Consultation Paper of CERC

INTRODUCING COMPETITION

IN

GENERATION OF ELECTRICITY

AUGUST, 2004

CENTRAL ELECTRICITY REGULATORY COMMISSION

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INTRODUCING COMPETITION
IN
GENERATION OF ELECTRICITY

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Introducing competition in generation

INTRODUCING COMPETITION
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GENERATION OF ELECTRICITY

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The Central Electricity Regulatory Commission (CERC) has commissioned the National Council of Applied Economic Research (NCAER) to prepare a Consultation Paper on the above subject. In pursuance thereof, this Paper has been written by Gajendra Haldea, Chief Advisor, NCAER. In its present form, it is a Discussion Paper on which the views and objections of stakeholders and experts are to be invited. It does not necessarily represent the views of CERC.

Introduction

Competition is not an end in itself; it is a means of reducing costs and improving quality. It also implies an open market where shortages are rapidly eliminated through the best allocation of resources. It accelerates growth and development besides preserving economic and political democracy. Above all, competition empowers the consumer; it is the best guarantee for consumer protection.

1.2 This paper articulates the need for introducing competition and consumer choice in generation and supply of electricity, and suggests an action plan for this purpose. It argues that provision of consumer choice is not merely a matter of policy that lies in the domain of government, it is a statutory obligation that vests justiciable rights in the citizens.

1.3 The paper is divided into three parts. Part I outlines the recent trends in electricity industry. Part II analyses the law on the subject; and Part III suggests a road map for introducing competition in the generation and supply of electricity.

PART I

Recent Trends in the electricity industry

Recent Trends

2.1 Until the 1970s, the industry was vertically integrated and it was normal for electricity utilities to generate, transmit and distribute electric power to end consumers who had no choice but to buy from a monopoly. During the 1970s, distinction began to be drawn between the carriage and content segments of power and telecom industries. It was recognised that while the network constituting the carriage or transportation segment could be owned by one entity, new technologies enabled several producers to compete by using a common carriage for transportation.

2.2 Duplication of carriage networks is generally uneconomic and, therefore, impractical. Networks have thus been treated as natural monopolies to be subjected to close regulation for ensuring their non-discriminatory usage at regulated tariffs. At the production end, however, electricity is being increasingly exposed to competition as buyers can choose from among competing producers who have equal access to the networks for transporting their produce.

2.3 The above proposition was tested and settled by the United States Supreme Court in *Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).* It was held that the Otter Tail Company could not refuse to "wheel" power to the municipal distribution systems, that is to say, to transfer by direct transmission or displacement, electric power from one utility to another over the facilities of an intermediate utility. This landmark judgement institutionalised the concept of wheeling electricity over the network of a third party upon payment of wheeling charges, thus enhancing competition in production of electricity. Since electricity typically constitutes over three-fourths of the tariff paid by the end consumer, with transmission and distribution costs representing the rest, competition in the production segment has led to quantum gains in terms of efficiency improvements and cost reduction.

2.4 The 1970s and 1980s witnessed the growth of competition among producers supplying to local distribution entities. However, this competition was restricted to wholesale transactions between producers and utilities; it did not extend to consumer choice. At the distribution end, the utilities retained their monopolistic character that

shielded their inefficiencies in the procurement and supply of electricity at the retail level. This arrangement was altered when a legislative framework for introduction of choice at the consumer end was manifested in the Electricity Act 1989 of U.K. At present, several countries/states in the U.S., Europe, Latin America, Australia and New Zealand offer choice at the household level.

The Indian Context

3.1 The structure of electricity industry in independent India was laid down by the Electricity (Supply) Act 1948. Prior to 1948, private licensees supplied electricity under the provisions of the Indian Electricity Act 1910, but this was mostly confined to urban areas. In 1947, the electricity industry in the UK was nationalised through enactment of the Electricity Act 1947. India followed suit in 1948 and except for some pockets such as Mumbai, Kolkata, Ahmedabad and Surat, the entire industry was nationalised by virtue of the aforesaid Act of 1948.

3.2 During the 1980s, separation of generation from transmission had emerged as a best practice in developed countries. In India too, inter-state transmission was segregated and assigned to Power Grid Corporation in the early 1990s. Setting up of generating stations in the private sector was also enabled. Distribution of electricity, however, remained a monopoly in the hands of State Electricity Boards (SEBs) that continued to function as integrated utilities.

3.3 Between 1995 and 2001, eight states unbundled their respective SEBs into separate corporate entities for generation, transmission and distribution. However, the state-owned transmission companies were designated as buyers of all electricity sold by producers. As a result, the industry structure consisted of an inter-connected chain of monopolies referred to as a ‘single buyer’ model where the benefits of competition have been elusive.

3.4 Reform of the power sector during the 1990s failed to make a material improvement in its quality and viability. The Government, therefore, decided to take a fresh look at the industry structure with a view to evolving a new law based on emerging best practices. This led to the first draft of the Electricity Bill that was presented (by the author of this paper) to the Chief Ministers’ Conference held in February 2000 and presided over by the Prime Minister. It is to be noted that for the first time in India, the concept of consumer choice enabled by non-discriminatory open access to transportation networks found place in this draft legislation. The Conference resolved to subject the Bill to a national debate with a view to evolving

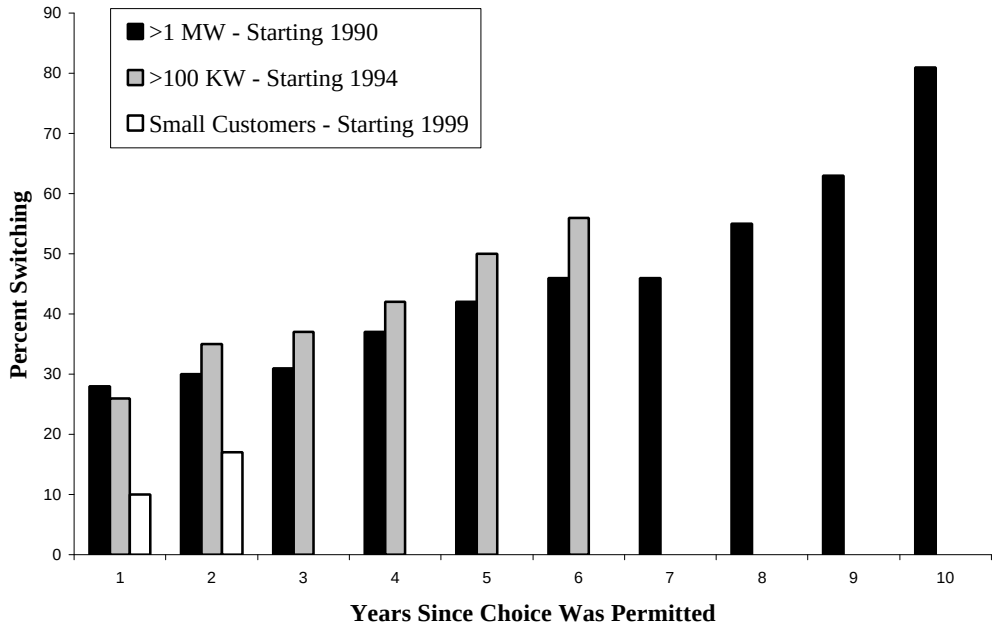
at a consensus. The resultant process of consultations gave the much-needed endorsement for introduction of competition in production and supply despite resistance from several quarters. A progressive law was thus enacted by the name of Electricity Act 2003.

3.5 In the Indian context, allowing competing producers to sell to multiple consumers would not only improve quality and improve costs, it would also help attract private investment in power generation, thus eliminating the persistent shortage of electricity. Competition is indeed the best guarantee for consumer welfare; law and public policy must fully embrace it.

The UK Experience

4.1 As mentioned above, the UK enacted its Electricity Act 1989 that mandated consumer choice in phases. By April 1990, this provision was enforced and competition at the consumer end was institutionalised. From April 1994, this choice was extended to consumers of 100 KW and above; and by June 1999, all consumers (about 24 million) were allowed to choose their supplier. The shift to competing suppliers in UK is reflected in the graph below.

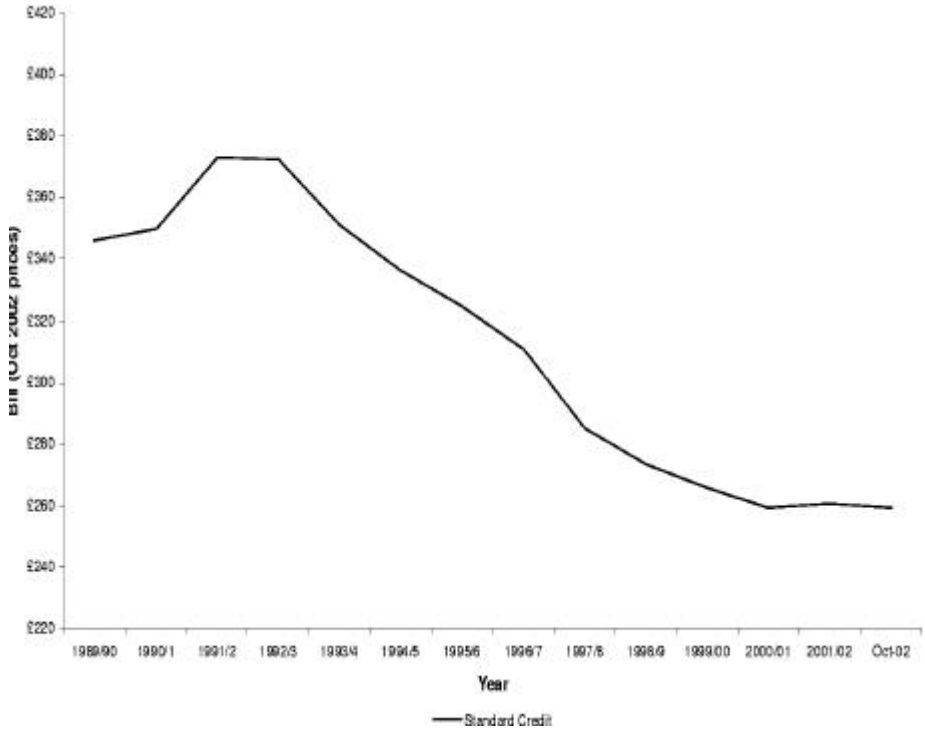
The switching rate to competing suppliers in UK



Source: A Review of the Development in Industrial and Commercial Electric Supply, OFGEM, December 2000

4.2 The restructuring of electricity industry in UK, based on competition, led to a steady decline in consumer tariffs. Similar trends have been witnessed in several other developed countries and in some of the developing countries in Latin America. The decline in UK's electricity prices is reflected in the graph below:

Average real domestic electricity bills, 1989-2002



Source: OFGEM/ energy watch

Experience in other countries

4.3 The US economy, recognised as the largest in the world, was built on the basis of competition, which is essentially a means of improving efficiencies and cutting costs as also of ensuring the best allocation of resources. The US Supreme Court while opining on the Sherman Act 1890 in the Northern Pacific Railway Co. v. United States, 356 U.S. 1, 4(1958) stated:

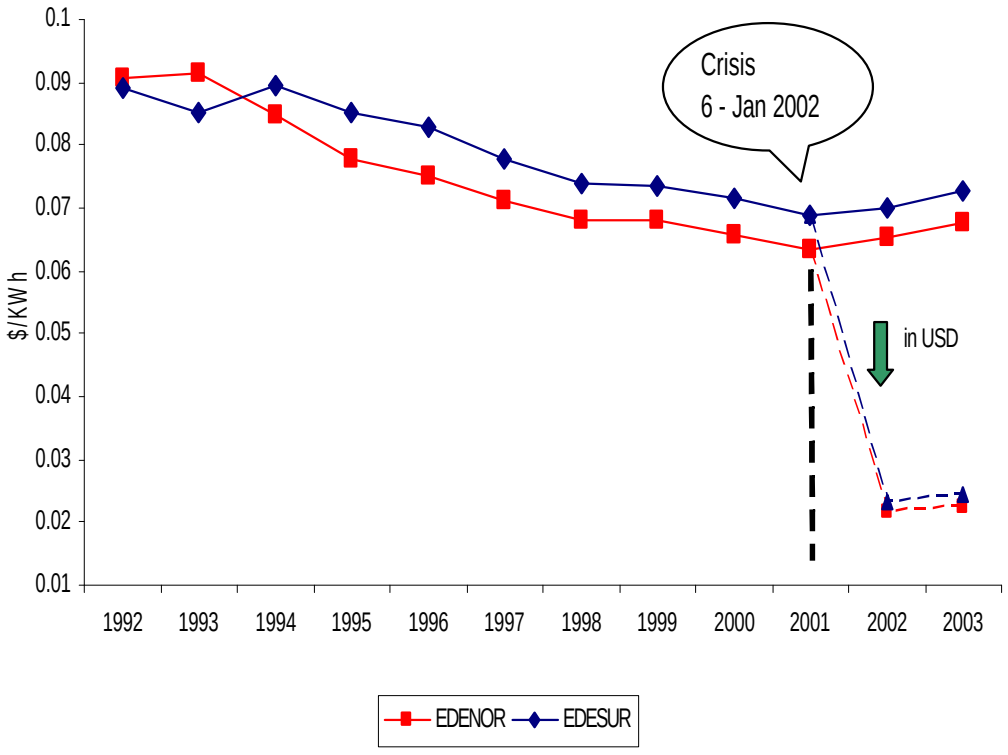
> *"… a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade, resting on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the*

same time providing an environment conducive to the preservation of our democratic, political and social institutions."

4.4 It has been demonstrated beyond doubt in the developed economies, as also some developing economies, that competition in the production and supply of electricity leads to efficiency improvements and tariff reduction. The developed countries include the US, Australia, New Zealand and constituents of the European Union. Developing countries include several Latin American economies that have witnessed similar benefits that encompass significant reductions in T&D losses. It is to be noted that in more than a decade of international experience, not a single country that introduced competition has retraced its steps.

4.5 As an illustration of the impact of competition in developing countries, the graph below reflects the trend of electricity prices in the two distribution companies of Argentina:

Average Retail Tariffs: Argentina



Source: Macro Consulting, Argentina

PART II

The Law on Competition in Generation of Electricity

The role of law

5.1 In a democratic polity, the rights and obligations of citizens are codified by laws aimed at creating a just, fair and transparent environment that assures all citizens of equal opportunity and enables the growth and well being of the society as a whole. Governments, institutions and individuals must conform to the rule of law that embodies checks and balances aimed at protecting individual freedoms while enhancing public welfare.

5.2 The State has a critical role to play in furtherance of the growth and well - being of its citizens. Through its actions comprising governance, the State must create the wherewithal that would empower citizens to exercise their rights. The Constitution of India, therefore, states the Directive Principles of State Policy that must guide the State in its business of governance. Nevertheless individual freedoms enshrined as fundamental rights in the Constitution rank superior to the Directive Principles, and are justiciable. The State cannot infringe them unless it codifies the nature and extent of such infringement that must always be limited to reasonable restrictions in public interest. The Directive Principles and the fundamental rights are to be harmonised thus.

5.3 The above propositions apply with equal force to the electricity industry. On the one hand, individual freedoms need to be protected, and on the other hand, the State must enable the orderly growth of this industry, as it is vital for the nation. The recently enacted Electricity Act 2003 manifests a complex interplay of these diverse requirements and creates the institutional framework necessary for harmonizing competing interests. A scrutiny of the relevant provisions of the Constitution of India and the Electricity Act will help clear the perspective.

Constitutional Provisions

6.1 The Constitution lays down the goals, which the nation is committed to achieve. The principles embodied in Parts III (Fundamental Rights) and IV (Directive Principles of State Policy) constitute the underlying theme of human rights. While the distinction between the two Parts is that Part III is enforceable and Part IV is not enforceable, however, together they constitute the human rights

regime including respectively the political rights and the social and economic rights. Without one, the rights in the other are not only incomplete but also unattainable. Together they have been called the conscience of the Constitution *(Ref. Minerva Mills Ltd. v. Union of India (1980), 2 SCC 591).*

6.2 The distinction between Parts III and IV is similar to the distinction between subjective and objective rights, as is found in the jurisprudence of certain European countries. The subjective rights (i.e. Part III) inhere to the individual and he can seek their judicial enforcement, however the objective rights (i.e. Part IV) do not inhere to the individual though they oblige the State to perform certain acts for the individual.

Directive Principles of State Policy

7.1 It would be opportune to recall the words of Dr. Ambedkar, Chairman, Drafting Committee of the Constitution, explaining the underlying object in laying down the Directive Principles of State Policy:

> *"It is no use giving a fixed, rigid form to something which is not rigid, which is fundamentally changing and must, having regard to the circumstances and the times, keep on changing …… the directive principles have a great value, for they lay down that our ideal is economic democracy."*
>
> *"…… our object in framing this Constitution is really two fold: (i) to lay down the form of political democracy, and* ***(ii) to lay down that our ideal is economic democracy and also to prescribe that every government whoever is in power, shall strive to bring about economic democracy*** *……"*

7.2 According to the Directive Principles, the State is required to secure better distribution of the resources of the community and to restrict concentration of the means of production to the common detriment. Article 39 reads as follows:

> *Article 39*
> *The State shall, in particular, direct its policy towards securing*
>
> * * *
>
> *(a) that the ownership and control of the material resources of community are so distributed as best to subserve the common good;*

(b) that the operation of economic system does not result in the concentration of wealth and means of production to the common detriment.

7.3 Compelling the producers of electricity to sell their produce to designated monopolies, and vesting in such monopolies the sole right to supply electricity to consumers amounts to concentrating the means of production in the hands of monopolistic entities. This can also be construed as a monopolistic control over the material resources of the community to the detriment of the common good. Given the nature of electricity industry, the aforesaid control was being exercised simply by denying access to the means of transporting electricity to the consumers. Provision of open access to the transportation networks will help eliminate monopolies in conformity with the letter and spirit of Article 39.

Fundamental Rights

8.1 The Constitution guarantees the fundamental right of all citizens to carry on any occupation, trade or business. Article 19(1)(g) reads as follows:

Article 19(1)
19 (1) All citizens shall have the right –

* * *

(g) to practise any profession or to carry on any occupation, trade or business

8.2 This right to practice any profession or to carry on any occupation, trade or business within the territory of India is wide in scope. In *State of Rajasthan Vs. Vyas Mohan Lal, AIR 1971 SC 2068,* the Supreme Court held that the right guaranteed by Art. 19(1)(g) cannot be lost by waiver or even express agreement entered between a citizen and the State. Further, in *Saghir Ahmed Vs. State of U.P., AIR 1954 SC 728*, the Supreme Court held that the right guaranteed by Art. 19(1)(g) is the natural right, to enter into or carry on any trade, profession or calling which every person has, as a member of a civilized society, anterior to and independent of any legislation or grant by the State.

8.5 A corollary of this fundamental right is that even citizens who do not trade themselves will stand to benefit from the freedom of trade as it would create a free and open economy that would empower every citizen to choose from among several

traders for enhancing his welfare. The same would hold true for production of any goods and services by way of occupation. Several producers would provide choice and enable a citizen to buy the best product at the lowest possible price.

8.4 Consider the freedom of expression that allows the media to bring different news and views to the citizens. While those writing or speaking through the media are exercising their freedom of expression, the recipients of their views are equally benefited by this exercise. Freedom of expression would have no meaning if it were restricted to mere expression alone, and did not include the right to be heard or read. The two sides of this coin involve freedom of expression on the one hand and freedom to hear or read such expression on the other hand. One will be incomplete without the other.

8.5 Similarly, freedom of trade and occupation must be viewed as one side of the coin while freedom to buy from among multiple traders or producers is the other side of the same coin. For if freedom of trade or occupation were denied to traders and producers, the vast multitude of citizens, who are empowered by the resultant choice, will be deprived of the freedom to choose from among competing traders and producers. As such, the freedom of traders and producers should not be viewed in a narrow sense of empowering the traders and producers alone. It is a freedom that constitutes the foundations of economic democracy

Freedom of Trade throughout India

9.1 The rights guaranteed by Art. 19(1)(g) and the free markets that it creates are further strengthened by Article 301, which ensures free flow of trade and commerce throughout the territory of India. It was in the context of trade barriers, which had been raised by the States in exercise of their legislative powers that the Constitution-makers framed the Articles in Part XIII, particularly Art. 301 that reads as follows:

> *Article 301*
> *Subject to the other provisions of this part, trade, commerce and intercourse throughout the territory of India shall be free.*

9.2 The makers of the Indian Constitution recognised that free movement and exchange of goods throughout the territory of India, and the right to carry on such trade was essential for sustaining and improving the economic well being of the country and its citizens. The provision contained in Art. 301 guaranteeing the freedom of trade, commerce and intercourse is not a declaration of a mere platitude,

or the expression of a pious hope of declaratory character; it is not also a mere statement of a Directive Principle of State Policy, it embodies and enshrines a principle of paramount importance that the economic unity of the country will provide the main sustaining force for the stability and progress of the political and cultural unity of the country.

9.3 Article 301 confers a justiciable right and extends it to all individuals within the territory of India. In propagating the right vested by Article 301, the framers of the Constitution have made use of the word "intercourse" to give this freedom the largest import to include intercourse not included in the words "trade and commerce", and such freedom is not limited to inter-state but also extends to intra-state transactions and movements, subject to restrictions imposed by the State in public interest, which must also be reasonable and not arbitrary or excessive. The above contention finds support in - *Atiabari Tea Co. Vs State of Assam: [AIR 1961 SC 232], Automobile Transport Ltd. Vs State of Rajasthan [AIR 1962 SC 1406] and Chobe Vs Palnikar [AIR 1954 Hyd. 207]*. Considering that electricity is included in the definition of 'goods', the freedom of trade in electricity throughout the territory of India is a justiciable right.

Reasonable Restrictions – in public interest

10.1 The scope of reasonable restrictions on the freedom to trade is the subject matter of Article 19(6) and Article 304. A plain reading of these Articles reveals the scope of the power bestowed upon the legislature to prevent any mischief that can hamper public interest. Article 19(6) reads as follows:

> *Article 19(6)*
> *Nothing in sub-clause (g) of the said clause shall affect the operation of any existing law in so far as it imposes, or prevent the State from making any law imposing, in the interests of the general public, reasonable restrictions on the exercise of the right conferred by the said sub-clause, and, in particular, nothing in the said sub-clause shall affect the operation of any existing law in so far as it relates to or prevent the State from making any law relating to, -*
>
> *(i) the professional or technical qualification necessary for practicing any profession or carrying on any occupation, trade or business, or*

> *(ii) the carrying on by the State, or by a corporation owned or controlled by the State, of any trade, business, industry or service, whether to the exclusion, complete or partial, of citizens or otherwise.*

10.2 Monopolies cannot normally be viewed as a reasonable restriction on the freedom of trade or occupation as they amount to a complete abrogation of this freedom. However, it was considered necessary by the Government of the day to nationalise certain industries and deny freedom to engage in trade or occupation in such industries. To protect such nationalisation, the Constitution (First Amendment) Act 1951 amended Article 19(6) to enable the State to create state-owned monopolies by law. However, Article 19(6) is confined to creation of State-owned monopolies alone. It does not confer any power to the legislature or the government to create private monopolies and, therefore, even by a law to be enacted by the Parliament, the freedom of trade and occupation can not be infringed for the purpose of granting monopoly rights to a private entity.

10.3 The Supreme Court in the matter of *Yasin Mohammad Vs. Town Area Committee AIR 1952 SC 115* held that any imposition, which restricts a citizen's right to carry on an occupation, trade or business, but is not authorised by law, cannot be covered by Cl. (6) and must, accordingly, be held to be invalid, being in contravention of Cl. (1)(g).

10.4 In the electricity sector a conspicuous example of restriction on trade and occupation was the creation of state-owned monopolies in the form of SEBs This was done with the objective of extending supply of electricity in a planned manner to the far-flung areas and to all sections of the society. The creation of SEBs under the provisions of the Electricity (Supply) Act 1948 thus came within the ambit of Article 19(6) and was, therefore, protected from challenge on the grounds of violation of fundamental rights guaranteed by Article 19(1)(g). Consequent upon repeal of the Electricity (Supply) Act 1948, the state-owned monopolies are now open to challenge for violation of Article 19(1)(g).

10.5 Unless abrogated in accordance with the provisions of Article 19(6), the scope of Article 19(1)(g) is wide and must be interpreted as such. The Hon'ble Supreme Court in the case of *Mithilesh Garg Vs. Union of India, reported in AIR 1992 SC 443* while deciding the issue of a challenge to the liberalisation in grant of State carriage permit has observed that –

> "*More operators means healthy competition and efficient transport system. Even otherwise a liberal policy is likely to help in the elimination of corruption and favouritism in the process of granting permits. It cannot be said that too many operators on a route are likely to affect adversely the weaker section of the profession. The intending operators are likely to be conscious of the economies underlying the profession. When the State has chosen not to impose any restriction under Article 19(6) in respect of the motor transport business and has left the citizens to enjoy their right under Article 19(1)(g) there can be no cause for complaint by existing operators."*

10.6 In the matter reported in - *Bhilai Engineering Corpn. & Ors. Union of India [AIR 1994 SC 998]* the Hon'ble Supreme Court discussed at length the deleterious effects of monopolies on the economy and relying on the report of The Monopolies Inquiry Commission held -

> *"Therefore, the avowed policy of the government particularly from the point of view of public interest is to prohibit concentration of economic power and to control monopolies so that the ownership and control of the material resources of the community are so distributed as best to subserve the common good and to ensure that while promoting industrial growth there is reduction in concentration of wealth and that the economic power is brought about to secure social and economic justice."*

10.7 The imposition of reasonable restrictions on free trade and commerce have been enabled by Article 304 which reads as follows:

> *Article 304*
> *Notwithstanding anything in article 301 or article 303, the legislature of a State may by law-*
>
> * * *
>
> *(b) impose such reasonable restrictions on the freedom of trade, commerce or intercourse with or within that State as may be required in the public interest.*

10.8 Article 304 (b) permits the State legislature to impose such reasonable restrictions on the freedom of trade, commerce and intercourse with or within that

State as may be required in the public interest. This power can be exercised only through enactment of a law, and that too if public interest so requires.

10.9 It is evident that the right and freedom guaranteed under the provisions of the Constitution are subject to reasonable restrictions, imposed by the State in the "interest of public welfare." Interest of public welfare is a wide expression that would comprise within its ambit the interests of public health and morals, economic stability of the country, equitable distribution of essential commodities at fair prices, maintenance of purity in public life, prevention of fraud and implementation of the Directive Principles of State Policy, and if any restriction imposed on freedom of trade and commerce is in public interest, then such restriction would be a reasonable restriction. However, a reasonable restriction can only be imposed under the authority of a law, and not by an executive order. Moreover, restrictions so imposed are justiciable in courts of law.

Power Reforms and the Electricity Act 2003

11.1 In line with the changing economic realities and the realisation that the State by itself was unable to manage the power sector, eight States enacted their respective Electricity Reforms Acts between 1995 and 2001 for abolishing their respective SEBs and for constituting corporate entities for generation, transmission and distribution of electricity. The legal sanctity conferred by the Electricity (Supply) Act 1948 on the monopolistic character of the SEBs thus ceased to exist in these eight States. Subsequently, the Electricity Act was enacted in 2003 with the objective of promoting competition in the electricity sector and for enhancing the interest of consumers. The legal framework governing the power sector has thus undergone a paradigm shift.

11.2 The Electricity Act 2003, while repealing the Electricity (Supply) Act 1948, has brought about significant changes in the power sector by:

- enabling competition;
- mandating open access to transmission and distribution networks;
- recognising trading and supply as a licensed activity; and
- de-licensing generation

11.3 The Act seeks to promote competition by vesting justiciable rights in consumers and by imposing specific duties and obligations on generating companies, Central and State Transmission Utilities, Regional and State Load

Despatch Centres, transmission licensees and distribution licensees. The Act also provides comprehensive powers and jurisdiction to the State and Central Regulatory Commissions for regulating the above said entities. A scrutiny of the following provisions of the Electricity Act 2003 would reveal the clear intention of the legislature in furtherance of the aforesaid.

Rights of Generating Companies

12.1 At the production end, the Electricity Act enables a generating company to sell its produce anywhere in India. From the date of commencement of the Act, every generating company has been vested with the right and freedom to sell its produce to any distribution or trading licensee in India. As and when the respective State Commissions extend open access to consumers under section 42(2), generating companies will also be entitled to sell directly to consumers. Section 10(2) of the Act reads as follows:

> *10. Duties of generating companies–*
>
> * * *
>
> *(2). A generating company may supply electricity to any licensee in accordance with this Act and the rules and regulations made thereunder and may, subject to the regulations made under sub-section (2) of section 42, supply to any consumer.*

Transportation of Electricity

13.1 Electricity is a commodity with several features that distinguish it from other goods and services. It cannot be stored and its instant transportation (transmission) requires a network of wires. A pre-requisite for ensuring orderly transportation of electricity is the creation of an independent entity that would channelise and control its flow in an optimum manner and without any discrimination, just as a traffic policeman or air traffic controller does in respect of traffic flowing to and from several directions. The Act, therefore, provides for independent entities at the regional and state level to supervise, coordinate and ensure the optimum flow of electricity. Section 28 reads as follows:

> *28. Functions of Regional Load Despatch Centre–*
>
> * * *
>
> *(2) The Regional Load Despatch Centre shall comply with such principles, guidelines and methodologies in respect of wheeling and*

optimum scheduling and dispatch of electricity as the Central Commission may specify in the Grid Code.

(3) The Regional Load Despatch Centre shall–

(a) be responsible for optimum scheduling and despatch of electricity within the region, in accordance with the contracts entered into with the licensees or the generating companies operating in the region;

(b) monitor grid operations;

(c) keep accounts of quantity of electricity transmitted through the regional grid;

(d) exercise supervision and control over the inter-State transmission system; and

(e) be responsible for carrying out real time operations for grid control and despatch of electricity within the region through secure and economic operation of the regional grid in accordance with the Grid Standards and the Grid Code.

13.2 Further, Section 38 of the Act enjoins upon the Central Transmission Utility to facilitate inter-state transmission of electricity without any discrimination. It reads as follows:

38. Central Transmission Utility and functions -
(1) The Central Government may notify any Government company as the Central Transmission utility:

Provided that the Central Transmission Utility shall not engage in the business of generating of electricity or trading in electricity:

* * *

(2) The functions of the Central Transmission Utility shall be

(a) to undertake transmission of electricity through inter-state transmission system.

* * *

(d) to provide non-discriminatory open access to its transmission system for use by –

(i) any licensee or generating company on payment of the transmission charges, or

(ii) any consumer as and when such open access is provided by the State Commission under sub section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the Central Commission.

13.3 The responsibility for regulating a free and fair flow of electricity across the country rests with the Central Commission. In this context, relevant extracts of Section 79 of the Act read as follows:

79. Functions of Central Commission–
(1) The Central Commission shall discharge the following functions, namely:-

* * *

(c) to regulate the inter-State transmission of electricity;

13.4 The above provisions cast an obligation on the Central Transmission Utility and the Regional Load Despatch Centre to facilitate the transmission of electricity between different parts of the country and between diverse contracting parties. Further, the performance of these obligations is to be regulated by the Central Commission. The power to regulate encompasses the responsibility for bringing about conditions that would facilitate free trade and movement of electricity throughout the territory of India.

13.5 There are similar provisions in respect of State level operations for ensuring orderly transmission and despatch of electricity within the boundaries of a State. First and foremost, a specific duty has been imposed on the State Commission to facilitate and promote efficient and economical flow of electricity within its jurisdiction. Section 30 reads as follows:

30. Transmission within a State –
The State Commission shall facilitate and promote transmission, wheeling and inter-connection arrangements within its territorial

jurisdiction for the transmission and supply of electricity by economical and efficient utilization of the electricity.

13.6 In addition to the provisions of section 30, the functions of State Commissions with respect to intra-state transmission and wheeling of electricity have been stipulated in section 86, which reads as follows:

86. Functions of State Commission –

* * *

(1) The State Commission shall discharge the following functions, namely:-

* * *

(c) facilitate intra-State transmission and wheeling of electricity;

13.7. For carrying out the functions of load despatch at the State level, on lines similar to the aforesaid Regional Load Despatch Centres, section 32 of the Act provides as follows:

32. Functions of State Load Despatch Centers -

(1) The State Load Despatch Centre shall be the apex body to ensure integrated operation of the power system in a State.

(2) The State Load Despatch Centre shall

(a) be responsible for optimum scheduling and dispatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State;

13.8 Further, the Act enjoins upon the State Transmission Utility to provide intra-state wheeling of electricity without any discrimination. Section 39 reads as follows:

39. State Transmission Utility and functions -

(1) The State Government may notify the Board or a Government company as the State Transmission Utility:

Provided that the State Transmission Utility shall not engage in the business of trading in electricity:

* * *

(2) The functions of the State Transmissions Utility shall be;

(a) to undertake transmission of electricity through intra-State transmission system;

* * *

(d) to provide non-discriminatory open access to its transmission system for use by

(i) any licensee or generating company on payment of the transmission charges; or

(ii) any consumer as and when such open access is provided by the State Commission under sub-Section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission.

13.9 Section 40 of the Act imposes similar obligations, as contained in section 39, on all transmission licensees including the Central Transmission Utility and the State Transmission Utility.

Trading in electricity

14.1 For producers to reach the markets efficiently and for licensees and consumers to be able to buy from producers located in different parts of the country, the assistance of intermediary traders is essential, like in any other segment of the economy. Traders can buy from competing producers, aggregate supplies from different sources, and sell to licensees and consumers as per their respective requirements, thus improving the allocative efficiency, pricing and utilisation of productive resources. For this purpose, section 14 of the Act stipulates trading as a business to be licensed by the respective Commissions. The eligibility and duties of a trader have been stipulated in section 52 of the Act that reads as follows:

52. Provisions with respect to electricity trader–
(1) Without prejudice to the provisions contained in clause (c) of section 12, the Appropriate Commission may, specify the technical requirement, capital adequacy requirement and credit worthiness for being an electricity trader.

(2) Every electricity trader shall discharge such duties, in relation to supply and trading in electricity, as may be specified by the Appropriate Commission.

14.2 The term *"trading"* has been defined in section 2(71) of the Act as *"purchase of electricity for resale thereof"*. It follows that a trading licensee can also discharge the functions normally undertaken by supply companies in developed countries. The term trading licensee should, therefore, be construed as a trader and supplier of electricity. This opens up the electricity sector to competition in the supply of electricity by entities other than generating companies and distribution companies.

Open Access for Consumers

15.1 The rights conferred upon producers of electricity to sell their produce among multiple buyers and the corresponding duties imposed upon transmission entities and load despatch centres to transport electricity in an efficient and non-discriminatory manner aim at creating a competitive market that would improve efficiencies and cut costs. Trading licensees have been introduced to lend greater efficiency and competitiveness in the sale and purchase of electricity. For ensuring that these provisions benefit the consumer who is the ultimate object of this entire endeavour, section 42 of the Act stipulates as follows:

> *42. Duties of distribution licensee and open access –*
>
> * * *
>
> *(2)* ***The State Commission shall introduce open access in such phases and subject to such conditions****, (including the cross subsidies, and other operational constraints) as may be specified within one year of the appointed date by it and specifying the extent of open access in successive phases and in determining the charges for wheeling, it shall have due regard to all relevant factors including such cross subsides, and other operational constraints:*
>
> * * *
>
> *Provided that the State Commission shall, not later than five years from the date of commencement of the Electricity (Amendment) Act 2003 by regulations, provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one megawatt.*
>
> *(3)* ***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****.*

15.2 It should be evident from the aforesaid provisions that open access to the distribution networks for transportation of electricity to consumers is to be made available as a matter of right and without discrimination. As noted earlier, the right to carry on any trade and occupation including production and trading of electricity is a fundamental right of the citizen. This right is recognised and embodied in section 42(3) of the Act, and the State Commissions have a statutory duty to give effect to this right. Recognising that provision of open access to all consumers throughout the territory of India will require some physical changes in the network, particularly in respect of metering and billing, the State Commissions have been empowered to extend open access to consumers in phases, with the initial phase addressing consumers of 1 MW and above.

15.3 Read harmoniously with other provisions of the Act and the spirit thereof, open access to networks is to be provided to consumers by way a statutory right. The power to phase its introduction among consumers must be viewed only as a form of reasonable restriction that should be imposed to the extent necessary. Thus, the respective State Commissions would need to demonstrate that the phasing to be stipulated in their Regulations under section 42(2) is necessary and of no greater impact than what public interest justifies. Such phasing cannot, therefore, be viewed as a matter of discretion; it is essentially a power and duty to impose reasonable restrictions only to the extent warranted by public interest. In that context, the imposition of unreasonable or excessive restrictions through the means of phasing would be open to challenge by affected consumers.

15.4 As noted earlier, the legislative framework for introduction of open access was first introduced by UK in 1989. This was subsequently adopted by several developed and developing countries. The relevant sections of UK's Electricity Act 1989 read as follows:

> *Licences authorising supply etc.*
> *6 (2) The Secretary of State after consultation with the Director, or the Director with the consent of, or in accordance with a general authority given by, the Secretary of State, may –*

(a) grant a licence authorising any person to supply electricity to any premises specified or of a description specified in the licence; or

(b) extend such a licence by adding to the premises or descriptions of premises specified in the licence.

* * *

Exceptions from duty to supply
17 (1) Nothing in section 16(1) above shall be taken as requiring a public electricity supplier to give a supply of electricity to any premises if –

(a) such a supply is being given to the premises by a private electricity supplier; and

(b) that supply is given (wholly or partly) through the public electricity supplier's electric lines and electrical plant;

and in this Part "private electricity supplier" means a person, other than a public electricity supplier, who is authorised by a licence or exemption to supply electricity.

15.5 Besides the above, consumers who draw their supplies from captive generating stations have been granted open access to the transmission and distribution networks without having to wait for the regulatory affirmation required for other consumers under Sub-section (2) of Section 42. The provisions of Sub-section (2) of section 9 read as follows:

9. Captive generation –
(2) Every person, who has constructed a captive generating plant and maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use:

Provided that such open access shall be subject to availability of adequate transmission facility and such availability of transmission

facility shall be determined by the Central Transmission Utility or the State Transmission Utility, as the case may be:

Provided further that any dispute regarding the availability of transmission facility shall be adjudicated upon by the Appropriate Commission.

15.6 To get a perspective on the possible impact of open access for captive producers, the aforesaid section 9 must be read with the definitions of "captive generating plant" and "person" as contained in section 2 of the Act. They read as follows:

(8) "captive generating plant" means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any cooperative society or association of persons for generating electricity primarily for use of members of such cooperative society or association;

(49) "person" shall include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person;

15.7 The aforesaid provisions entitle captive generating stations to reach their respective members/ users by availing of open access to the transmission and distribution networks as a matter of right and without any payment of surcharge. They also incentivise producers and buyers to form associations, cooperative societies and companies for coming under the umbrella of such captive stations. Evidently, these provisions would exert a strong pull in favour of capacity creation in the captive segment, thus causing a migration of bulk consumers from the distribution companies/ SEBs to the captive fold with its attendant problems in serving the subsidised consumers.

15.8 It is relevant to note here that in several states such as Karnataka, Andhra Pradesh, Rajasthan and Orissa, certain captive producers have, for several years, been using the grid to transport electricity to their respective points of consumption/sale. Past practice in these States coupled with the entitlement conferred by Sub-section 9(2) clearly demonstrate that provision of open access to the networks is physically and technically feasible. Postponing open access on the grounds of technical or physical constraints may not, therefore, stand to reason. In

that context, the State Commissions would need to arrive at a reasonable judgement in order to safeguard consumer interest, particularly because SEBs are likely to press for retention of their bulk consumers by either postponing the introduction of open access or by making it unviable.

15.9 Further, the State Commissions would need to test their actions through the touchstone of Article 14 of the Constitution that enjoins upon the State not to deny any person equality before the law and equal protection before the law. It is well established that equal protection extends to the right of equal treatment in similar circumstances, equal right to privileges offered by State, and equal opportunity to facilities provided by the State. It also entails that the State shall not discriminate between individuals in respect of treatment, privileges and facilities offered by it. Discrimination is permissible only if there is a rational classification between two entities based on reasonable criterion and further, such classification should bear a nexus with the object to be achieved through such discriminatory treatment. Thus, it would be open to challenge why bulk consumers, similarly placed as compared to captive consumers, cannot enjoy open access to networks while the same is readily available to captive consumers. It could be argued that the mere fact of ownership of a generating station cannot constitute a sufficient ground for guaranteeing open access in one case while subjecting it to extended phasing in other cases.

Regulations must accelerate Open Access

16.1 The Legislature has delegated to the Regulatory Commissions the onerous task of introducing non-discriminatory open access to the networks through regulations to be framed in accordance with the provisions of the Act. Being creatures of the Act, the Commissions are obliged to carry out its objectives in letter and spirit. In this context, it may be useful to scrutinise the import of the term "regulate" as interpreted by the Supreme Court in the cases mentioned below.

16.2 The Hon'ble Supreme Court has in the case of *Deepak Theatre, reported in AIR 1992 Supreme Court 1519* held that –

> *"the power to regulate a particular business or calling implies the power to prescribe and enforce all such proper and reasonable rules and regulations as may be deemed necessary to conduct the business in a proper and orderly manner. It also includes the authority to prescribe the reasonable rules, regulations or conditions subject to which the business may be permitted or conducted."*

16.3. In the case of *Jiyajeerao Cotton Mills Ltd. reported in AIR 1989 Supreme Court 801* has observed that –

> *" the word regulate has different shades of meaning and must take its colour from the context in which it is used having regard to the purpose and object of the relevant provisions, and as has been repeatedly observed, the Court while interpreting the expression must necessarily keep in view the object to be achieved and the mischief sought to be remedied."*

16.4 Keeping in view the provisions of the Act that confer the right of open access, particularly the rights conferred on consumers by Sub-section (3) of Section 42, the Commissions have a statutory duty to frame regulations for the speedy and effective exercise of these rights. The objective of such regulations should be to facilitate open access. Reasonable restrictions on the right of open access, or the phasing thereof, may be included only to the extent dictated by public interest.

16.5 It should be clearly understood that if the market were liquid, competitive and efficient, it would ensure that the demand for electricity is met at the lowest possible production cost, consistent with security constraints, and it will ensure that, at each time and location, the right quantity of electricity is produced and consumed at an appropriate price. In the long-term, these prices provide the correct economic signals indicating where investment in the power system is needed, including the location of new generating units, expansion of transmission facilities and participation in demand-side management programs. These are the elements needed in a well-functioning market to alleviate constraints, further increase competition, and continuously improve the system's ability to meet power demand. That indeed would enhance the welfare of the citizen as well as the society, and thus serve the objectives of the Act and the Constitution.

16.6 The aforesaid provisions do not in any manner affect or restrict the supply of electricity to chosen consumer categories at subsidised tariffs. Subsidies could continue as before, or made more efficient and focused. That, however, is a matter of state policy and must be dealt with by means of affirmative intervention of the government. Nevertheless, it is important to recognize that an efficient electricity industry will enable better support for the subsidised categories as compared to an unviable sector.

PART III

Introducing Competition in Generation

Monopolies Must End

17.1 As noted in Part I, creation of monopolies, other than state-owned monopolies constituted by law, violates fundamental rights; and the Electricity Act 2003 does not contemplate any state-owned monopolies. With repeal of the Electricity (Supply) Act 1948, the legal status of SEBs is confined to being licensees under the Electricity Act 2003. Their rights and obligations are to be governed by the licence conditions to be stipulated by the respective State Commissions in accordance with the Act. As such, the SEBs cannot claim any monopolistic rights or privileges.

17.2 The existing monopolies as well as the mindset associated with them will have to yield in favour of economic democracy manifested by consumer choice. Free and unfettered competition should be the rule of trade in conformity with democratic values. Regulation should only impose reasonable restrictions aimed at enhancing public welfare. Developed countries have already eliminated monopolies in generation and supply of electricity and several developing countries have followed suit. India cannot afford to lag behind.

Competition vs. Regulation

18.1 It should be clearly understood that the structure of the electricity industry is not conducive to creation of multiple networks for transportation of electricity. While the law does not prevent the creation of multiple networks, it is normally uneconomic to do so. As such, building of parallel networks is unlikely unless the incumbent is unduly inefficient, inadequate or expensive. In practice, therefore, transportation networks would operate as natural monopolies that must serve everyone in a non-discriminatory fashion. This would require close regulation aimed at providing equal access to the network without any discrimination.

18.2 In order to enable fair competition, it would be necessary to segregate competitive segments of the industry from the non-competitive natural monopolies. The law, therefore, prohibits transmission companies from engaging in trading or generation of electricity. At the distribution level, the wires function comprising transportation of electricity would need to be functionally separated from the supply

business in order to enable competing suppliers to operate on a level playing field. This would require the tariffs of distribution companies to be bifurcated into wheeling and energy tariffs so that supply companies are able to use the distribution network at par on payment of regulated wheeling charges to the distribution company.

18.3 The production segment becomes eminently suited to competition when multiple producers are enabled to use the common carriage for transporting electricity to licensees or consumers. This empowers the consumers to choose from competing suppliers and determine the tariff through bilateral contracts. This proposition has been stipulated in Section 49 of the Act. The underlying principle is that when consumer choice becomes effective, generation and supply tariffs should be deregulated and only the non-competitive segments relating to transportation should continue to be regulated. On the other hand, as long as the end consumer lacks choice, the tariffs of all constituents of the supply chain must be regulated to afford the requisite protection to the consumer.

Some myths that need to be demolished

19.1 Several difficulties are being voiced, particularly by the incumbent entities, with regard to introduction of open access and competition. Some of the arguments may rely on myths. It is, therefore, necessary to identify and demolish some of these myths.

Are electricity systems dissimilar?

19.2 First and foremost, it needs to be recognised that electricity systems in India are similar to those in developed countries. As such, they are virtually as amenable to introduction of open access for bulk consumers as they are in developed countries. For example, generation and transmission were separated at the national level over a decade ago and eight states have done it too. The same principle is to be replicated for supply to bulk consumers. In terms of physical and technical parameters, this would not pose any significant problems.

19.3 Several states had in past allowed specified producers to use the grid for wheeling electricity to certain bulk consumers. This virtually constituted discretionary open access. The Act now requires open access to be provided to all captive generating stations. Evidently, provision of open access to bulk consumers is technically feasible; it is mainly the issues relating to cross-subsidy that need to be

addressed through suitable regulatory and policy measures. This should not take very long if the intent is clear.

Is open access to bulk consumers feasible in the near future?

19.4 It is often made out that open access to bulk consumers is not feasible within a short timeframe and that it can only be achieved over an extended period. As mentioned above, several states such as Andhra Pradesh, Karnataka, Orissa and Rajasthan have in the past permitted private generating stations to use the grid for carrying electricity to distant points of consumption. In Andhra Pradesh alone, over 200 bulk consumers buy electricity that is produced by private entities and transported through the common grid on payment of specified wheeling charges. While this was done as a matter of executive discretion in the past, the Act makes it mandatory to provide such open access to all captive producers. As such, there seem to be no physical or technological constraints in replicating this arrangement for all bulk consumers across the country.

19.5 The incumbents' effort to postpone the introduction of open access is bound to be challenged by an equally resourceful stakeholder group comprising captive producers/consumers. It is to be noted that the definitions contained in Sub-Section (8) and (49) of section 2 read with the provisions of the Section 9 enable captive producers to reach a large number of consumers by forming companies, cooperative societies or associations. Further, provisions of open access to the transmission and distribution networks for carrying electricity to captive consumers is mandatory under Sub-Section (2) of Section 9. Moreover, Sections 38 (2), 39 (2) and 42(2) stipulate that no surcharge is payable for such transportation. These provisions are likely to exert a strong pull in favour of a rapid growth of captive producers/ consumers who will demand such open access as a matter of right, and this process will demonstrate the technical feasibility of this arrangement in the near future.

Is open access more complex at the distribution level?

19.6 It is also made out that open access should first be introduced at the transmission level and the same will have to wait for a few years at the distribution level. This implies that monopoly distribution licensees and SEBs would be free to buy from any producer but consumer choice will continue to be denied. This arrangement eminently suits the incumbent monopolies and is, therefore, being pressed by them. Predictably, they are opposing open access at the distribution level because that would challenge their respective monopolies.

19.7 It may be noted that the Central Commission has already notified its regulations for provision of open access to inter-state transmission networks. Most of the State Commissions, however, are yet to notify their respective regulations for use of intra-state transmission networks on similar lines. Further, little progress has so far been made towards provision of open access to the distribution networks. Since regulation of distribution lines rests entirely in the jurisdiction of State Commissions, open access for the consumer is virtually dependent on the State Commissions.

19.8 It is important to recognise that provision of open access to transmission networks poses greater system challenges as compared to open access at the distribution level. In fact, open access to the distribution networks is comparatively simpler to introduce so far as physical and technological parameters are concerned.

Can open access to consumers wait for 5 years?

19.9 In terms of the proviso to sub-section (2) of section 42, open access to distribution networks is to be provided to all consumers of 1 MW and above within a time limit of five years. This provision is sometimes interpreted as a virtual five years' holiday from competition. Such an interpretation would not conform to the letter and spirit of the Act. When the law provides for a time limit of this nature, it makes allowance for all states and regions of the country. This time limit will also apply to the states that have not yet initiated power reforms or are electrically underdeveloped. The legislative intent is to give such states sufficient time for introducing open access and hence a time limit of five years. It follows that states that have initiated reforms in the past need not wait for five years; they should comply much earlier.

19.10 The objective of the Act, both in letter and spirit, is to introduce open access and empower the consumers by giving them choice. This intent is clearly reflected in sub-section (3) of Section 43. States that have unbundled their SEBs should, therefore, immediately proceed with introduction of open access as the wherewithal is already in position. To treat the maximum time limit as a suggested timeframe for all states including comparatively developed states would clearly be an erroneous interpretation of the law.

Is privatization a panacea?

19.11 It is sometimes suggested that privatisation of distribution utilities is a panacea for the current problems. It is, however, necessary to recognise that privatisation of existing utilities is a complex, expensive and uncertain proposition.

At any rate, it is a time consuming process and the appetite of private investors is limited. Reliance on the privatisation option would, therefore, imply extension of the *status quo* and postponing of consumer choice. In this context, the lessons arising out of privatisation of distribution companies in Orissa and Delhi through creation of private monopolies deserve close scrutiny. In Orissa, the expected improvements have not occurred so far during the past five years while the results in Delhi during the past two years have also been below expectations. In addition, privatisation in Delhi has been supported by large government grants (approximately Rs. 4000 crore) that other states may not be able to sustain. Moreover, both these states opted for the 'single buyer' model that most experts regard as unsustainable. As such, these cases offer several useful lessons.

19.12 Instead of relying solely on privatisation of state-owned distribution companies, emphasis should be placed on facilitating private investors to compete with existing distribution companies in supply of electricity to consumers. It is competition among multiple producers and suppliers, as distinct from creation of private distribution monopolies, that would actually improve efficiencies and cut costs for the benefit of the consumers.

Pre-requisites of competition

20.1 Introduction of competition in the power sector is feasible only when certain prerequisites are fulfilled, namely:

(a) Open access to T & D networks
(b) Separation of carriage and content
(c) Independent system operator
(d) Regulated wheeling charges
(e) Trading arrangements
(f) Settlement mechanism
(g) Efficient transmission arrangements
(h) Time of the day metering
(i) Regulatory Capacity

These pre-requisites to competition are briefly discussed below:

Open access to T & D network

20.2 By its very nature, electricity cannot be transported except through transmission and distribution networks consisting of electrical lines, load despatch

centers sub-stations, transformers etc. All producers of electricity must, therefore, depend on these networks for transporting their produce. However, competition among them can be stifled if they do not have equal opportunity to reach multiple licensees and consumers. Under the 'single buyer' model currently in vogue, SEBs and transmission companies buy all the electricity that is produced for sale, and producers do not have the right to use the transportation networks for selling directly to bulk consumers. Since all produce must be sold to a single buyer, it implies the absence of a market, and of competition.

20.3 Under the provisions of the Act, non-discriminatory open access is mandatory for transmission of electricity from a generating company to any trading or distribution licensee across the country. Such open access, however, will only introduce limited competition because all distribution entities in India are monopoly suppliers to the consumers, and the enormous pilferages and inefficiencies at their level will not be challenged by such competition. A quantum leap will, therefore, remain elusive until retail competition at the level of bulk consumers is operationalised.

20.4 To compound matters further, virtually all public sector distribution entitles in the country are perceived as bankrupt and, therefore, private investment in generation is unlikely to materialise so long as producers are required to sell to licensees alone. Consequently, shortage in production will continue and reduction in costs is unlikely to occur because competition in an environment of scarcity will only escalate prices, instead of reducing them.

20.5 In view of the above, the benefits of reform would reach the consumers only when they are empowered to choose from among competing producers and suppliers. This can happen only when the State Commissions enable open access to distribution networks in terms of sub-section (2) of Section 42 of the Act. This will allow producers to access creditworthy consumers, thereby ensuring private investment and elimination of shortages. Introduction of open access to consumers must, therefore, be viewed as a key prerequisite of competition and of eliminating shortages, besides improving quality and reducing costs.

Separation of carriage from content

20.6 Open access to the networks must be non-discriminatory if a level playing field is to be provided to competing producers and suppliers of electricity. If the owner or operator of a network is also a producer of electricity, he is likely to give preference to the transportation of his own produce as compared to his competitors'

supplies. In such a situation, private investors would shy away from investing in fresh capacity. It is, therefore, common practice to prohibit transmission companies from engaging in production or supply of electricity. Accordingly, Sections 38, 39 and 40 of the Act, as noted in Part-I, prohibit transmission companies from engaging in trading of electricity.

20.7 So far as distribution networks are concerned, Sections 61, 62 and 86 of the Act require the State Commissions to determine the wheeling charges payable to the owner of a distribution network for transporting electricity from any producer/supplier to a consumer. Through regulations, the State Commissions are also required to ensure that the distribution companies function as common carriers providing non-discriminatory open access as stipulated in Section 42(2).

20.8 The Act does not clearly identify the supply function as a distinct licensed activity, though a reading of the relevant provisions clearly suggests that supply is amenable to separation in the context of open access to the T&D networks. For all practical purposes, the instrument of trading licence would, therefore, have to be used by suppliers of electricity who wish to access consumers directly. So far as generating companies are concerned, they would be free to supply to consumers without obtaining a licence, but such supply would have to conform to the regulations issued by the respective State Commissions under section 42 (2) of the Act.

20.9 Ideally, the law should be amended to recognise and regulate the supply of electricity as a distinct function. However, until such amendment takes place, the business of supply would have to be conducted under a trading licence.

Independent system operator

20.10 For efficient and economic flow of electricity from multiple producers to numerous buyers, it is necessary to have an independent entity for regulating its despatch in a non-discriminatory manner and for maintaining grid security. At the regional level, this role is to be discharged by the Regional Load Dispatch Centres (RLDCs) which were operational much before the Electricity Act 2003 came into force, but they will now have to function under the provisions of Sections 27, 28 and 29 of the Act. Accordingly, the RLDCs are in the process of implementing the regulations notified by the Central Commission for open access to transmission networks. However, State Load Dispatch Centres (SLDC), in the manner stipulated

by Sections 31, 32 and 33 of the Act are yet to be established. The States would need to comply with these provisions and set up SLDCs soon.

Regulated wheeling changes

20.11 In order to provide non-discriminatory open access, it is necessary to determine the wheeling charges that would be payable for use of the common transportation networks. As noted earlier, Section 61, 62, 79 and 86 require the Central and State Commissions to determine these charges for inter-state and intra-state wheeling respectively. While the Central Commission has determined the said wheeling charges through its tariff regulations, some of the State Commissions are yet to determine such charges for the state transmission networks. It is expected that the State Commissions would comply with the said mandatory provisions expeditiously as the time limit of June 10, 2004 is already past.

Trading arrangements

20.12 For a market to function efficiently and effectively, trading arrangements have an important role to play. Section 14 and 52 of the Act stipulates such trading arrangements under licenses to be issued by the respective Commissions. Regulations for trading licenses have already been notified by the Central Commission and several trading licences have since been granted. Similar action at the state level would have to follow in conformity with the Act.

Settlement mechanism

20.13 For catering to mismatches between supply by a producer and drawal by a buyer, it is necessary to create a settlement mechanism. Such a mechanism already exists in form of availability-based tariff (ABT) so far as inter-state transactions are concerned. It enables buyers and sellers to make good the excess/shortfall between demand and supply at the price prevailing at the relevant time. A similar arrangement needs to be replicated for facilitating trading and settlement at the state level. In the absence of such arrangements, intra-state transactions between producers and distribution licensees would face serious difficulties on account of grid security, commercial disputes and perverse incentives. As the market evolves, other settlement and balancing mechanisms, such as power exchanges may also need to be evolved by the respective commissions.

Efficient transmission arrangements

20.14 For production and supply to reach buyers in an efficient and cost effective manner, it is essential to ensure efficient transmission arrangements. In the absence of smooth transmission and dispatch arrangements, outages and commercial losses would be frequent and unmanageable. The Central Commission has taken several steps, including the notification of a grid code and open access regulations for ensuring efficient transmission arrangements. Further refinement aimed at making these arrangements more efficient and cost-effective may be made in light of the emerging experience with a view. Similar arrangements at the state level also need to be put in place soon.

20.15 The orderly growth of electricity industry pre-supposes an adequate and efficient transmission system. Competition in generation of electricity could easily get distorted if transmission bottlenecks persist. A full consideration is, therefore, essential for planning the growth of transmission networks in the medium and long term. A framework that would enable private investment at competitive costs needs to be evolved in order to keep pace with capacity addition in generation. The existing arrangements for allocation and pricing of transmission capacity also deserve a close scrutiny.

Time of day (TOD) metering

20.16 Varying demand during different hours of the day justifies differential pricing of electricity. A quick look at the tariffs and unscheduled inter-change (UI) charges prevailing under the ABT regime would show wide variations between off-peak and peak hours. When bulk consumers buy directly from producers and suppliers, they would need to be integrated into the ABT system and would have to be subjected to differential pricing in respect their over drawals and under drawals from the grid. Without such differential pricing, the true costs of electricity will not be discovered and its allocative efficiency would be compromised.

20.17 In view of the above, it would be necessary to install ToD meters (conforming with the requirements of ABT) in the premises of consumers buying through the grid so that the value of their excess/short drawals during peak and off-peak hours can be recovered. In addition, it will also be desirable that ToD meters are installed for all bulk consumers even if they continue to buy from their respective distribution companies. The installation of ToD meters will enable State Commissions to determine peak, off-peak and intermediate tariffs for all bulk consumers, thus reflecting the true costs of power supply for all such consumers.

Regulatory Capacity

20.18 The complexity of the transition process needs to be clearly understood and addressed. Under the Act, the prime movers of change will be the regulatory commissions whose duties and powers seem to be all-pervasive. In order to enable the commissions to discharge their functions effectively, their capacities would need to be substantially enhanced in terms of additional manpower with the requisite expertise. Inadequate attention to this aspect would impose a heavy cost on the growth of power sector and a full consideration of these issues seems essential.

Current Status of Conditions Precedent

21.1 From the above discussion, it would be evident that the legal framework for introduction to open access and competition is already in place. Compliance of most of the provisions has already been undertaken by the Central Commission while State Commissions are in the process of such compliance. It can, therefore, be argued that the prerequisites for introduction of competition and open access for bulk consumers are largely in place and if consequential actions are taken by the State Commissions in discharge of their statutory duties, most of the states can introduce open access for bulk consumers within a period of six months to one year.

21.2 The real issues at the state level arise from the element of cross-subsidy in bulk supply tariffs. Incumbent SEBs and distribution companies argue that migration of bulk consumers to other producers/suppliers will deprive them of the revenue necessary for subsiding the farm sector. However, the law enables the State Commissions to levy a suitable surcharge on bulk consumers who buy from alternative sources. This is meant to offset the burden of cross-subsidy and should address the concerns on this account. It should not, therefore, be used as justification for postponing the introduction of open access for all consumers of 1 MW and above.

Limitations to Competition

22.1 Competition pre-supposes adequate supply if consumers are to be benefited by efficiency improvements and cost reduction. If a commodity is in short supply, it creates a sellers' market that enables producers and traders to raise prices and lower quality. Since the demand for electricity is substantially greater than the supply available, prices are bound to rise in an open market, thus defeating the entire purpose of power reforms by enabling producers and traders to make unintended

profits at the consumers' expense. Under these circumstances, there is a clear case for continuing regulation of tariffs until adequate production can offer the comfort of prices getting settled through a truly competitive process.

22.2 Virtually all power production at present is locked into agreements between generating companies and distribution companies/SEBs. Most of the power stations have been substantially depreciated and, therefore, offer comparatively low tariffs. These agreements should continue undisturbed so that volatility in electricity tariffs is eliminated. At any rate, these are valid contracts that need to be enforced and there is no reason for tampering with these on-going arrangements.

22.3 Under the aforesaid contracts, there could be situations of surplus supply during certain seasons or hours of the day. During such periods, producers should be enabled to sell to other buyers in the market as long as they do not breach the tariff determined by the respective commissions. Such sales outside the respective contracts can partially relieve the contracting parties of their obligations by offering alternative avenues. These benefits could be shared among the parties as long as the tariffs do not exceed the regulated price.

22.4 There is a large number of captive generating stations in India that have surplus capacity either during limited periods or on a continuous basis. Since their fixed costs are sunk, they can bring comparatively cheap power to the market if only they are allowed to access the licensees and consumers. The law, however, requires their tariffs to be determined by the respective commissions in case they are selling to the licensees. In terms of Section 61(a) of the Act, the Central Commission should specify the principles and methodologies for determining the tariffs of such generating stations. The State Commissions could then determine the station-wise tariffs so that their surplus capacity can be harnessed for providing additional supplies to reduce shortages. Direct sale to consumers, however, would not require tariff determination by the commissions (see Section 49 of the Act).

22.5 New capacity should be allowed only on a competitive basis and for this purpose, a coherent framework needs to be evolved by the Central Commission and the Central Government. In the past, flawed framework has led to costly and inadequate capacity addition. Full consideration should, therefore, be given to the evolution of a coherent framework that would enable financing of capacity addition on a competitive basis.

Competition for existing Gencos

23.1 As noted above, all existing producers such as NTPC, NHPC, SEBs and IPPs must continue to supply power as per their existing contracts and the tariffs to be recovered by them should be no greater than these determined by the respective commissions. These producers should, however, be free to sell any surplus production in the market, but subject to the prices not exceeding their regulated tariffs.

23.2 All captive stations and other producers having surplus uncommitted capacity should be enabled to sell to the grid and to bulk consumers. For this purpose, inter-connection should be facilitated in terms of Section 30 of the Act. Further, wheeling tariffs at the state level should also be notified at the earliest, in compliance of the mandatory provisions of the Act. Entry of surplus capacity in the market would help minimise shortages and reduce tariffs and unscheduled interruption (UI) charges.

Timeframe for introduction of Open Access

24.1 As noted earlier, open access to bulk consumers (1 MW and above) has to be ensured by January 2009 in terms of the last proviso to sub-section (2) of Section 42. This is the outer time limit for giving effect to the rights of the consumers throughout the territory of India. It cannot be used as a ground for delaying these rights in states and regions where open access can be provided in a shorter period. The time limit of 5 years is evidently to be read as the maximum permissible period and not as a suggested time frame for all the states.

24.2 In states where unbundling and corporatisation has already been completed, open access would be comparatively simpler to introduce because separate transmission entities and wheeling tariffs are already in place. They also have distribution licensees functioning on commercial lines. As such, competing producers and suppliers can be enabled to access bulk consumers within a short time frame. These states are, therefore, eminent candidates for introduction of open access without much delay. A similar approach can also be adopted for large cities with population exceeding 2 million. Such cities have fairly developed systems that can be subjected to the introduction of open access to bulk consumers.

24.3 States where regulatory commissions are in position for two years or more can constitute the next category because such states already have a fair amount of regulatory practices and database to enable introduction of open access. These states

could be in the second category for phasing the introduction of open access to consumers.

24.4 In light of the above, a national consensus and policy needs to be evolved for mandating open access in category-I states by March 2005 while in category-II states, it may do so by March 2006. In the remaining states, open access should be introduced by March 2007 with the exception of certain electrically underdeveloped states, particularly north-eastern states other than Assam, where open access may be introduced by March 2008.

24.5 In order to set at rest some concerns, real or perceived, that open access will lead to a rapid migration of bulk consumers from the distribution companies to competing suppliers, the state commissions could specify phased annual ceilings that would ensure a gradual transition. Thus, in the first year, open access may be restricted to about 6% of the total procurement of a distribution company and this limit may be increased further by 6% every year. This would help manage the transition and allay fears relating to any possible instability. Moreover, such a limit would largely address the incremental requirements of generating capacity without affecting or substituting the present sources of supply. In that sense, open access would help in meeting the incremental demand for electricity through private investment on a competitive basis.

Determination of surcharge

25.1 As noted earlier, under sub-section (2) of Section 42 of the Act, a surcharge and additional surcharge is to be levied by the respective State Commissions to compensate the distribution companies for supply of subsidised electricity to certain consumers. Incumbent entities are likely to press for a high level of surcharge in order to avoid competition and retain customers. A consensus needs to be evolved on the broad principles to be followed by the respective State Commissions while determining the surcharge and additional surcharge. This is important if competition is to be facilitated in real terms.

25.2 It is proposed that the surcharge including additional surcharges should be determined by the respective State Commissions, but subject to a ceiling to be determined by the following formula:

Surcharge = TBC - MCS

Where:

TBC is the Applicable tariff for the respective Bulk Consumer;
MCS is the Marginal Cost of Supply by the distribution company; and
MCS = Marginal cost of purchase of electricity by the distribution company + applicable wheeling charge + applicable T&D loss for the relevant electrical lines.

25.3 As an alternative formulation, it may be specified that the surcharge/additional surcharge shall be no greater than 20% of the average price at which the respective distribution companies procured electricity in the preceding financial year.

25.4 The above formulations could also be considered by the Central Commission as part of its regulations under Section 38 of the Act. The said section stipulates the determination of wheeling surcharge by the Central Commission for providing open access to the consumers in the course of inter-state transmission of electricity. Early determination of the said surcharge by the Central Commission would go a long way in accelerating competition and consumer choice in the power sector.

25.5 Further, conforming to the provisions of sub-section (2) of Section 42 of the Act, cross-subsidisation should decline progressively and a consensus needs to be evolved on the broad principles to be followed in this regard. At the minimum, the surcharge/additional surcharge should decline by at least 10 % every year. Such reduction in cross-subsidy should not be viewed as a measure that would necessarily raise the tariffs of economically weaker sections or the farmers. By way of state policy, these categories can continue to receive subsidised electricity, but the funding for such subsidy should be met from electricity duty and other taxes/ cess that may be suitably adjusted for this purpose. Thus, the comparatively affluent sections would still be required to pay higher tariffs by increasing the duties/taxes so that certain categories can continue to be subsidised. Such arrangements will make the subsidies far more targeted, rational and transparent, while at the same time help in commercialising the distribution companies.

25.6 Incumbent distribution companies could also attempt to ward off competition by increasing the additional surcharge and/ or demand charges to be paid by bulk consumers for default supply by the distribution companies. In order to safeguard against such anti-competitive practices, the national policy should specify that the demand charges, if any, would have to be adjusted against the surcharges payable by a consumer. Further, in lieu of the surcharge, the distribution companies should

continue to act as default supplier for such consumers in order to provide security of supply.

Policy framework for new capacity

26.1 Given the current shortages coupled with the projected growth rates, capacity addition would have to be undertaken on a fairly large scale. According to the estimates of the Ministry of Power, additional capacity of 1 lakh MW needs to be set up by 2012. Even if these projections were scaled down, the total requirement would nevertheless be very significant. The Central and the State Governments together will not be able to match these requirements and reliance on private investment is, therefore, inevitable. In fact, private investment in generation would need to be maximised so that public investment can focus on transmission and distribution segments. Given the past experience, private investment in generation is unlikely to materialise unless a credible framework is put in place. The evolution of such framework is, therefore, of critical importance to the growth of power sector.

26.2 While private investment can be allowed only on a competitive basis, a somewhat different approach can be followed in respect of public sector undertakings (PSUs) until such time as public and private investment can be treated at par. The rationale for stipulating a different treatment for public investment is that the procurement process of PSUs is open to public scrutiny and is subjected to significant checks and balances. As such, in case of PSU generating station, the regulatory commissions can enforce tariffs that do not significantly violate the consumers' interests. In view of the above, the framework for creation of new capacity could be laid down on the following lines.

Capacity addition by Public Sector Undertakings

26.3 Public Sector undertakings (PSUs) may be allowed to set up capacity based on ‘cost plus’ tariffs in line with the current practice. The capital costs incurred by them through of open competitive bidding can continue to form the basis of the fixed charges to be determined by the respective commissions. However, these costs must be approved upfront by the appropriate commission as they would subsequently form the basis of tariff determination. Regulatory intervention would be virtually redundant if these capital costs are presented as *fait accompli* after they have been incurred. As for variable charges, these could also continue to be fixed on the basis of normative parameters, as laid by the Central Commission. This arrangement could continue for a period of three years, and thereafter reviewed with the objective of placing PSUs at par with the private sector. In the meanwhile, PSUs

should be free to bid at par with the private sector for projects to be set up on the basis of competitive bidding.

26.4 In addition to the above, the Central commission may also lay down benchmark capital costs and/or benchmark fixed and variable tariffs (including indexation) that would serve as the ceiling for determination of costs and tariffs of PSU generating stations. However, such benchmark costs and tariffs should be determined after a full process of analysis and open hearings by the Commission.

26.5 Since PPAs between PSUs and the utilities guarantee assured returns, their return on equity (ROE) may be fixed at bank rate + 2% for plant availability of 80%. Recognising that PSUs should be enabled to improve their returns through higher efficiency levels, they should have the freedom to sell outside the PPAs for availability exceeding 80%. Such sales could be made directly to bulk consumers and for this purpose, the respective State Commissions should provide open access under sub-section (2) of section 42 of the Act.

Capacity addition by Private Sector

26.6 All capacity to be set up by the private sector on the basis of PPAs should be subjected to open competitive bidding. However, the bidding parameters should be based on tariff alone, as other forms of bidding could be contentions. Bidders should be asked to bid for fixed and variable charges on predetermined terms and conditions, including indexation for inflation. To facilitate the process, the Central Commission should evolve standard power purchase agreements (PPAs) to avoid wasteful duplication and unfair practices. Distinction may also be drawn between peak and off-peak supplies, thus enabling the setting up of power plants primarily for peak supplies.

26.7 With the onset of competition, the current practice of fixing tariffs based on individual items such as depreciation, interest cost, O&M expenses etc. should be dispensed with. Adoption of tariff based bidding would enable the bidders to package or reconfigure the individual terms to their best advantage and allow innovative methods for cost reduction. Conceptually, procurement of electricity should be based on output specifications comprising the quality and cost of supply, instead of going into input specifications or determination of costs relating to each item. Such an arrangement would also conform to international best practices.

26.8 Detailed guidelines for competitive bidding should be evolved by the Central Commission and notified under Section 61 (a) of the Act. These guidelines would need to be substantive in nature and would govern the terms and conditions for

generation and sale of power. In addition, the Central Government may notify the guidelines relating to the process of competitive bidding so that the bidding and procurement procedures are uniform, efficient and cost-effective. In this context, it is necessary to recognise that the jurisdiction of the Central Government under section 63 of the Act relates to the process of competitive bidding whereas the terms and conditions relating to the determination of tariff for such power stations would continue to be in the jurisdiction of the Central Commission.

26.9 In order to enable market based arrangements in future, the tenure of PPAs should not be unduly long. PPAs exceeding 10 years should, therefore, be discouraged while PPAs of short or medium duration should be preferred. On the other hand, if the tenure of PPAs is short, sponsors may find it difficult to secure financing for such PPAs. In view of the above, utilities may be allowed to enter into PPAs for periods of up to 10 years with the option to exit or renegotiate thereafter.

26.10 For encouraging market development on competitive lines, at least 20 percent of the PPA-based capacity should be sold in the open market, outside the PPAs. Such capacity may be sold either through traders or directly to bulk consumers. It should also be mandated that at least 5 per cent of the installed capacity would be sold through bilateral contracts with bulk consumers. Such a stipulation would accelerate the growth of a market in electricity and help in reducing tariffs.

26.11 One of the main impediments to capacity creation is the inability of project sponsors to secure financing. This is mainly on account of the lack of credit worthiness of the buyer utility coupled with the absence of alternative avenues for sale of power. To overcome this problem, standardised PPAs should stipulate that in the event of a contracting utility failing to make timely payments, a producer would have access to the market for sale of his produce. In such cases, disincentives should also be built in for the defaulting utility so as to deter non-compliant behaviour. These could include wheeling of electricity within the regional grid at the risk and cost of the distribution company and/or payment of the difference between the PPA price and the actual sale price recovered. Such disincentives should also include increased access to bulk consumers who are currently receiving power supply from the utility.

Capacity addition by Merchant Plants

26.12 Generating stations that are set up with PPAs of 5 years or less may be treated as merchant plants. Such plants should have the freedom to sell to the

utilities in the regulated markets. However, as per the provisions of the Act, the tariff for sale to utilities would have to be regulated by the respective commissions because they supply electricity to captive consumers who cannot exercise choice. As and when sufficient competition in the market place has been ensured, such tariff regulation can be light handed, bordering on deregulation.

26.13 In order to promote a competitive market, merchant plants should also be enabled to sell electricity through recognised power exchanges. However, where such sales are made to the utilities, the tariff would have to be regulated in accordance with the Act. This mandatory requirement could possibly be met by setting a price cap for such transactions and then allowing the price to be discovered in a competitive market that functions transparently.

26.14 In addition to the above, merchant plants should be allowed to sell directly to bulk consumers through bilateral contracts that do not require the regulator's intervention for tariff setting (Section 49 of the Act). The greater the scope of open access under Section 42 of the Act, the larger will be the market for supply by merchant plants. States that wish to accelerate private investment in generation should consider expanding the scope of open access at an accelerated pace.

The Road Ahead

27.1 In light of the above, it is important for the commissions to take effective and expeditious measures for giving effect to the provisions relating to open access to the transmission and distribution networks with the objective of encouraging competition in the generation and supply of electricity. On its part, the Central Government should notify the National Electricity Policy and the Tariff Policy under section 3 of the Act to facilitate the introduction of such competition. The legislative intent is clear; and the existing barriers would have to yield in favour of the arrangement ordained by the Act. In this context, the steps to be taken by the respective commissions and/or governments are outlined below.

Role of the Central Commission

27.2 The Act stipulates a critical role for the Central Commission. This is inevitable because state boundaries will become increasingly blurred as the sector opens up and inter-state flows become a rule rather than an exception. The industry will rapidly acquire a national character as compared to a predominantly state-level identity that it carries at present. The role of the Central Commission would include regulation of inter-state transmission, determination of tariffs for inter-state

generation and transmission, specifying the principles and methodology for generation and transmission tariffs, development of the market and advising the Central government on competition in the sector.

27.3 The Central Commission has already notified its regulations to provide open access to licensees for inter-state transmission of electricity. Wheeling tariffs for inter-state flows are also in place. These regulations conform to the provisions of Sections 28(2), 38(2)(d), 62(1)(c) and 79(1)(c) of the Act. However, the new arrangements are yet to stabilise and may require the Commission to remove difficulties as and when they arise. The process of streamlining these arrangements is itself in need of some streamlining which should receive urgent attention of the Commission.

27.4 Though the use of a state-owned network in the course of inter-state transmission lies in the jurisdiction of the Central Commission, some ambiguity persists about its use and the charges thereof. Further, several issues have been raised by licensees in respect of wheeling tariffs currently in vogue. These include the level of charges, their method of calculation and their incidence on different categories of transactions. A full consideration by the Commission is necessary for creating efficient and cost-effective arrangements in this behalf.

27.5 It is important to recognise that efficient transmission arrangements across the country are a pre-requisite for orderly growth and development of the electricity industry. The Central Commission would need to discharge an overarching role with a view to facilitating inter-state flows, preventing pan caking by states; ensuring competitive trading arrangements, establishing balancing/settlement mechanisms, and facilitating power exchanges.

27.6 The development of a market is essential for the benefits of competition and growth to reach the consumer. Section 66 of the Act imposes a statutory duty on the Central Commission to develop a market for electricity. The Commission's approach to market development is yet to be spelt out for initiating a debate among stakeholders. It is important for the Commission to address itself to the task of evolving a coherent national model for development of a market and it is understood that the matter is receiving the attention of the Commission

27.7 Section 61 of the Act requires the Central Commission to specify the principles and methodologies for determining the tariffs of generation and transmission of electricity. These regulations will also apply to the State

Commissions in order to lend some uniformity for facilitating investment and tariff setting. Regulations to this effect have already been issued by the Central Commission but they may need to be reviewed in order to give effect to the recommendations contained in this paper.

27.8 In formulation of the policy relating to competition, the Commission bears the statutory responsibility of advising the Central Government as stipulated in Section 79 (2) of the Act. The Central Government, in turn, is required to notify the National Electricity Policy and the Tariff Policy under the Act. Introduction of competition in the power sector would form an important part of these policies and the Commission should, therefore, tender its advice expeditiously. This paper is proposed to be considered by the Commission and subjected to a public hearing for such modification as may be necessary. Thereafter, the Central Commission proposes consider sending the final version to the Central Government by way of its statutory advice on promotion of competition in the electricity industry.

27.9 The Central Commission would need to spell out a timeframe for completing the aforesaid tasks. As these tasks are complex and time consuming, the Commission would need to deploy the requisite expertise, either in-house or by outsourcing, particularly in view of the critical importance of these matters.

Role of the State Regulatory Commissions

27.10 The State Commissions have a crucial role to play as the electricity industry at present lies squarely in the domain of the respective states. In particular, much of the restructuring and consumer protection as well as the introduction of retail competition lies in the jurisdiction of State Commissions. Their task is indeed very challenging and the growth of power sector in the respective states will be affected by the quality and speed of their work.

27.11 Some of the important statutory duties to be discharged by the State Commissions include:

(a) Issuing State transmission licences under section 16 of the Act;

(b) fixing wheeling tariffs as required by Sections 62(1)(c) and 86(1)(a) of the Act;

(c) facilitating wheeling and inter-connection as required by Section 30 of the Act;

(d) ensuring independent system operation (SLDCs) as required under Sections 31(1) and 32(2)(e) of the Act. This may include adoption of the ABT regime at the state level;

(e) enabling consumer choice as stipulated in Section 42(3) of the Act and issuing regulations for this purpose under section 42(2); and

(f) ensuring that open access is non-discriminatory, as required under Sections 39(2)(d), 42(3) and 86(1)(d)

27.12 The State Commissions need to urgently notify the regulations identified in this paper, as they are pre requisites to the introduction of open access and competition. The Commissions are under a statutory obligation to protect consumer rights and the Act recognises open access as a right of the consumer. So far as consumers are concerned, the sole jurisdiction for introduction of open access rests with the State Commissions. As such, they have a critical role to play in introducing competition, thereby eliminating charges, cutting costs and improving efficiencies in their respective states.

Role of the State Governments

27.13 The State Governments have an abiding interest in the growth and development of power sector. They need to engage in a dialogue with the respective State Commissions and the stakeholders to carry the development process forward. They also have a specified duty under Section 31 of the Act to set up independent State Load Despatch Centre for ensuring a free and fair flow of electricity. This needs to be expedited with a view to creating a level playing field for prospective investors. If necessary, State Governments may also consider issuing directives to the respective State Commissions where the progress is slower than expected.

Role of the Central Government

27.14 The Central Government has a statutory duty to issue a National Electricity Policy and a Tariff policy under section 3 of the Act. These policies would be incomplete without a clear road map for introduction of competition. The Government may evolve these policies based on the statutory advice tendered by the Central Commission, and after extensive consultations with expert and stakeholders. In case evolution of the entire policy is to take some time, an interim policy may be considered for opening up the power sector to competition. This is of utmost importance because opening up of the sector would enable the much-needed

investment in capacity addition that has been the bane of power sector for the past several decades.

27.15 The approach outlined in this paper, as duly modified by the Central Commission after public hearings, may be considered by the Central Government as the basis of its policy on this subject. Any deviations that may be made by the Government should follow a similar process of open and transparent consultations so that the policy remains acceptable and gets implemented.
