COMPETITION ISSUES IN THE INFRASTRUCTURE SECTOR

- With special reference to the Indian Electricity Sector

Internship Report
Submitted to the Competition Commission of India

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**RESEARCH OBJECTIVE:**

- To undertake a detailed study of the Electricity Sector and investigate issues relating to the introduction of competition
- To find out why open access in the sector, which is provided for by law, is yet to be implemented successfully
- To familiarize myself with the provisions of the Competition Act, 2002, which can be applied in the presence of a sector regulator

**RESEARCH METHODOLOGY:**

The research study was carried out with the help of the following strategies:

- Studying primary and secondary sources
- Interpretation of cases
- Library research
1. **INTRODUCTION:**

   The shortage of infrastructure facilities has been the most important constraint in achieving tremendous growth rates in the Indian economy. A World Bank report has stated that inadequate infrastructure is the biggest problem for doing business in India. It is a critical input for broad-based and inclusive growth aimed at improving the quality of life, generating employment and reducing poverty across regions. Inadequate investment and absence of a competitive environment has primarily been responsible for the inability of the infrastructure sector to keep pace with the enhanced requirements of accelerating growth. Infrastructure sector, which includes oil, natural gas, transport, telecom, construction etc., during 1990s, was one of the reform deficit areas. In the past periods, infrastructure sectors have been under government control and were working without any competition either from the public sector or from the private sector and services were delivered mostly by natural monopolies which exhibited inefficiencies in management and working. Added to this was a perception that competition is infeasible in these sectors due to their inherent characteristics. But introducing regulated competition was very important because infrastructure projects had to balance various commercial and public interests. Absence of competition would, in effect, lead to operational inefficiencies, poor service quality and inefficient resource allocation.

   During the economic reforms of 1990s, considerable emphasis was laid on making the infrastructure sector open to competition wherever possible and on encouraging the participation of private players. This attracted huge private investments in a variety of infrastructure facilities, after which, this sector has shown considerable improvements. It has metamorphosed into a sector which is more organized and is also witnessing increased competition with growing private sector, innovative partnership models, and foreign players.

   In this project, we focus on the competition issues in infrastructure sector with specific reference to the electricity sector. We look into the challenges faced in introducing competition in various segments of this sector. The electricity sector witnessed major policy changes, regulatory initiatives and structural changes during the period of economic reforms as it was widely recognized that reliable and uninterrupted power supply is one of the basic necessities for the growth of industries. Unbundling of the sector, de-licensing and legal initiatives to bring in competition have been initiated. The most important initiatives to bring in competition were letting private players in
generation of electricity and provision of ‘open access’ to generating companies to the transmission grids and to the end users of choosing their supplier. The changes that these initiatives have brought about are quiet significant, but have not necessarily been in the direction intended. India continues to be a power-deficit economy and the core problems of wastages, lack of efficiency and competition still remain to be addressed successfully.

2. INTRODUCING COMPETITION IN THE INFRASTRUCTURE SECTOR:

The infrastructure sector, falls under the category of what is called network industries. In the case of network industries, markets usually involve enormous capital with a huge proportion of fixed costs and highly risky investment, intensive and interdependent technologies owned by different market players, network externalities of products and tendency of product standardization. In some industries only a handful of participants are in the market due to the heavy capital and sunk costs and the dominant firms may easily raise the barriers of market entry to exclude competitors. In view of this, market failures in those industries appeared significant which called for a need to regulate these industries effectively. Electricity supply, telecommunications, railroads, highways, ports, oil and natural gas etc are few examples of network industries.

The most important characteristic of network industries is that the average total cost lowers as the total output increases. The effect of economies of scale is commonly seen in every stage and there is never ending increasing returns. Hence, it is economical for a single large supplier to cater to the needs of consumers rather than multiple small firms existing in the market. These inherent characteristics of infrastructure industry are what make competitors reluctant to enter these markets. They will be required to undertake huge and risky investments at once and the gestation period is also considerably long. This is what creates natural monopolies in few segments. Competition was not possible unless some alternative was made to exclude the new entrants from making such huge investments. The solution to this problem emerged in the form of allowing the new entrants to legally use the infrastructure networks which were already created and maintained. By providing such open access, competitors were encouraged to venture into various segments of infrastructure sector, which would have otherwise continued to remain a monopoly. Open access
was seen as the only effective way to induce immediate competition in the sector and make it function efficiently. Also, the case for open access is stronger for public or social infrastructure because measuring demand for such infrastructure is difficult due to information and appropriation problems – consumers are not willing to pay the full value of the positive externalities and to the extent that they are willing to pay, it will be an amount lower than that which will maximize social welfare. In other words even if transaction costs of measuring demand were zero, suppliers would favour existing use and applications that involve appropriable and observable benefits at the expense of applications that generate positive externalities. Therefore support (subsidy) for such infrastructure goods is important or it will be undersupplied. The particular conceptual insight here is that an orientation towards open access accords benefits to all.

Let us now look into the introduction of competition through open access in the electricity sector, the related problems and why open access has not been so successful.

3. **THE ELECTRICITY SECTOR:**

Power sector reform has topped the public policy agenda in India for more than a decade. Even after fine-tuning frameworks and incentives to increase investment in generation, most of the country still faces severe power shortages. There are frequent black outs and burn outs. There is unsatisfactory performance in this sector which is also leading to wastage of capital. This can be attributed to the lack of effective regulation and competition in the power sector.

The electric utility industry is composed of 4 discrete processes-generation, transmission, distribution and retailing. Electricity generated using coal, natural gas, water, wind etc, is transmitted over high-voltage lines. This sector which was controlled by the government was open to entry and competition because of persistently high electricity rates. Transmission and distribution are still considered natural monopolies, while generating and retailing are considered conducive to competition. Because the transmission grid is a natural monopoly, a vertically integrated utility owning both transmission and generation can deny transmission access to independent generators or provide transmission access on highly unfavorable terms in order to increase the profits of its own
generation facilities. This can be prevented by requiring all transmission owners to divest all generation assets so that their incentive to manipulate transmission facilities gets eliminated. All the transmission grids in India are owned by the SEBs (State Electricity Boards). With the Electricity Act, 2003, regulations these vertically integrated state utilities have been unbundled. It has also been mandatory for the SEBs to provide transmission access to all generators on reasonable and nondiscriminatory terms. The Electricity Act also provides explicitly that consumers who consume more than 1 megawatt of electricity shall be given the freedom to choose their supplier, i.e., whom they want to buy electricity from. These steps have been taken to introduce competition in the natural monopoly segments of transmission and distribution.

4. INTRODUCING COMPETITION THROUGH OPEN ACCESS IN THE ELECTRICITY SECTOR:

The Electricity Act, 2003, was a historic piece of legislation which has opened the power sector to multiple players and provided a power market replete with competition. A key objective of this act was to provide ‘open access’ in the transmission and distribution stages of electricity. Open access is a non-discriminatory provision for the use of transmission lines or distribution system by any generating utility or consumer. This system provides the seller or buyer, the right to use the transmission line owned and controlled by other utility, and to generators, the right to sell their power at any location in any region. Thus generators and buyers can trade freely without having the right of transmission just by paying the wheeling charges to the owner. The transmission utility was not allowed to refuse the use of its transmission network except in instances of capacity limitation. At the national level, Power Grid, which was the central transmission utility, could provide open access and at the state level, state transmission utilities, the State Electricity Boards (SEBs) could provide open access.

The basic objectives of providing open access were the following:

- To invite private sector to invest in the power industry
- To promote competition among the generating companies
- To facilitate consumers to buy power directly from generators
• To lead to availability of cheaper and reliable power supply

The open access in the electricity sector has given rise to various advantages to the generators, society on the whole and the individual consumers as well, besides posing significant problems due to which the debate on whether open access is good or bad is still going on. Those who advocate open access in the electricity sector see it as a means of fostering healthy competition which ultimately results in advantages for consumers. Open access creates social value and the positive externalities produced by it makes it socially desirable. Open access to infrastructural resources like transmission and distribution supports society’s economic interests by promoting wealth maximization, efficient allocation and by ensuring other societal goals like fairness, equality and non-discrimination.

The counter argument is that competition was not always useful in bringing down prices. Prices can also be brought down by bringing down the distribution costs. Open access should not be the prime concern for the time being since we are lagging behind in improving our power supply relative to demand. In such situations, open access will only create more problems than solutions. Transmission congestion and high levels of cross subsidy surcharge hinder effective open access.

5. RELEVANT CASE:

• ANILA GUPTA V/s BEST UNDERTAKING

There was one case that deserves mention, based on denial of open access to a competitor. This case was initiated by the CCI based on information filed under section 19 of the Competition Act by Anila Gupta. CCI ordered the DG to investigate and submit a report on the case details. Let us look at the facts and findings.

Ms. Anila Gupta, a resident of South Mumbai, has filed a petition on 18th January, 2007 seeking a court order that would direct Tata Power Company Limited (TPCL) to supply her electricity, switching over from the then current supplier, Brihanmumbai Electric Supply and Transport (BEST) Undertaking. BEST filed an affidavit stating that it is a local authority having exclusive territorial jurisdiction to supply electricity to the residents within its area and that TPCL cannot supply electricity within this area, although, TPCL has expressed its willingness to supply electricity to the Informant. As such, the
Informant has alleged that the stand taken by BEST against its consumers is illegal and BEST has blatantly indulged in gross and flagrant abuse of its dominant position. The Director General was ordered to make an investigation into the matter under 26(1) of the Competition Act, 2002, and to submit a report on the said allegations.

The DG, based on positioning of BEST in the supply of electricity in the relevant market, found that it enjoys complete dominance by virtue of its market share, market structure and its size and resources. Its dominance by way of regulatory barriers of entry has been created by the Electricity Act, 2003 and Mumbai Municipal Corporation Act, 1888 which gives exclusive position of monopoly and dominance in the relevant market. After having established dominant position of BEST in the relevant market, in-depth analysis and assessment of its conduct and the provisions of the Electricity Act and other Regulations was done by the DG to determine the abuse of dominance under Section 4(2) of the Act. It was found that BEST was not permitting supply of electricity by TPCL through the wheeling on its distribution network. It is noticed that BEST does not permit TPCL to use its network in the form of high tension wires, substations etc. by virtue of the provisions of the Electricity Act, 2003. As a result of such restriction, TPCL would have to bear capital expenditure of over 590 crores which was ultimately to be borne by the consumers.

The said restriction on wheeling of electricity as existed in the case of BEST was not found to exist in the adjoining area of Mumbai where TPCL had common jurisdiction with Reliance Infra. Thus, wheeling of electricity was found to exist between TPCL and Reliance which shows that a differential & special treatment to BEST which tends to directly or indirectly impose unfair or discriminatory conditions in services as also price of services in violation of Section 4(2)(a)(i) and 4(2)(a)(ii) of the Act. The said non-availability of wheeling network of BEST has also resulted in denial of market access to competitors including TPCL in its license area common to BEST which is infraction of Section 4(2)(c) of the Competition Act. Investigation has also found that BEST was also not permitting its competitors including TPCL to lay its own distribution network for supply of electricity in the given license area. The investigation, therefore, has concluded that BEST has indulged in several conducts which are abusive of its dominant position in the form of imposing unfair conditions on services, limiting the provision of services and denies market access to competitors and the relevant market. The BEST has therefore been found to have violated the provisions of Sections 4(2)(a)(i), 4(2)(a)(ii), 4(2)(b)(i) and 4(2)(c) of the
Act. However, the Commission has closed the case saying it will not be appropriate to give a finding at the prevailing stage. But the informant could approach the Commission again, if she so desires, after a final view was taken in the matter pending before the Electricity Tribunal.

The Competition Commission of India (CCI) had stepped into the picture for the first time. TPC has demanded that it will supply power to Gupta only if she provides enough space to set up a substation. The CCI asked Maharashtra Electricity Regulatory Commission (MERC) to submit a report on whether there is a provision in the regulatory framework for the imposition of such a condition by a private electricity distributor on those who seek power connection from them. The two reasons for which CCI’s intervention proved significant were – MERC passed an order in 2009 allowing TPC to supply power to consumers living in the common area of supply of TPC and BEST by laying a separate distribution network and it was set to hold a hearing, suo motu, to address the pleas of those who wanted to change their distributor from BEST to TPC. TPC replied to CCI saying the file was closed in January 2011 as Gupta failed to provide suitable space for substations.

6. **THE DOCTRINE UNDERLYING OPEN ACCESS:**

The natural monopoly segments in the electricity sector involve enormous capital, highly risky investments, tremendous sunk costs and never-ending increasing returns. Due to the heavy investments in assets and facilities facilitating electricity generation, transmission and distribution, it is more economical for firms to share these facilities rather than waste resources in trying to duplicate the same. The benefits of open access policy follow from enhancing competition in the upstream market, generation segment in case of electricity. Maintenance of a competitive market in electricity and the success of deregulation depend largely on electric power transmission and open access to the power grid by competing generators. However, transmission systems are natural monopolies that have all of the characteristics of an essential facility. Thus, the continued viability of a competitive wholesale power market requires transmission owners to provide access to generators on equal terms and not to discriminate against other generators, if the transmission owner is also in the wholesale power market. Similarly, for competition in the retail power market, which refers to the supply of electricity, the distribution licensee of a particular area have to provide open access to
competitors to his wheeling wires, so that customers can buy power from suppliers of their choice. We will now look into the doctrine that legally facilitates this sharing, the “Essential Facilities Doctrine”. It is being looked upon as a means to introduce competition in the otherwise monopoly sectors and has gone a long way in improving economic and consumer welfare through competition.

7. **THE ESSENTIAL FACILITIES DOCTRINE:**

The essential facilities doctrine, which can be traced back to about a century ago, has been widely invoked across a number of jurisdictions all over the world and has generated a good deal of attention among people interested in competition and competition policies. Essential facilities doctrine requires a monopolist to share the natural monopoly asset he controls that serves as a necessary input in another market and is necessary for competition. Failure to share such an asset invites antitrust/antimonopoly liability. This doctrine has been influenced by the American antitrust law. Because of the economics of network goods, which exhibit increasing returns to scale in consumption, EFD application is greatly justified. The two basic premises this doctrine rests on are: first, a natural monopolist in one market should not be allowed to deny access to the crucial facility to prevent rivals in adjacent markets, he has a duty-to-deal; second, dividing the natural monopoly among multiple owners could lead to a sacrifice of important efficiencies.

A vertically integrated owner of an essential facility can deny access to the asset or charge a higher price for access to firms in the dependent competitive market as part of a so-called ‘raising rival’s costs’ strategy. By depriving rivals of access to a key input or providing access on discriminatory terms, the monopolist may force these firms to raise their prices in the competitive market. Since these inputs have no equally cost effective substitutes, at least in the short term, deprived access or access at inflated prices forces the rivals to use a less effective mix of inputs and raise prices of the final product as a result. Thus the dominant firm weakens the competitive pressure it faces from other firms and can raise its own price and thus obtain immediate payoffs. Essential facilities cases are viewed as involving a structural problem in the market which limits competition and hence the issue must be addressed for effective functioning of the market.
7.1 **PRINCIPLES OF ESSENTIAL FACILITIES DOCTRINE:**

A facility is essential and has to be shared only if the following conditions are satisfied:

(1) the essential facility is controlled by a monopolist
(2) it is practically or reasonably impossible for a competitor to duplicate the essential facility
(3) the denial of use poses serious restraints to competition in the sector’s downstream market
(4) It is feasible to provide access to the facility

There must be no real or potential substitute to the facility and the impossibility to replicate may be physical (in case of tangible assets) or legal (in case of intangible assets). The importance of granting access to competitors must be taken into account. It will not be sufficient that the position of the company requesting access would be more advantageous if access were granted- but refusal of access must lead to the proposed activities being made either impossible or seriously and unavoidably uneconomic. The refusal by the dominant undertaking can be actual or ‘constructive’, where constructive refusal could, for example, take the form of unduly delaying or degrading the supply of the product or involve the imposition of unreasonable conditions in return for the supply. It is also important to clearly define the relevant market while investigating in abuse of dominance cases.

Where a firm controls an essential facility and operates on a downstream market, it would be sensible for it to operate the facility separately from the downstream activity and to maintain separate accounts for each business. If it operates the essential facility as an entirely separate business, without regard to its downstream activity, it is less likely to commit an abuse.

However, the owner of an essential facility will not commit an abuse where it has an objective justification for denying access. Obvious justification would be that the undertaking seeking access is not creditworthy, it is technically incapable of using the facility in a proper manner. A particular issue that arises in the case of essential facilities is that there may be capacity constraints which make it impossible for access to be provided. For example the owner of a port might already be using it to full capacity, in which case it would not be possible for it to grant access to a third party. If several competitors are already using the facility and are operating in the same downstream market, this would suggest that granting access to another undertaking would not be necessary to maintain competition there. If there is only capacity for one additional user, it might be appropriate to hold an
auction and to grant access to the highest bidder. It is doubtful that the owner of the essential facility can be under a duty to increase capacity in order to enable a third party to have access. If the dominant firm claims that all the capacity in the essential facility is being used, an investigation may be necessary to determine whether the claim is genuine one or whether the argument is being deployed in order to deny access to the downstream competitor.

The essential facilities are necessary inputs in mostly distinct, vertically related markets. This is an important limitation on the doctrine because requiring a firm to share its assets with a firm in the same stage of production within an industry undermines incentives to invest. Experts have questioned the economic underpinnings of mandated asset sharing on the basis that monopoly profits is what attracts business acumen in the first place and this is what induces risk taking that produces innovation and economic growth. Since it requires entrepreneurs to share the assets owned by them with third parties, it is an infringement into the private property rights of the asset owner. The right to choose one’s trading partners and to dispose off one’s assets freely enjoy constitutional status and an incursion on these rights require careful justification. Such justifications in terms of competition policy require a careful balancing of conflicting considerations. From a long run perspective, it is generally pro-competitive and in the interest of consumers to allow a firm to retain for its own use, the facilities it has developed for the purpose of its business. For example, if access to a production, purchasing or distribution facility was allowed too easily, then there would be no incentive for a competitor to develop competing facilities. Thus competition would be reduced in the long term though it was increased considerably in the short term. Determining what a reasonable access fee to be charged by the monopolist is, might also prove complex. Another important principle to be kept in mind is that one should not lose sight of the fact that the primary purpose of competition law is to prevent distortion of competition and to safeguard the interest of consumers, rather than to protect the position of particular competitors.

7.2 NEED FOR AND ECONOMICS UNDER THE DOCTRINE:

There is an obvious reason why the issue of essential facilities has aroused so much interest. From the 1990’s onwards, there developed a policy that favored the de-monopolization and liberalization
of sectors in India. Exposing sectors such as telecommunications, energy markets, and transport to competition was considered desirable. However, competitors would be slow to emerge where service providers could compete only if they had some access to important infrastructures such as telecommunication wires and cables, the electricity grid, gas and pipelines, ports, airports and railway lines owned and operated by dominant undertakings. In such cases control of the infrastructure gives rise to what is often referred to as a bottleneck problem: that competition is impossible where one firm, or a combination of firms, can prevent others from operating on the market by denying access to a facility which is essential and cannot be duplicated. While some infrastructure resources may be consumed directly to produce immediate benefits, most of the value derived from the resources results from productive use rather than consumption. Value is created downstream by a wide variety of end users that rely on access to the infrastructure. From an economic perspective, it makes sense to manage such infrastructure resources in an openly accessible manner because doing so permits a wide range of downstream producers of private, public, and non-market goods to flourish.

In many countries this problem was overcome by the establishment of specific regulatory regimes that mandate open access to such infrastructures on reasonable, non discriminatory terms. Open access eliminates the need to rely on either the market or the government to “pick winners” or uses worthy of access. The inefficiencies, information problems, and transaction costs associated with picking winners may justify managing public, social, and mixed infrastructure resources in an openly accessible manner. Such open access has led to the creation of social value in the downstream markets by strengthening competition, improvement in efficiency, innovation and experimentation with new uses, and the generation of positive externalities that result in large social gains.

7.3 **TANGIBLE AND INTANGIBLE ESSENTIAL FACILITIES:**

The distinction between tangible and intangible essential facilities provides a dividing line on how the doctrine should be applied. Although tangible assets with natural monopoly characteristics, electric transmission lines for example, can be leveraged into the competitive portions of their respective industries, the doctrine should not be applied to these bottlenecks. In these traditional natural
monopoly industries, regulatory agencies have effectively assumed the role of enforcing the doctrine. Court-ordered access or any judicial second-guessing of agency decisions may be economically harmful when a regulator is already performing the function. This proposition was expressed in Trinko. Prudent application of the doctrine to intangible essential facilities, patented genetic sequences and application programming interfaces on Microsoft Windows for example, can improve economic efficiency without burdening the federal courts. Intangible assets like these are de facto monopolies, critical inputs in multiple markets and not subject to regulatory oversight. Using the essential facilities to impose a duty-to-deal on the owners of these assets can produce lower prices and greater innovation in the markets for products ranging from cancer therapies to computer operating systems.

Specialized sector regulators would mandate nondiscriminatory access to rivalrous, tangible natural monopolies and generalist antitrust courts would compel sharing of nonrivalrous, intangible essential facilities. Courts are considered apt for setting royalties for intangible essential facilities because when mandating the sharing of intellectual property, courts could look to a prior course of dealing to find a market price for the same or similar asset, which presumably includes a reasonable return on investment. Because the sharing of intangible assets require occasional discrete intervention, as opposed to ongoing judicial supervision, courts would not have to assume the day-to-day controls characteristic of a regulatory agency.

7.4 FEW RELEVANT CASES:

- The genesis of Essential Facilities Doctrine can be typically traced to the 1912 Supreme Court case US v. Terminal Railroad Association of St. Louis. The defendant was a consortium of 14 railroad companies that controlled all the bridges and terminals needed to access a major rail hub, St. Louis. The defendant refused to grant access to nonaffiliated railroads, preventing them from serving St. Louis. The court found that since no non-member could pass through or enter St. Louis without using these facilities owing to the geographical and topographical conditions and as the facilities were also allowed with the unanimous consent of all members, the actions of the terminal company would be anti-competitive. This led the US Supreme Court to conclude that the facilities were ‘public utilities’
and denial of access would have an adverse impact on trade and commerce, accordingly that access had to be provided to all users on just and non-discriminatory terms.

One should not misunderstand this as a mandate that every huge investment made by an entrepreneur will be subject to third party access. Such misgivings will kill the incentive to improve efficiency, innovate and invest. The essential facilities doctrine is invoked only in certain circumstances where it is technically feasible to provide access without the entrepreneur having to suffer any loss, it is not possible to duplicate the facility within reasonable period of time and denial of access leads to hindrance in competition.

- Finally, in the year 2004, the US Supreme Court in the case of **Verizon Communications Inc v. Law Offices of Curtis v Trinko LLP** held that the Supreme Court has never recognized the essential facilities doctrine. The challenge under the Trinko Judgment was the denial to share network mandated under the Telecommunications Act, 1996 to competitors. Under the Telecommunications Act of 1996 local exchange carriers were mandated to provide access to their networks to competitors or new entrants and it was argued that the Verizon was providing access to its network on a discriminatory manner to the detriment of the competitors and was therefore acting contrary to the provisions of the Sherman Act. In this context the Court ruled that for an attempt to monopolise it is necessary to show in addition to the possession of monopoly power in the relevant market, “the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. The Court further observed that directing / compelling firms to share their infrastructure would not be in line with the underlying purpose of competition law as it may lessen the incentive for enterprises to invest in economically beneficial facilities. Furthermore, it will also require the Court to act as the central planners for the industry and could facilitate collusion among the parties and thereby impeding the objective of the Sherman Act. The Court also noted that because of these uncertain virtues, very cautiously and only under very limited exceptional circumstances will sharing be mandated. The Court noted that the case did not fall within these exceptions. In this context the Court noted that even under the essential facilities doctrine the challenge will not succeed. The Court held that the in-dispensable requirement for invoking the doctrine is the unavailability of access to the “essential facilities” and where access exists, the doctrine serves no purpose. Specifically in this case the Court held that since the Telecommunications Act of
1996 provides for sharing, there was access to facility. Therefore, in effect the Supreme Court did not even feel the need to recognise the doctrine and provided a very narrow compass for its application even in the event if it were to apply.

- In **Otter Tail Power Co. v. United States**, Otter Tail Power Company distributed electric power in 465 towns in Minnesota, North Dakota and South Dakota. In towns where Otter Tail distributes at retail, it operates under municipally granted franchises which are limited from 10 to 20 years. When the some of the franchises expired, the relevant towns wanted to replace Otter Tail with their own municipal electricity distribution system. Otter Tail attempted to prevent towns from replacing it with a municipal distribution system by refusing to sell power at wholesale to proposed municipal systems in the communities where it had been retailing power, refusing to "wheel" power to such systems, that is to say, to transfer by direct transmission or to displacement of electric power from one utility to another over the facilities of an intermediate utility. The Court held that Otter Trail had used its monopoly power “to foreclose competition or gain competitive advantage, or to destroy a competitor”.

- Another example, which is related to essential facilities doctrine in case of intangible assets is, **Court of First Instance (CFI) Judgment in the Microsoft case**, wherein the case related to the non-disclosure by Microsoft of interoperable information. While addressing the indispensability requirement or the degree of interoperability that was required the Court held that the standard that has to be used is with reference to what is necessary to remain viably on the market. The CFI justified this on the interpretation that Article 82 deals with conduct that hinder the maintenance of effective competition on the market and that furthermore the jurisprudence of ECJ imposed a special responsibility on the dominant undertakings not to impair genuine undistorted competition in the market. The CFI then found that the finding of the Commission that the ‘interoperability with the client PC operating system is of significant competitive importance in the market for work group server operating systems’ was correct and Microsoft could not prove otherwise. Microsoft also argued that the test applied by the Commission was incorrect in the light of the earlier cases pertaining to abuse of dominance where the refusal should have been likely to eliminate all competition or in other words there is a high probability that the conduct will have such a result. The CFI held that this was only a matter of terminology and that the objective of Article 82 would not be served if the Commission were to wait till there is no competition in the market. Furthermore, the CFI held that the standard that needs to be demonstrated
is the refusal is likely to eliminate ‘all effective competition’ on the market. Finally the Court observed that the practice of not granting interoperable information would amount to an abuse of a dominant position. It will be relevant to observe that the Microsoft judgment has to be viewed in the light of the specific market situation it dealt with (viz. software and high technology market which was characterised by network effects) and what would be the effect of the actions of Microsoft in future on such a market where it is necessary to have interoperable information.

7.5 THE ‘ESSENTIAL FACILITIES DOCTRINE’ AS UNDER THE INDIAN LAW:

Under The Competition Act, 2002 the ‘essential facilities doctrine’, though not explicitly, is covered under:

1. **Section 4(2) (c)** of the Act which states that there shall be an abuse of dominant position if an enterprise or a group indulges in practice or practices resulting in denial of market access in any manner; and
2. **Section 3(4) (d)** which prevents “refusal to deal” agreement and deems them to be anti-competitive agreements holding them to agreements that cause an appreciable adverse effect on competition in India. Explanation (d) to s. 3(4) defines “refusal to deal” in an inclusive manner to include any agreement which restricts or is likely to restrict, by any method the persons or classes of persons to whom goods are sold or from whom goods are to be bought. It should be noted that since the definition of “refusal to deal” is an inclusive one it is not limited to only sale and purchase of goods but would also cover access to services.

Further, the Essential Facilities Doctrine can be institutionalized in various other Indian Laws as follows:

1. **“COMMON CARRIER” REGIME UNDER PNGRB ACT, 2006**

The “common carrier” and “contract carrier” regime contemplated under the Petroleum and Natural Gas Regulatory Board Act, 2006 (“PNGRB Act”) in respect of pipelines carrying petroleum, petroleum products or natural gas is a reflection of the “essential facilities” concept into Indian law. The PNGRB Act defines a “common carrier” to mean such pipelines for transportation of petroleum, petroleum
products and natural gas by more than one entity as the Board may declare or authorize from time to time on a non-discriminatory open access basis, but does not include pipelines laid to supply – (i) petroleum products or natural gas to a specific consumer, or (ii) crude oil.

(2) “OPEN ACCESS” REGIME UNDER ELECTRICITY ACT, 2003

The Electricity Act, 2003 defines “open access” to mean “the non discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission.”

(3) “INTERCONNECTION” REGIME FOR TELECOM NETWORKS

The Telecom Regulatory Authority of India Act, 1997 specifies that one of the functions of the TRAI shall be to ensure effective inter-connection between different service providers, fix the terms and conditions of inter-connectivity between the service providers and maintain a register of interconnect agreements. In discharge of these functions the TRAI has enacted Telecommunication Interconnection Regulations for Telecom service providers as well as Broadcasting and Cable Services providers. TRAI also regulates user charges for interconnection through Telecommunication Interconnection User Charges regulations.

7.6 APPLICABILITY OF THE DOCTRINE IN THE INDIAN CONTEXT:

The political, social and economic scenario in India is quite different and distinct from what is prevailing in the Western world and this is relevant when such a doctrine is applied to the Indian context. Until the early 1990s, India was governed by the License Raj that penalized industries for producing more than the quantities prescribed in the license. These industries were literally tied down by various other government policies and could develop only with the dictates of the government. Moreover, state funded and owned enterprises were allowed a monopoly in most industries from oil and gas, power, telephones to airlines. When reforms were introduced in 1991, public sector enterprises had access to their own unique resources that were not made available to private enterprises, which had to invest huge amounts in creating its own infrastructure but managed to
generate profits over time. The question is whether these companies can be compelled to share their facilities built at a huge cost on a fair and non-discriminatory basis to new entrants to free ride on their investments in the name of promoting competition. In few cases, it might only be a basis for transfer of profits from one organization to another. Another larger question is: in a resource scarce country like India, whether it is prudent to duplicate facilities or compel companies to share the same, but on terms that are fair and in the interest of all concerned. Where does one draw the line and is it within the scope of CCI to go beyond legalese and rule on equity and efficiency?

The issues will range from the applicability of the doctrine itself in the first case. In India’s Competition Act of 2002, instances relating to the abuses of one’s dominant position include limiting markets, indulging in any practice or practices that result in denial of market access to a competitor in any manner and leveraging to protect another market. It can be inferred that the intention of the law-makers seems to be an implicit recognition of the doctrine of essential facilities. Recently, the report of the Working Group on Competition Policy, constituted by the Planning Commission, has also recommended recognition of the essential facilities doctrine in no uncertain terms. Whether essential facilities can be covered under any of these categories will be one of the issues at the forefront. The US SC in Verizon has identified that there are uncertain virtues in forced sharing. Another concern would be regarding when the doctrine should be applied. Should the infrastructure be a public utility of great public importance for the development of commerce and trade in India? It is an acute necessity to balance the interests of the innovators and investors in infrastructure else free riders may take undue advantage. Determination of essentiality is another important question - should the facility be indispensable or should it be viable for competition. It would also be necessary to check, after determining essentiality, when can the doctrine be applied- is it in a situation when the conduct is likely to eliminate all competition or is it likely to eliminate all effective competition in the market. In addition, crucial to the determination of this issue would be the determination of the relevant market and whether the features of essentiality and applicability of other conditions are applicable in that particular relevant market. A key ingredient for determining the abuse of dominant position under Section 4 is the relevant market. Economic tools and data will have to be clearly adduced in determining the relevant market and the viability or essentiality of a facility.
Furthermore, regard should be had to how and in what circumstances the doctrine has been applied in different countries. In the US, ownership and control of essential infrastructure facilities developed by private enterprises vests with the developer investing in and undertaking the development of such facilities and under US law, the right to property is paramount and well guarded. Under the Indian scenario, the right to ownership of the infrastructure facilities that is developed by a private entity is usually limited to that of exclusive operation and thereafter transfer of the facility to the Government. Usually the structure adopted under most of the Indian concession arrangements is that of Build Operate Transfer (BOT). Hence the limited and strict application of the “essential facilities” doctrine that has been adopted by the Supreme Court of the US would not be applicable in the Indian scenario.

In case of Europe, the courts have applied the doctrine in the background of Special Responsibility of the dominant undertaking, a concept that is alien to Indian Jurisprudence and in the light of protecting the common market in Europe. It should be kept in mind that the Indian Supreme Court has clearly held in a number of cases that where a foreign precedents or legal principles from similar legal jurisdictions are sought to be applied, prime importance should always be given to the Indian conditions where it is to be applied and also to the circumstances and setting in which the related Indian law is enacted. The Indian policy makers too have, wherever felt necessary, specifically mandated access to information/ resources. Gas pipelines for supply of natural gas to homes, communication towers maintained by telecom operators, transmission grids through which a generator can supply electricity to his customers, railway tracks etc, are few examples that has been regarded as essential facilities.

As part of its policy prescription for a healthy competition regime, the committee which was formed under CCI chairman Dhanendra Kumar, drafted a new policy sought to bring IPR holders under the doctrine of third party access to essential facilities - a principle that requires owners of dominant infrastructure like pipelines and railway tracks to grant access to other players at a reasonable fee. "Such treatment can be given to intellectual property rights as well if the IPR concerned possesses infrastructure characteristics," the policy had stated. It also sought to ensure fair pricing 'particularly of public utilities and IPR holders which could be imbued with monopolistic characteristics. The proposal evoked very strong responses from IPR practitioners as well as global law firms. "One of the great strengths of the Indian economy is innovation in critical areas such as software, service and beyond."
The mere possession of IPR cannot be treated as a dominant position," said Vinod Dhall, former CCI chairman.

7.7 LIMITS TO THE DOCTRINE:

Where infrastructures of the kind of airports, telecommunications etc have been established by the state or with state funding, or by undertaking to which monopoly rights have been granted by the state, a requirement that they should be shared with the third parties may be considered to be a reasonable public policy choice. Undertaking controlling a bottleneck might be considered to be super dominant, implying that they have a higher responsibility not to distort competition than the obligations attaching to merely dominant firms. However, it is important to recognize that there must be limits to the essential facilities doctrine. Demanding that a dominant firm should grant access to its facilities is a major and uncompensated intervention on the part of competition authorities into the private property rights of the firm; and an excessive application of the doctrine can have harmful economic effects. This is not only because there is an element of expropriation in requiring one firm to grant access to its property to a competitor, but also because the, prospects that the third party might be able to demand a free ride on the fruits of another’s investment might deter the latter from making the investment in the first place. Few even argue that the competitors will be charged monopoly prices for access granted to them, which will ultimately be passed on to the consumers. Hence, the prices paid by the consumers, infrastructure capacity and consumer welfare remain the same. Moreover, compelling negotiation between the competitors may facilitate the supreme evil of antitrust: collusion. It is clear, therefore, that there must be a sensible limit upon what is to be considered to be an essential facility, and that the circumstances in which access to it can be mandated should be determined with the need not to discourage investment. In particular, where the infrastructure has been established by firms acting in the private sector, without recourse to public funds and without the benefits of monopoly rights conferred by the state, sensitivity to the free rider issue is very important.
7.8 LADDER OF INVESTMENT – A POSSIBLE SOLUTION TO THE FREE RIDER PROBLEM:

The "ladder of investment" is a regulatory approach proposed by Martin Cave (2006), which has been widely embraced by national regulatory authorities in the European telecommunications sector. The approach entails providing entrants, successively, with different levels of access - the "rungs" of the investment ladder, while inducing them to climb the ladder by setting an access charge that increases over time or by withdrawing access obligations after some pre-determined date (i.e., by setting sunset clauses). Proponents of the ladder of investment approach claim that such regulatory measures would make service-based entry and facility-based entry complements - albeit they have been traditionally viewed as substitutes - in promoting competition. The regulators, thus, have shown a strong interest in this approach.

The potential problem with promoting competition with access regulation is that once entrants start enjoying profits by competing on services alone, it will hinder their incentive to invest in their own infrastructure, particularly if access prices are set low. Adoption of the LOI approach would promote investment in building facilities. In this approach, new entrants are provided with transitory entry assistance and are incentivized to build their own network in the medium or long run. They begin with acquiring access at a level which requires little investment to provide their services. Then as their customer base grows, they are encouraged to invest in the network elements necessary to bypass each level of access. The regulator gives the entrant an initial lift up on the investment ladder by ensuring its access to the incumbent’s infrastructure in reasonable terms. To make sure the entrant climbs the ladder, the regulator gives it another lift up to the next rung. This second time, the lift up not only ensures access to the incumbent’s infrastructure at a higher level, but also burning up the rung on which the entrant was standing. The entrant would then make the necessary investment to climb up to the next highest rung. This process goes on till the entrant reaches the top of the ladder, surpassing all parts of the incumbent’s infrastructure. As the entrant’s investment takes place progressively and is spread over time, facilities are created without the entrant having to incur very high investment costs at once.
This approach can be adopted while providing access to the essential facilities in the electricity sector also. The new entrants will be induced to make steady investments and continuously work on improving efficiency. This might lead to technological innovations while providing a solution for the free rider problem in the infrastructure market.

8. **WHY IS OPEN ACCESS NOT WORKING?**

Even after several years, there is limited success in this domain. Inspite of section 42 of EA 2003 stating that states shall allow open access to all consumers above one megawatt load, most consumers are yet to have the freedom to choose their electricity suppliers. There are multiple reasons which can be attributed to this failure. Almost none of the state utilities have revised their tariffs to keep in line with rising costs of electricity. This has resulted in their overdependence towards highest-paying consumers in the state i.e., the industrial consumers. In view of the over-dependence, it is difficult for state utilities to give open access to industrial consumers as that may lead to financial problems for utilities. The discoms are reluctant also because they feel they will suffer losses if large consumers shift. So it has led to various technical issues to deny open access or high charges being levied as open access. Hence, purchasing electricity from open access becomes unviable for any consumer. Further, the state load dispatch centres (SLDCs) have failed to act as independent system operators and open access is being denied by SLDCs to protect state electricity boards from competition. The implementation of inter-state transfer of power has been hindered because of state machineries impeding the implementation of open access reform. Another reason is that it is difficult to persuade a monopolist/incumbent to give up its monopoly privileges. Forcing the monopolist to keep the usage of his assets open to third parties is an uncompensated infringement of his private property rights. The regulators should fix a fair compensation in return for the provision of open access. Prices should be broken up in components like production cost, transmission loss cost, wheeling charges etc, so that this clarity on charges encourages consumers and discoms towards open access.

Kerala was the first state to have allowed open access. But it did not take place as the applicant has shifted to another state. West Bengal Electricity Regulatory Commission (WBERC) has granted open access to 3 applicants, but it is yet to commence. The Jharkhand State Electricity Regulatory
Commission (JSERC) has allowed one applicant (TISCO) to have open access, but OA is not taking place because this has been challenged by Jharkhand State Electricity Board (JSEB). In Punjab, 2 applications were received for open access and both were approved as well as implemented. Despite the State facing acute power shortage, 5 Generators (Captive & Co-generators) have been allowed Open Access to sell power outside the State in open market. Haryana and Himachal Pradesh are yet to implement open access though there have been a number of applications received. The following table gives data on open access capacity sought, approved and successfully implemented.

<table>
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<th>STATE</th>
<th>APPLICATIONS RECEIVED</th>
<th>CAPACITY (mw)</th>
<th>APPROVED</th>
<th>CAPACITY (mw)</th>
<th>CASES IMPLEMENTED</th>
<th>CAPACITY IMPLEMENTED</th>
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Tamilnadu is a major defaulter. Though it has received open access applications for 1,764 mw, the highest of all states, it has not approved even one. The main reason for this is that vested interests in the state are trying to harness and capture resources in the garb of consumer interest. The states Tamilnadu and Karnataka have misused section 11 of the EA, 2003, which authorizes state governments to operate and maintain generating stations, but is silent on authorizing the states to direct them to sell the electricity produced to other states. The state governments, therefore, find it easy to invoke this section to misuse it in their favor and protect state monopolies though open access is a statutory right under section 42 of the EA.

One of the most important question that arises in the light of this issue is that – Why are the sector regulators and competition authorities not intervening to implement open access effectively? The reason is that there is overlap in the jurisdiction of both sector regulators and CCI, this overlap primarily being because of the powers entrusted to both of them by the respective laws that they are meant to implement. In case of open access, the already thin line of difference in their jurisdiction becomes even blurred. A basic question for which the answer is yet to be sorted out is- Under whose jurisdiction is open access? We briefly look into the interface between sector regulators and competition authorities and argue that open access as a whole cannot come under the jurisdiction of a single regulator. There are few technical and structural aspects of open access which can only be regulated by the sector regulators and few behavioral aspects which has to be left to the competition authorities to look into.

9. THE INTERFACE BETWEEN SECTOR REGULATORS AND COMPETITION AUTHORITIES:

The sector regulators, who emerged because of the need for regulation in network industries, were entrusted with the duties of controlling anticipated market failure; prevent firms that are in dominant and monopoly positions from abusing their position and engaging in anti-competitive behavior and ensuring fair competition in their respective sectors by making decisions in a transparent, participatory
and consultative manner. Fair competition in the whole economy was possible only by regulation, for the purpose of which competition laws were enacted and competition authorities were given the mandate to regulate competition in all sectors of the economy. This ushered in some level of confusion and conflict and the regulators were reluctant as they had to give up a portion of their authority relating to competition issues. It also needs to be appreciated that sector regulators and competition authorities generally have different legislative mandates and perspectives. But it is the most beneficial only when the two sets of regulators coexist because they share a common goal of protecting consumer interests and enhancing social and economic welfare.

In respect of regulatory roles, there are 4 distinct aspects of regulation which can be identified:

(1) **Technical Regulation** - this entails setting and monitoring product and process standards to assure compatibility, allocating publicly owned resources and addressing privacy, safety and environmental protection concerns

(2) **Competition Enforcement** - this entails the control of abuse of dominance, anti-competitive agreements and anti-competitive mergers and acquisitions (M&As) using provisions of the competition law.

(3) **Economic Regulation** – entails controlling or specifying production technologies, eligible providers, terms of sale, standard marketing practices and adopting cost based measures to control monopoly pricing

(4) **Access Regulation** - this entails ensuring non-discriminatory access to necessary inputs, specially network infrastructures where natural monopoly is widely prevalent

Technical regulation, which requires frequent interventions and continuous assessment of performance against set standards, needs application of sector specific expertise. This has no direct relevance to competition concerns which makes it more suitable for a sector specific regulator to handle the task. When it comes to competition enforcement, a more general approach is required since competition laws apply to all sectors in the economy and its implementation should be consistent across sectors. The competition authorities who are experts at this are better suited for this task.

Technical regulation is an ex-ante and a structural issue. Whereas, competition regulation is an ex-post and behavioral issue. Economic regulation is ongoing and requires sector specific knowledge. But, at the same time, terms of sale, marketing practices etc have a direct bearing on competition. The
procedures adopted by regulatory agencies might result in creation of entry barriers which, the competition authorities might find challenging. Even in access regulation, the objective on one hand is to promote and protect competition and on the other hand, it is to process cost data to set appropriate access terms so as to ensure a level playing field.

In the latter two cases, it is clear that exclusive jurisdiction cannot be given to either of the regulators. This forms the basis for adoption of concurrent jurisdiction in many countries. Concurrent jurisdiction implies that both competition authorities and sector regulators have mandates in regulatory matters, regardless of the issue in hand. This might, in some cases, end up in confusion due to vested interests and regulatory capture undermining the principles for deciding which institution is best suited to handle the issue. Hence, it is important that both sets of regulators work in a co-ordinated manner. There can be forums set up to discuss conflicting issues and continuous, informal exchange of ideas should be facilitated between sector regulators and competition authorities, to enable them to maintain a good rapport with each other. Consulting each other in conflicting issues can be made legally mandatory and they should be given the right to make report submissions to each other. It is also necessary that the regulators avoid adoption of competition distortion policies.

It is possible to draw a line of difference between the way sector-specific regulators and the competition authorities work, within their jurisdiction. Competition rules tell the agents in the market what they should not do, while sector regulation does the reverse and tells them what they should do. Sector regulators are charged with functions of attenuating the effects of market power, but competition authorities focus on reducing such power. Sectoral regulators monitor various structural aspects but competition authorities keep a check on the behavioral aspects. Sector regulators usually apply an ex-ante approach, in contrast to competition authorities applying an ex-post approach (except in the area of merger review). Sector-specific regulators intervene more frequently and require a continual flow of information from the regulated entities, but competition authorities rely more on complaints and gather information only when necessary. Sector regulators are typically assigned a wider range of goals than the competition authorities, so they become more adept in trading off conflicting goals.
9.1 PROVISIONS CONTAINED IN THE COMPETITION ACT, 2002:

The Competition Act 2002 contains provisions for the sector-specific regulators and the competition authorities to work in coordination with each other so as to avoid disputes. The relevant provisions are:

[Reference by statutory authority]

Section 21. (1) Where in the course of a proceeding before any statutory authority an issue is raised by any party that any decision which such statutory authority has taken or proposes to take is or would be, contrary to any of the provisions of this Act, then such statutory authority may make a reference in respect of such issue to the Commission.

[Provided that any statutory authority, may, suo motu, make such a reference to the Commission.]

(2) [On receipt of a reference under sub-section (1), the Commission shall give its opinion, within sixty days of receipt of such reference, to such statutory authority which shall consider the opinion of the Commission and thereafter, give its findings recording reasons therefor on the issues referred to in the said opinion.]

[Reference by Commission]

Section 21(A). (1) Where in the course of a proceeding before the Commission an issue is raised by any party that any decision which, the Commission has taken during such proceeding or proposes to take, is or would be contrary to any provision of this Act whose implementation is entrusted to a statutory authority, then the Commission may make a reference in respect of such issue to the statutory authority:

Provided that the Commission, may, suo motu, make such a reference to the statutory authority.

(2) [On receipt of a reference under sub-section (1), the statutory authority shall give its opinion, within sixty days of receipt of such reference, to the Commission which shall consider the opinion of the statutory, and thereafter give its findings recording reasons therefor on the issues referred to in the said opinion.]
In matters relating strictly to competition issues, the competition authorities must be given supreme authority inspite of contradictory provisions existing in the acts which are entrusted to the statutory authorities for enforcement. The non-obstante clause in the Act which explicitly provides for this is

[Act to have overriding effect]

Section 60. *The provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force.*

At the same time, the law also states that this Act should be put to work in addition to other laws operating but should not be used in any derogatory manner.

[Application of other laws not barred]

Section 62. *The provisions of this Act shall be in addition to, and not in derogation of, the provisions of any other law for the time being in force.*

9.2 SECTOR REGULATORS AND COMPETITION AUTHORITIES IN THE ELECTRICITY SECTOR – NEED:

One of the central questions facing both sets of regulators is whether to delegate the regulation of potentially competitive elements of the utility to the specialized regulatory agency or whether they should be solely subject to normal competition laws enforced by the competition authorities- often referred to as ‘light-handed regulation’. The fact that, in the electricity sector, economies of scope between generation, transmission and distribution appear small suggests that it is desirable to separate the potentially competitive generation and supply from the natural monopoly networks. The relevant question here is whether the competitive segments of generation and supply should be dealt with under normal competition law, as in many countries, subject to tests of significant market power, or whether they should be subject to stronger regulatory controls. The regulatory system in the electricity sector was not effective in India previously. The SEBs’ (State Electricity Boards) performance was not up to the mark, they were suffering from huge financial and commercial losses, there was no regulatory body to regulate the functioning of SEBs and regulations were not addressing the necessary
issues like supply of reliable, quality power and protection of consumer interests. Thus there was an urgent need for regulations in the sector.

9.3 SETTING UP OF THE CERC AND SERCs:

To provide a competitive and transparent environment and to ensure efficient functioning, an independent CERC (Central Electricity Regulatory Commission) at the central level and an independent SERC (State Electricity Regulatory Commission) at the state level were established in 1998 for regulating the power sector. The respective commissions took over the role of a regulatory body for the sector. They passed numerous regulations and provided a legal framework for players to conduct their business in the industry. Their functions include regulating tariff, regulating transmission of electricity, fixing up of tariffs, issuing of licenses and enforce standards with respect to quality, continuity and reliability of service. In the electricity sector, market surveillance is a critical element as it requires timely information that is commercially sensitive. Hence this task of monitoring relevant markets should be entrusted to the regulatory authorities since competition authorities will be far less equipped to do this and will be far slower to act. The Electricity Act creates ambiguities as the preamble clearly talks about the objective of promoting competition in the electricity market. The commission (central or state) is empowered to regulate production, supply or consumption, to promote competition and is further allowed to regulate distribution to prevent abuse of dominance. Thus, in its regulatory functions, the law clearly directs the regulator to act in a manner so as to promote competition and efficiency. They are also required to advise the government on measures to promote competition. On the other hand, the nature of competition authority’s power vis-à-vis CERC and SERC is ambiguous. The law implicitly recognizes that sector regulators have a role to play in competition matters and says these regulators may refer competition issues to the CCI, but to what extent the CCI can influence the regulators in absence of such requests is not clear. This ambiguity is the reason for gaps and conflicts in the functioning of the respective agencies.
9.4 LEGISLATIVE GAPS:

Section 49 of the Competition Act does not specifically require the CCI to carry forward its advocacy role by participating in the proceedings before the statutory regulator on competition matters and give their advice on the same.

Section 60 of the Electricity Act, which is concerned with market dominance, empowers the regulators to deal with the abuse of dominant position or combinations which are likely to cause an adverse effect on competition in the electricity industry. These exactly are the functions of the CCI as stated under sections 4 and 6 of the Competition Act.

Section 174 of the Electricity Act gives overriding powers to the act with no mention about the Competition Act. This supreme power has been conferred to the Competition Act also under section 60 of the Competition Act, 2002.

9.5 SUGGESTIONS:

- The Competition Commission of India should proactively participate in discussions on the competition related issues before the electricity regulators.
- Government should establish a concurrency party between the CCI and the sector regulators, so that there is better coordination between them, to ensure that competition concerns are addressed properly.
- In future, the Competition Act, 2002, may be amended with an enabling provision for cooperation between the Competition Commission and the Electricity Regulatory Commissions so as to prevent arbitrariness.

As long as there are competition authorities and sector regulators present, they need to work together and understand each other. Cooperation and coordination are essential for minimizing potential conflicts.
10. PRESENT ELECTRICITY SECTOR SCENARIO:

The Electricity Act of 2003 has introduced multiple provisions to foster competition in the electricity sector and improve its efficiency. Generation has been de-licensed to attract more private players in the electricity generation segment so that these players constantly strive towards tapping all possible sources of electricity generation. In the transmission segment, the open access to transmission and distribution lines has provided a chance to choose the most efficient transfer of power. In the distribution segment, open access and stringent penalties for power theft has left the buyers with the option of choosing their suppliers and has led to a reduction in losses. De-regulation has reduced real prices. The increased competition among generators and suppliers has improved the efficiency of the sector with an improvement in reliable power supply to consumers, to a certain extent. But there is still a lot of scope for improvement since uninterrupted power supply is inevitable for industrial progress.

As on August 31, 2010 the share of Central, State and private sector in the total installed capacity is 31%, 49% and 20% respectively. During FY 2010 overall energy deficit in the country was 10.1% while peak deficit stood at 12.7% with shortage of 15,157 MW. During the period April – July 2010, the domestic energy deficit was of 11.1% while the peak deficit stood at – 13.8%. The transmission grid is presently experiencing problems on account of insufficient interregional transfer capacity which is hampering the increasing volume of traded power as also encountering problems pertaining to increasing short circuits levels. Demand for power is continuing to outstrip supply. In the last 10 years, generation had increased by 60% but household access to power has increased only by 10%. At present 92 per cent of the generation capacity in India is owned by State and Central governments and most of it is contracted through long term power purchase agreements (PPAs) for 15 or 30 years. Even in the private sector the capacity is currently contracted through PPAs. These long-term contracts will prevent any near term transition to a competitive market based on power pools. Under these conditions, where a quick transition to competitive power pools is not expected, the regulator will be fixing the generation tariff. All the generating companies need to compete through competitive tariff bidding route to supply power to the distribution licensees.
Open access transactions have been primarily used by SEBs / distribution licensees to sell surpluses or to meet the short – term power requirements in their respective regions. The industrial customers still face problems pertaining to accessing their choice of suppliers due to the restrictions imposed by several state governments / SLDCs citing shortages or non – availability of transmission infrastructure. According to Central Electricity Regulatory Commission (CERC), up to May 2010, applications seeking open for over 18000 MW have been submitted, but implementation has been quite low at about 2,000 MW. Nonetheless, the inter State open access market has progressed due to regulatory initiatives taken by CERC. AT & C losses are likely to remain a source of concern for the State sector distribution companies, thus leading to continued dependence on subsidies / grant from the respective state governments, as also resulting in frequent hikes in retail tariffs. Financial health of State DISCOMs will continue to remain fragile with continued reliance on growing subsidies and likely shift of lucrative consumers through open access. Thirteenth Finance Commission (TFC) has in its recommendation to the GoI, pointed out that requirement to hike the tariff in poorly performing states could be as high as 19% per annum to bridge the gap between actual receipts and government subsidy.

11. MAJOR REGULATORY ISSUE IN THE ELECTRICITY SECTOR - REGULATORY CAPTURE:

It was often felt that competitive markets, when left to themselves, deliver efficiency but not equity and fairness and hence, cannot provide adequate infrastructure facilities and services. This often led to the direct state provision of infrastructure facilities and services or the nationalization of infrastructure companies. In recent years, the privatization of many infrastructure providers has created the potential for the emergence of private monopolies and this has necessitated their regulation by government. But regulatory capture seems to have defeated the basic motive of introducing regulation.

‘Regulatory Capture’ protects the illegal, unethical, or immoral practices, against the public interest, by the same authorities that are charged with ‘policing’ the regulated entities. The theory of regulatory capture expounded by Stigler (1971) and Peltzman (1976) argued that most
industrial regulation was designed to protect incumbents against competition from entrants and had the effect of legalizing monopoly power to the detriment of consumer welfare. Open access can effectively happen if it was possible for the state or regulator to ensure power at low cost to poor consumers. This will require strong political will. In Punjab, there was surplus power but the benefits of it were not percolated to poor consumers. What was to blame was the capture of regulators by distribution licensees which is widely prevalent in many other states also. The close proximity of the electricity regulators to the industry leads it to give higher value to the industry’s requirements rather than those of consumers or market welfare. Regulators who are dependent on the industry to provide them with skills and personnel are more vulnerable to capture. In addition to the limitations of a single regulator, the presence of multiple regulators in closely related fields leads to regulatory overlaps. There is a danger that discoms and regulatory bodies might block access if their concerns do not get addressed. When the regulatory commission is manned entirely by people who come within the industry, regulatory capture becomes intense. Regulators who are captured use their regulatory powers to redistribute rents rather than to drive down costs and benefit consumers. They might also hinder the introduction of new and efficient services, in favor of the special interest groups.

The selection process also can be so manipulated that only such members are selected who will act according to the desires of the appointing authority, usually governments. Almost every Chairman and member of regulatory bodies in India is a former government official. Steps should be taken to ensure that they constitute only a fraction of the total membership of the regulatory authority. When state owned enterprises are a large part of the regulated entities, they do many times get their owners, the government, to act in ways that are in the interest of the enterprise. The ‘independent’ regulator follows the government’s lead.

Let us quote an example. There is an electricity regulator who is to decide tariffs. He accepts gold plating of capital costs and this gives a much better return on investment because tariffs are set accordingly. Dhabhol and its continuing problems of high tariffs are, according to the Godbole Committee’s findings, a result of the then regulator, the Governments of Maharashtra and India and their representatives accepting the capital costs quoted by the promoters. Those involved in the decision-making included Ministers, bureaucrats and officials of the electricity undertaking. Obviously
the governments concerned, abandoned the interests of the consumers that they were supposed to look after in order to allow Dhabhol much higher returns than should have been allowed. There was poor scrutiny and verification of all costs. Despite public protests by informed people, the costs were accepted. No one has been penalized for this wrongdoing. Then there are state-owned enterprises, especially at the central level, who exercise considerable influence over the representatives of the owning Ministry. A good example is the way in which private investment in transmission was delayed over seven years after the law was amended to enable it. Power Grid Corporation, the central government monopoly in interstate transmission, was against this policy and was able to prevent action being taken. The load despatch centre in electricity is the neutral and objective signaling and systems control mechanism that ensures that electricity flows over the wires and in acceptable frequency and voltage. It needs to be independent of all other users of the system. In India, the state government owned distribution enterprises have been able to maintain their control over the LDC’s in order to safeguard their own interests. There is of course blatant corruption when one of the parties bribes the regulator to take decisions that favour the bribe giver. This is common in almost all regulatory systems, including independent and transparent ones.

Another example which brings to light the behavior of captured regulators is as follows. ‘Open access’ is a cardinal principle in the regulation of all public utilities because the cost of transmission lines, pipelines, airports, etc, is high and there cannot be more than one in a prescribed area. The Electricity Act 2003 mandates open access, that is, all generators, distributors and buyers are entitled to use the transmission and distribution lines, so long as capacity is available. They cannot be denied and they cannot be discriminated against by higher tariffs. But state governments (Karnataka, Tamil Nadu, as instances) did not want the power generated in their state to be sold outside and have asked the electricity company to refuse open access to send the electricity out to another state. The respective state regulatory commissions have gone along with the denial of open access, an important element in electricity reform and legislation. The CERC has ordered that the states should follow the law. The matter is now before the Courts.

Though there has been descent progress in the sectoral reforms, there are concerns prevailing in the sector regarding government dominance over the regulatory commissions. Government has regulated the sector for over 50 years and so is unwilling to transfer power to regulatory commissions in most
cases. Setting tariffs include subsidies, which are given by the government. Since government decides the amount of subsidies, it also brings in government intervention in decision making regarding tariffs and administered prices.

Regulatory capture is a major menace when it comes to implementing open access. Steps should be taken to check the capture of SERCs as soon as possible. It can be prevented only by a watchful media, community, customers and other stakeholders. It might help if the regulators are carefully selected for their values and integrity as well as independence. Selection of independent regulators should be by a committee that is not dominated by any single interest-government, industry and judiciary. The media should be alive to misuse and abuse of powers by independent regulators and self-regulating bodies. All regulatory bodies should consider decisions in an open and transparent manner and whistle blowing should be encouraged. Unfortunately in India by and large, regulators are selected because they will be compliant to vested interests.

12. **COMPETITION ISSUES IN THE ELECTRICITY SECTOR:**

In the transition from traditional regulated monopoly Electricity Supply Industry to modern deregulated Electricity Supply Industry, competition is more effective than regulation in promoting private sector participation through massive investments and efficiency in Electricity Supply Industry has increased sharply. But there are many structural and policy issues in the sector which hinder competition.

The following unique attributes of electricity and characteristics of power markets pose a problem for effective regulation of competition:

1. Electricity cannot be stored economically and demand must be cleared with "just-in-time" production from generating capacity available to the network at (almost) exactly the same time that the electricity is consumed.
2. The short-run demand elasticity for electricity is very low and supply gets very inelastic at high demand levels as capacity constraints are approached. As a result, spot electricity prices are inherently very
volatile and unusually susceptible to the creation of opportunities for suppliers to exercise market power unilaterally.

(3) It is not easy to determine whether the wholesale market for electricity suffers from significant market power because it is likely to suffer from collective dominance rather than single firm dominance and information and continuous market surveillance are desirable. It might also be necessary to modify market rules in a timely and well-informed manner.

(4) Going by segment-wise competition issues, in the generation segment, there is a lack of level playing field. In transmission, there is lack of access to transmission networks and there are issues with pricing of transmission capacity. In the distribution and supply segment also, there is lack of open access.

The Court of First Instance gives an example of conditions conducive to collective dominance: “the relationship of interdependence existing between the parties to a tight oligopoly within which, in a market with the appropriate characteristics, in particular, in terms of market concentration, transparency and product homogeneity, those parties are in a position to anticipate one another’s behavior and are therefore strongly encouraged to align their conduct in the market, in particular, in such a way as to maximize their joint profits by restricting production with a view to increasing prices”. Electricity wholesale markets thus exhibit characteristics that are likely to support collective dominance, and allow prices to remain well above competition levels, even when the market does not appear to be particularly concentrated. If the capacity is not instantly available to deliver into a constrained region, then the generators operating in that region can demand extremely high prices. End-user tariffs are irrational and regulators do not have necessary capacity to handle competition.

Though the Electricity Act, 2003 has mandated State governments to unbundle the SEBs, simple restructuring would not simplify competition and regulation issues. Though open access has been promised, interstate transmission and distribution within states is still a monopoly. Generation constitutes around 60-65% of the total cost of electricity supply, about 10% is the transmission cost and remaining 25% accounts for distribution. Effective competition in generation segment can improve efficiency and lead to substantial reduction in the cost of supply of electricity. The currently inefficient generation companies should be exposed to the pressure of markets by providing open access on better workable terms. A diffused, non-targeted, non-merit based subsidy delivery mechanism is one of the biggest hurdles in the way of privatization of distribution entities. Issues related to competition
between generating companies, or other anticompetitive behavior that impacts upon the competitive working of the generation companies are not touched upon due to the overlap of duties of both sets of regulators in this regard.

13. **WHAT CAN COMPETITION AUTHORITIES DO TO IMPROVE COMPETITION IN THE ELECTRICITY SECTOR?**

Though it can be safely said that as of now, that no case associated with the EFD has come before the any antitrust authority in India, it is our understanding that the Competition Act, 2002 has sufficient structure for the judiciary to invoke the essential facilities doctrine if it needs to do so. Of course the doctrine is not mentioned in the Act, but like the European legislation that appears to have inspired the Indian law, the Act has clauses that prohibit the abuse of a dominant position – Section 4(c). It is also the case that under Section 18, it is the duty of the Commission to abolish practices that have adverse effect on competition. Specifically, Sections 19(3) and 19(4) deal with determining factors that restrict emergence of competition viz. creation of barriers to new entrants, driving existing competitors out of market, etc. and criterion to ascertain the dominant position through market share of the firm, size and importance of competitors, etc. is also specified. Since government owns most infrastructures, issues of competition become more difficult to determine, since government is regarded by many as always acting in the interests of the citizen and the consumer. State owned enterprises do not always act in the interest of the consumer and to promote competition or its effects.

Consumers pay one of the highest prices for electricity in Purchasing Power Parity (PPP) terms. This shows the serious lack of competition in the sector. Operationalisation of open access is the prime agenda of the Ministry of Power since they consider it as the most effective tool to improve competition and efficiency in the power sector. For successful implementation of competition policies, it has to be engineered and supported by effective regulation. The State Electricity Boards (SEBs) are an enterprise under section 2 (h) of the Competition Act, 2002. This gives the Competition Commission the authority to take action against SEBs if they are found to abuse their dominant position or deny access to competitors. Given this scope, it is up to the judiciary to invoke the doctrine in a case where it needs to be aptly invoked to enhance downstream spill-over which enhances welfare for all. The
commission can also make reference to a statutory authority under section 21 (A) if it feels its decision might go against provisions under the act that the statutory authority is empowered to implement. The statutory authority, in a similar way, can make a reference to the commission under section 21. By virtue of the non-obstante clause in section 60, the Competition Commission has an upper hand over all other sector-specific acts, if the issue in hand is purely competition oriented. Further, competition authorities could fine companies holding dominant positions if they are found to abuse market power or charge high prices. In case of collective dominance, the obvious competition policy remedy would be to require companies to divest generating capacity in order to reduce market concentration. If competition policy lacks the power to restructure, the next recourse is a regulatory solution.

The role of CCI in sorting out issues and fostering segment-wise competition can be:

(1) Lack of level playing field in generation - recommend government to address various issues in the generating segment

(2) Lack of access to transmission networks - Impress upon Regulatory Commissions to ensure non-discriminatory access to transmission network

(3) Issues with pricing of transmission capacity - Costs of network access and usage ought to be determined in a manner that promotes open access and trading. The CCI may advise the Regulatory Commissions to take action against any kind of discriminatory pricing by a particular entity

(4) Lack of open access in distribution and retail supply - Impress upon respective ERCs against any kind of practice that results in denial of market access to consumers

The State distribution enterprises are facing losses of Rs. 60,000 crores due to stealing of power. Ironically, these rising losses will act as a trigger for open access as when the bankrupt distribution licensees will be unable to pay for the generating capacity and the generators, ultimately, will demand for direct access to their paying consumers. The main dampener to open access is cross-subsidy surcharge which makes open access prices unattractive. Open access can be successful only if all consumers above 1 megawatt electricity consumption are made to face unregulated tariff. Deregulation of electricity supply to high use consumers will incentivize open access. The doctrine of ‘essential facility’ is particularly relevant to infrastructure sector; where a particular facility is considered essential, the Competition authority should be empowered to order compulsory access on reasonable terms.
14. **POSSIBLE CASES FOR CCI TO INTERVENE:**

- Section 42(3) of the Electricity Act states- *Where any person, whose premises are situated within the area of supply of a distribution licensee, (not being a local authority engaged in the business of distribution of electricity before the appointed date) requires a supply of electricity from a generating company or any licensee other than such distribution licensee, such person may, by notice, require the distribution licensee for wheeling such electricity in accordance with regulations made by the State Commission and the duties of the distribution licensee with respect to such supply shall be of a common carrier providing non-discriminatory open access.*

Section 2(41) defines a local authority as follows- *…any Nagar Panchayat, Municipal Council, municipal corporation, panchayat constituted at the village, intermediate and district levels, body or port commissioners or other authority legally entitled to, or entrusted by the Union or any State Government with, the control or management of any area or local fund.*

Since the provisions of the act mandating open access is not binding on a local authority, the firms which are local authorities tend to use this provision in their own favor to prevent competitors from entering into their supply domain (as happened in Anila Gupta case). This local exclusive franchise acts as a serious hurdle for competition in the distribution segment. The CCI can *suo motu* make a reference to the CERC asking it to amend this section since this is highly inconsistent with competition laws. Such exemptions sought make competition laws toothless altogether.

- Section 11 of the Electricity Act states- *The Appropriate Government may specify that a generating company shall, in extraordinary circumstances operate and maintain any generating station in accordance with the directions of that Government.*

This section allows state governments to give orders to generators of power on what to do with their output in what were supposed to be exceptional circumstances. However, governments have been issuing the stop-order whenever faced by a power shortage and private companies have tried to sell their output to a higher-paying entity. The catch lies here for the misuse of this section as these circumstances are not clearly defined and state can frame them in their way.

The circumstances should be clearly defined and should not be based on inability of state generators and discoms to provide power to their consumers. The statement of Central government to make open
access mandatory for consumers above 1 MW load has sent a wave of fear among the consumers, who are uncertain of getting proper supply if section 11 is used again and again by states.

In the Karnataka case of 2010, for instance, JSW Power was stopped from proceeding with sale of power to a Tamil Nadu state buyer. Tamil Nadu has told all power generation units in the state to maintain output at maximum capacity and to supply to only the state grid or any other consumer within the state as specified. In these cases too, the CCI can intervene suo motu and refer to the SERCs that whenever such emergencies are declared, the SERCs should look into the underlying reason that has been quoted by the state governments and judge whether they are reasonable or such steps have been taken only to protect generators and SEBs from competition through open access. Deterring open access acts to the detriment of consumers and significantly hinders competition.

15. CONCLUSION:

Open access requirements are becoming an increasingly common remedy for problems of market power in network industries. An important benefit of this policy is the greater competition upstream of the bottleneck facility. In the electricity sector, open access to transmission grids have encouraged competition in the generation segment to a great extent. From the research, we can conclude that competition in the electricity sector is an ex-ante issue rather than an ex-post one. Problem lies with the introduction of competition through open access in the first place. Though open access has been provided for by law, a conducive environment is yet to be created for consumers to choose their suppliers. The charges for open access are highly unattractive. The state utilities are protected from competition by the captured regulators by denying open access to transmission lines by generators of other states. State governments are not favorable towards the supply of power to open access customers of other states. Discoms fear losses in revenue if big industrial customers switch to other suppliers through open access. This makes them reluctant to let competitors use their wheeling wires to distribute power.

Electricity reform process in India is already in action although in a slow pace, all the state electricity boards have been unbundled. The distribution system is privatized for better efficiency in metering,
billing and revenue collection. Open access and de-regulation were intended to make the power system more reliable, efficient and flexible. But there has been limited success because the regulators have failed to look into the reasons for open access being denied. Which regulator has the power to take action in this regard is not too clear because of the jurisdiction overlaps. Though there has been a considerable improvement due to provisions of the EA 2003, the basic aim of providing cheap, reliable and high quality power to all consumers still remains unachieved. The regulators are yet to address the fundamental question of whether the right to choose suppliers through open access is an enforceable right for a consumer or not. Possibly a time has come for the Commission to take up cases suo motu in pursuance of section 18 of the Competition Act. Though it is a difficult area for the competition authorities to enter, the act clearly states that it is the duty of the Commission to promote and sustain competition and protect the interest of consumers as well.
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