low voltage power product cannot be used in the traction sub-station except with the help of a step-up transformer, and the sub-station may require an IGBT or non-IGBT product depending upon the nature of power quality issues it faces. The Commission notes that the objection raised by the Informant regarding inclusion of the traction in the relevant market can only lead to expansion of the size of the market and the market share of the OP would only dip further, as the sales of IGBT based PQS to Indian Railways by the OP has already been included by the DG while assessing the market share of the OP. The Commission, thus, does not find any substance in this objection of the Informant.

117. The Commission notes that as per the DG, approximately 54% of the relevant market of IGBT based PQS for less than 1 KV is enjoyed by reputed manufacturers while unorganized/ other small manufacturers account for remaining 46% of the market. The Commission observed that Ken Research Report 2015 segmented the India Reactive Power Compensation market from end-users perspective and stated that “*The reactive power compensation market of India was equally shared by the organized and unorganized sector players. The organized market largely consisted of consumers such as the Railways, State Electricity Boards, NTPC and other related power sector units and plants as well as LS manufacturers such as Tata and other core sector industries. The unorganized sector consisted mainly of medium scale and small scale private consumers. In FY’2015, each segment accounted for 50% of overall demand....*”.



118. The Commission notes that in FY 2013-14 and FY 2014-15, Vertive has recorded higher turnover in the sale of IGBT based PQS, whereas in FY 2015-16, Consul Neowatt has the highest turnover followed by P2Power and Vertive at second and third position, respectively. Taking the average turnover, Consul Neowatt tops the position followed by Vertive and P2Power. The Commission further notes that the market appears to be competitive with the presence of a number of players and it appears that there are enough competitive constraints in place which prevents a player from acting independently of the market forces.
119. The Commission takes note of the finding of the DG that there existed no entry barriers, which is justified by the entry of the Informant and P2Power in the relevant market. It was also observed that IGBT was easily available in the market and PQS based IGBT could be developed by any technical person (as done by Informant, Neptune and P2Power), and the field visit by the DG also showed that space required for assembling/manufacturing IGBT based project is not huge and therefore, would not require intensive capital. With regard to the projections cited by F&S and Ken Research Report, the relevant market for IGBT based PQS was an emerging one and entry of new players would also augment the benefits to consumers of the said product. The DG noted the existence of multiple players and found no substance in the allegation of dependence of customers on the OP. Further, there was no evidence that the OP existed independent of competitive constraints in the relevant market.
120. The Commission notes that the conduct of an entity or enterprise attracts the rigours of Section 4 of the Act only if it holds a dominant position in the relevant market. The legal term '*dominant position*' is a binary term which essentially means either an undertaking is dominant and thus, subjected to Section 4 of the Act, or it is not, in which case, its behavior/conduct is not subject to the competition law.
121. In view of the above discussion, the Commission observes that since OP's dominance is not established, no case arises for examination of abuse of dominance under Section 4 of the Act.



122. Before parting with the order, the Commission observes that the Informant, through its written submissions and oral arguments, has raised objections *firstly* with respect to the sales data submitted by the OP and *secondly*, discrepancies in certain sales figures.
123. To address the first concern of the Informant regarding sales figures to be certified by a Chartered Accountant, the OP has filed the annual sales figures for STATCON (less than 1KV), PQC Statcon (less than 1 Kv), AHF (less than 1 KV), PQC plus, including the sales made to the Indian Railways for FYs 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17, duly certified by a Chartered Account on 30.10.2019 despite that same being already on record under the affidavit by its Company Secretary.
124. Regarding the second objection about discrepancy in the sales data highlighted by the Informant, upon the directions of the Commission, the OP clarified the alleged discrepancy in its written synopsis dated 20.09.2019 of oral arguments made during the hearing on 05.09.2019. However, the OP has sought confidentiality on the relevant paragraphs no. 20-22 of the written synopsis along with corresponding annexures requesting that the same may not be made available in public domain as it contains sensitive business information, the dissemination of which would adversely affect OP's position in the market. Accordingly, the OP requested for grant of confidential treatment on the aforesaid information/document for the entire course of investigation before the Commission and for a minimum period of 3 years thereafter.
125. At the outset, the Commission observes that though confidentiality may be granted on the Annexures as the same contain granular data, however, confidentiality cannot be granted on the entire paragraphs numbering 20-22 as the same contains information which is required to deal with the objection raised by the Informant.



Hence, the Commission, for the purposes of this Act in terms of Section 57 of the Act, rejects confidentiality with respect to contents of paras 20-22 of the synopsis dated 20.09.2019 filed by the OP. The Commission notes that the Informant argued that 0.16% of the total revenue of the OP for FY 2015-16 would amount to Rs.14.7 crores approximately and not Rs.4.62 crores as submitted by the OP before the DG. In this regard, the OP has submitted that the figure of Rs.14.7 crore is the sale of all IGBT solutions *i.e.* STATCOM, AHF and ancillaries which is derived from both exports and sales of the said relevant products in the domestic market. The OP by way of its written submissions dated 30.06.2017 had submitted the sales figures of STATCOM, AHF and ancillaries (peripheral and spare parts) in India and the value of sales only for STATCOM and AHF for FY 2015-16 in India was shown as Rs 4.62 crore in the submissions made before the DG. As the relevant market of IGBT based PQS includes sales of STATCOM and AHF in India and not the sales pertaining to ancillaries as well as sales made outside India, the figures submitted before the DG in the instant case relates to relevant product only and that too in the relevant geographic market.

126. In view of the foregoing, the Commission is of the view that the OP has addressed the objection raised by the Informant and the same does not have any bearing on the analysis of the Commission.

ORDER

127. On the basis of investigation and examination of the matter and considering all other material available on record, the Commission does not find ABB/OP to be in a dominant position in the relevant market. In the absence of dominance, the question of abuse of dominant position by the OP does not arise. Thus, no case is made out in terms violation of Section 4(2)(b), 4(2)(c) and 4(2)(e) of the Act. Accordingly, the case is ordered to be closed.



128. The Secretary is directed to forward a copy of this order to the Informant and the OP, in terms of provisions of the Act.

Sd/-
(Ashok Kumar Gupta)
Chairperson

Sd/-
(Sangeeta Verma)
Member

Sd/-
(Bhagwant Singh Bishnoi)
Member

New Delhi
Dated: 31.01.2020