

POWER EXCHANGE INDIA LIMITED

PARIVARTAN

ANNIVERSARY CELEBRATION ISSUE

TRADING DATA

OCTOBER 2009

Total Buy Bids (MUs)	197.37
Total Sell Bids (MUs)	221.16
Total Market Cleared Volume (MUs)	102.98
Total Unconstrained Market Cleared Volume (MUs)	110.06
Maximum MCP (Rs. / KWh)	8.00
Minimum MCP (Rs. / KWh)	1.80
Average MCP (Rs. / KWh)	4.79
Maximum Volume in a day (MUs)	7.54
Total Cumulative Market Clearing Volume in MUs	537.12

What's inside?

PXIL: Transforming Power Markets

Ms. Rupa Devi Singh
MD & CEO, Power Exchange India Limited

The Importance of Power Market

Dr. Kirit S. Parikh
Economist & Chairman (Governing Council),
Integrated Research and Action for
Development

Development of Power Market in India

Shri. G. B. Pradhan, IAS
Additional Secretary, Ministry of Power,
Government of India

A Peep into the Future Power Market of India

Shri. R. Krishnamoorthy
Member (Finance),
Central Electricity Regulatory Commission

Power Market

Shri. V. S. Verma
Member,
Central Electricity Regulatory Commission

Development of Power Market through the Exchange Route

Shri. Sutirtha Bhattacharya, IAS
Chairman & Managing Director, Transmission
Corporation of Andhra Pradesh Limited

Development of Power Market - Trading through Power Exchanges

Shri. Satnam Singh
Chairman & Managing Director, Power Finance
Corporation

Power Market Development

Shri. Alok Kumar, IAS
Secretary,
Central Electricity Regulatory Commission

Regulatory and Design Issues in Moving towards Markets

Prof. Sebastian Morris
Professor, Indian Institute of Management

GUVNL's Experience on the Development of Power Market in India

Shri. S. B. Khyalia
E. D. (Finance), Gujarat Urja Vikas Nigam
Limited

Development of Power Market

Shri. Sunil Wadhwa
CEO & ED, North Delhi Power Limited

Transmission pricing for Short Term Trading

Shri. Lalit Jalan
Chairman, Reliance Infrastructure Limited

PXIL: Transforming Power Markets



Dear Readers,

I have immense pleasure in sharing with you that Power Exchange India Limited has successfully completed the first year of its operations. We would like to express our heartfelt gratitude to all those power market participants who have provided their unwavering support to PXIL. I am also thankful to the Hon'ble CERC who have also been a source of guidance and encouragement in bringing the concept of Power exchanges to this country. In addition, I am also thankful to our equity partners who have reposed trust in the determination and vision of our very young team.

PXIL was set-up with a view towards developing for the country the power market it deserves. Exchanges as market places necessarily have to be efficient and transparent, as well as easily and widely accessible. However, when it comes to conceptualizing and establishing power exchanges, it is important that the products and services offered by the Exchange are in line with the specific requirements of the participants in the local market place.

Keeping this mind, PXIL's has chosen to develop its exchange trading system completely in-house based on the best practices from across the world and also in sync with the directions of the Regulator. Initially the matching logics for the day Ahead market were developed in line with the regulatory approval in place at that point of time. Going forward, PXIL would be looking to lead the way in introduction of innovation in matching logics as well as congestion management principles. In keeping with PXIL's philosophy of developing locally relevant practices, the thought process supporting the logics for the same will be shaped via a widespread consultative process in the country. It is our belief that by engaging the contributing, experienced minds in the country, we would be able to create and deliver for the Indian Power markets solutions which are not only world class but are also more ideally suited for our country.

PXIL also believes that in a country like India, in order to foster wide based participation on the exchange, it is important to have low entry barriers. PXIL therefore, has willingly taken upon itself to enter the market with a low cost entry model which can be shaped in line with regulatory and policy developments in the country. The trading Platform developed by PXIL enables nationwide access over the internet in an easy but completely secure way. In addition, other innovations include a system which is capable of being split into 'N' number of markets if need be, introduction of 0.1 MW unit bid as also possibility of trading in 15 min. time blocks. As we go forward, many more such facilities will be offered to participants, which will be unique to India and often not available in trading systems developed elsewhere in the world. It is PXIL's good fortune that it has inherited this approach from its key promoters who have performed a similar journey in their given domains. It is also to PXIL's advantage that it is able to build its business model based upon the extremely innovative and world class skill sets that are today available in the country's software sector.

PXIL has seen a consistent increase in support and commitment from the key stakeholders of the power sector. This has been reflected not just through a continued increase in the number of members participating at the exchange directly or through its trading members, but also by the diversity of the participants. The types of participants on PXIL includes Captive Power Plants, Independent Power Producers, Government Utilities, Private butors, Financial Institutions active in power sector as well as the power trading community. distributors, Financial Institutions active in power sector as well as the power trading community.

A narrative on our first one year will not be complete without a mention of yet another innovation brought to the market by PXIL jointly with Power Finance Corporation. The PCM facility on

PXIL trading platform enables utilities to not only avail of liquidity management facility, but also avail of significant quantum of credit facility online at the time of bid. We believe this facility will go a long way in lowering transaction costs for participants, while at the same time increasing the risk management support available to the trade. As longer tenor products get traded on Power exchanges, the availability of the PCM facility is a great source of comfort while introducing newer products.

PXIL has also taken several steps to educate and train participants in this fledgling Indian power market and has thus organised and supported various knowledge sharing platforms through conferences, training and workshops. At the end of one year, when we look back at all the milestones covered, the progress made and the support provided, we feel inspired to continue relentlessly on the path of developing the power market that this country deserves.

In keeping with our commitment to always be guided by well informed intellectual view points from within the power sector in the country, in this anniversary celebration issue of our monthly news bulletin, you would find intellectual contributions from key stakeholders of the Indian Power market who have been kind enough to outline the power market that they foresee in the days to come. We would like to thank them and also our dear readers for being with us through this interesting journey and we hope to traverse together through many more such milestones in the years to come.

Warm Regards,

Rupa Devi Singh
MD & CEO



The Importance of Power Market

With the unscheduled interchange of electricity, power trading began in India. The UI mechanism stipulated a price-frequency relationship. Given the installed capacities and network configuration of a power system, frequency can be related to the demand-supply gap whereas price-frequency can be interpreted as a price to excess supply relationship. This has provided the much needed rationality in the use of power across different utilities. It has also enabled utilities suffering shortages to alleviate the severity of shortage.

A formal power exchange, where parties can trade a day, weeks or months ahead can make the Indian power system even more rational. A longer tenure exchange market is expected to help iron-out shortages across the country. Further, it is anticipated to facilitate the construction of power plants of the right size at appropriate locations as generators can reduce the uncertainty of demand. And of course, it all culminates in the reduction of the cost of power to the end-user.

An exchange with a number of players has many advantages over bilateral trading. It leads to a more efficient price

discovery as anonymity reduces the possibilities of exploiting the opponent's compulsions. In a bilateral trade, parties are never sure if they could have done better. This sense of not getting a fair deal may be playing a role in India's negotiations with its smaller neighbours for joint hydro-electric projects. There is a possibility that these relatively smaller neighbours are insecure about receiving a right price for electricity. With a formal power exchange in place, India can offer them the benefits of selling power through a power exchange. Since an exchange reveals an optimal price in the competitive market, they can be sure of getting the right price even on entering into a long-term power purchase agreement.

A well functioning power exchange can thus act as a catalyst for signing of joint projects with our neighbouring countries, augment power supply and help us meet power demand efficiently.

Warm Regards,

Dr. Kirit S. Parikh,
Economist & Chairman (Governing Council), Integrated Research and Action for Development

Development of Power Market in India



Electricity Act 2003, Section 66, mandates that the Appropriate Commission shall endeavor to promote the development of a market (including trading) in power. This is echoed in the National Electricity Policy (Section 5.7.1). In line with the mandate given, policy initiatives were taken by the Government of India to promote and catalyze the reform process, restructuring of the Power Sector, introduction of competition with the objective of bringing about efficiency and investment in the Sector. The Central Electricity Regulatory Commission (CERC) has provided the necessary framework for the development and operation of the Power Market in India.

Short term Open Access in Inter-State Transmission has been implemented in the country paving way for the facilitation of the Bilateral and Collective Transactions through Power Exchanges. A variety of products have been made available to the consumers in the Bilateral Market namely, Advance, First Come First Serve, Day Ahead and Contingency. There are 44 licensed traders in the country and Short Term Bilateral transactions can be carried out through licensed traders or through Power Exchanges or directly between the buyer and the sellers.

Power Exchanges in India are a progressive step. We have opted for

National level Exchanges which by design are a neutral, transparent and anonymous platform for trading in Electricity providing pan-India access. Participation in the Power Exchange is purely voluntary, double sided bidding, providing opportunity for diligent players and offering more freedom and choice to the market participants. Power Exchanges provide for Social Welfare Maximization thereby allowing economy, bringing about efficiency and benefiting the end consumer. Detailed rules and procedures have been specified by the System Operator for Power Exchange transactions. The interfacing of Power Exchanges with the System Operator is a home grown solution with minimal expenditure and has been smooth without any major issues. An additional avenue is now available for sale of the intermittent surplus capacity available with the industry, captive and merchant generation, thereby facilitating optimal utilization of existing resources. Renewable energy sources are being harnessed and Power Exchange provides a platform for trading of renewable energy certificates in the future.

Price discovery in Power Exchanges provides a benchmark for the market thereby giving an investment signal for both generation and transmission. Power Exchanges provide risk mitigation, financial discipline,

payment security and comfort to the entrepreneurs besides building the confidence of the stake holders.

Worldwide, there is only one Power Exchange in a single physical delivery market. In India, we have consciously opted for Multiple Power Exchanges. This has resulted in competition amongst the Power Exchanges and a system of automatic checks and balances. Presently, there are two Power Exchanges operating in the country and a third has been granted in-principle approval.

Congestion is faced in all walks of life and congestion in transmission is a hard fact of life too. Transmission congestion in a high growth economy like India arises primarily due to mismatch between the commissioning of generation and transmission facilities, delay in commissioning of generation at the right location, skewed load growth due to socio-economic-political reasons, lumpiness of capacity additions, last mile problems. The word 'Congestion' normally has a negative connotation. However, mild congestion indicates optimal levels of investment and should be considered a positive signal. The very presence of congestion indicates growth, need for planning and further investment. Congestion management in the Power Exchanges is through an implicit auction mechanism such as 'Market Splitting' / 'Market

Coupling'. Sharing of available margins between the Power Exchanges is done according to the directions of the CERC and further work is on for optimization.

CERC has provided a number of Regulations for the Power Market operation. Recently, Regulations have been framed on Long Term Access and Medium Term Open Access. Moreover, the draft Power Market Regulations has also been floated for the comments of the stakeholders. Transmission Pricing is a vital issue and a methodology close to the point-of-connection tariff has been adopted for Power Exchange implementation in the country. CERC has initiated a review of the sharing of transmission charges methodology. An independent group of experts has been constituted for Market Monitoring and this group regularly publishes its report, which is available in the public domain on the CERC website.

The experience so far has been very encouraging in terms of the increasing volumes and participation. In the last year, many new and innovative products such as Term Ahead Contracts have been introduced at the instance of the Power Exchanges and stakeholders. The volume in the Short Term Open Access market is about 4-5% of the total energy generated. There are nearly 100 market participants and as high as 1700 MW and 32 MUs have been cleared in the Power Exchange. The prices in the

Power Exchange have seen seasonal volatility and CERC has introduced price caps for a limited period of 45 days for cooling of the market.

The 'Power Market' design is based on the four pillars of 'Scheduling and Despatch', 'Congestion Management', 'Imbalances' and 'Ancillary Services'. In India, the first three have been introduced and work is on for the introduction of the Ancillary Services. Power Market design is a complex subject involving multiple Regulatory jurisdictions and a variety of stakeholders. A very cautious approach is required particularly for a fast developing Power Sector like that of India. Issues would become all the more involved and complex as the market matures and financial products such derivatives, etc. are introduced. We are still on the learning curve aspiring for further growth and maturity.

Warm Regards,

Shri. G. B. Pradhan, IAS

Additional Secretary, Ministry of Power,
Government of India

A Peep into the Future Power Market of India



All across the world in the last two decades energy markets have the deregulated, unbundled and the role of private players has enhanced. This structural change has led to a creation of a market internally in each country and also a global energy market. Energy markets internationally are very large. Come to think of it, every human being has, in some form, exposure to energy markets! Mostly it is in the form of energy usage as electricity or heating or vehicular movement.

India's energy appetite is increasing at a rapid pace. This is primarily to cater our long term economic growth and provide energy to our fellow citizens for their well being. As per Planning Commission estimates, to maintain a GDP growth of 8- 9% over the next two decades, India has to triple its primary energy supply and increase electricity generation by four times.

The energy sector is capital intensive and the power sector is no exception. Capital is sourced largely through debt and partly through equity. The fact that a large amount of capital is involved makes the energy sector and the financial sector closely coupled to one another. Bankers and project financiers have brought significant innovation in structuring deals and lending to power projects to handle risks such as, a large amount of capital, long gestation periods of projects, prolonged payback periods and volatility in energy prices.

In the present scenario of shortages, a moot question that arises is whether Power Exchanges will grow, as the volume of electricity available, after taking in allocated power, long term commitments, portions handled by traders etc. is bound to be minimum. However, one has to be optimistic

about the future scenario. The way there is renewed interest in the power sector by investors, it can be expected that transaction through power exchanges will also grow. While the government announced target capacity addition is about 78000 MW for the XI plan, there are indications that in parallel interest is exhibited to the extent of 60000 MW to 70000 MW of capacity addition by various developers (as of unofficial estimates) may have already approached Power Grid for long term open access. Even if a conservative figure of 40 % success rate is considered still it is a huge addition.

The recent regulation on medium-term open access grid connectivity is a forward looking one. The planning and execution of transmission corridor for thermal projects above 500 MW and hydro projects above 250 MW is entrusted to CTU. This is a big gateway for Merchant Power Plants and is bound to boost capacity addition as well as the flow of electricity.

In years to come it can be expected that convergence of power market and financial markets will happen. Power exchanges will grow as transaction volumes increase and other derivative contracts may be offered subject to the superintendence of regulatory oversight. Banks will transform their role from acting solely as lending institutions to the power companies to also trading in electricity themselves. Investment banks will set up commodity trading desk similar to their international setups in financial centres like New York, London, Singapore and energy trading hubs like Houston and Rotterdam. Large pure play energy trading companies will set shop in India and large Indian energy companies will expand their trading desks.

With the advent of matured traders it can be expected that the complexity and variety of instruments traded will increase manifold. In the physical market there shall exist long term deals to cover, short term deals, day ahead and real time balancing contracts. There would be capacity contracts to cover fixed cost and energy contracts to cover variable fuel cost.

The financial power markets and power derivatives market, which is presently nonexistent, can be expected to develop. The process would start with simple forwards/futures and swaps contracts on electricity, thereafter options, swap options and finally, structured contracts. Paper trades backed by physical assets has been a trend internationally. It is seen investment banks buy physical generation and storage and undertake trades based on these. Such trends would be observed in India as well. Financial engineering and much more sophisticated trading techniques will be used. OTC markets will need credit rating of energy companies to be done prudently especially in context of the setback to the OTC market due to the recent financial crisis. Pricing of structured deals will be a function of their credit rating of the companies.

Along with structuring, sophisticated risk management and risk analytics will become prevalent. The use of forward price curve and volatility based risk analysis will become common practice. Derivative contracts to hedge price risk will be a part of any corporate's risk management policy.

However, for long-term sustenance and growth, both, physical and financial power markets need to remain closely coupled to one another. The power and

commodity regulators will need to ensure this as the ultimate objective of the market's most optimal allocation of resources in an economy.

It can be expected that liquidity will improve in day ahead and short term markets upto one to two years. This will lead to creation of benchmark electricity price and electricity indices. Energy based commodity funds will emerge and will become a portfolio diversification instrument for investments. Increased liquidity itself will act as a big risk mitigation mechanism in a market especially for merchant power plants. Liquid long dated markets have been a challenge everywhere around the world.

The recent regulation on renewable energy by the central commission is a well thought out one and it can be expected that players will make best use of the provision of the regulation for increased participation in the renewable energy sector. It can be expected that solar thermal will get a major boost and will (rather should) meet a major part of energy requirement in the next 30-40 years. Through sustained R&D, the cost of such technology can also be reduced. This is essential to mitigate the effects of climate change and any subsidy or support to such initiatives should be viewed as a subsidy to the whole mankind rather than to these players.

On the technical system operation and management side more renewable wind power supply will come on stream and will be integrated with the main grid. The challenge to maintain grid security and reliability along with optimising utilisation of wind power considering the intermittent nature of wind power will need to be handled through improvement in technology.

From the environmental point of view, energy efficiency initiatives will help reduce base load demand and demand response programmes will help reduce peak loads.

It will be fair to assume that the complete South Asia Region will get integrated as an energy market. Cross border electricity transactions between hydro energy surplus region in the Himalayan belt to high consumption load centres and energy deficit regions in India, Pakistan and Sri Lanka will become pervasive. There are projects already completed between Bhutan and India for power transfer, projects are underway to connect India and Sri Lanka for power transfer. Many more such initiatives can be expected.

In commodities related to power it can be expected that natural gas shall play an important role in shaping the energy future of India. The development of the national gas pipeline grid is underway. Natural Gas shall be used both for electricity generation especially as peak load plants and as piped gas in homes across the length and breadth of the country.

It can be expected that over the years there will be convergence in trading oil, gas, coal, power, environmental markets leading to a creation of an integrated "energy market" in India.

Last but not the least my congratulations to PXIL for stepping into this envisaged future!

Warm Regards,

Shri. R. Krishnamoorthy

Member (Finance),
Central Electricity Regulatory Commission

Power Market



At the outset let me congratulate PXIL for one year of successful operation and evolving a stable price settling mechanism through indigenous and in house efforts.

Over the last one and half years power exchanges in India have played crucial role, by establishing an organised day ahead market. This has provided a new opportunity for suppliers to optimise their asset utilisation and helped distribution utilities to partly meet their unforecastable demand through a market based mechanism. Electronic price dissemination has helped reduce information asymmetry between players of different size, one of the key ingredients for a well functioning competitive market.

It may be worthwhile mentioning that although exchange based trades are presently only 2-3 % of the total generation, in terms of absolute numbers the size is not insignificant as the overall market size itself is large. Exchanges have taken another step towards innovation by introducing term ahead contracts. This is a good beginning.

The Indian power sector is at an important crossroad. Significant power generation capacity additions are expected in the next 2- 3 years. The present installed capacity in the country is exceeding 1,50,000 MW and the Country's peak demand touches about 115,000 MW. We are able to generate only about 100,000 MW power and thus facing a shortage of about 15,000 MW (14%). We are short by about 12% as far as the energy is concerned. The shortages vary from State to State. As per the information available from CEA the supply position at a glance State-wise is given in the statement enclosed.

The government is planning for a huge capacity addition programme in the 11th Plan. The target capacity addition

programme being about 78,700 MW, out of which 18,000 MW have already been commissioned and about 57,000 MW capacity is under construction. Further, 46,000 MW capacity is also under execution for benefits in the 12th Plan against an expected capacity addition programme of about 100,000 MW. Additionally about 12000 MW capacity in the captive power sector and an equal amount in the renewable source of energy is also under the target of the government. It can thus be seen that power sector has become very vibrant during the last about 3-5 years.

The very fact that huge power generating capacity is under construction, is an indication that the power sector has become attractive for investments and financing of projects is not a constraint anymore. The challenge has actually shifted to environmental clearance, fuel availability and linkage, equipment manufacturing and transmission planning for evacuation of power from the generating stations.

Private sector's contribution in capacity has also been significantly higher which marks a departure from the past. The fuel shortage, the shortage in the equipment manufacturing of the main plant and the balance of plants as well as availability of the trained manpower are going to be the main focus areas in the future time to come. These would need to be addressed and got over through various policy measures as well as incentivising through higher pay packages to the core engineering people so as to retain them in the core engineering sector rather than shifting to the IT, etc. which is more remunerative in nature. Although we have a severe power shortage situation, the two power exchanges, namely, IEX and PXIL are playing an important role in reflecting these shortages through price signals and in evolving mature market mechanisms to settle the price

of electricity in the future. The power market if managed efficiently and in a professional manner in sorting out various issues and putting the power sector on a progressive path in line with the objectives envisaged in the Indian Electricity Act, 2003. The various regulations announced by the Central Electricity Regulatory Commission (CERC) are very timely to support the power sector as a whole including the power markets. CERC has recently taken aggressive initiatives to bring out regulations in regard to the renewable source of energy, the medium and long term open access, and others mainly to overcome the pressure in the international environment/climate change. This would give reducing CO2 foot print in the Indian power sector.

As the Indian market matures, we can expect Over the Counter (OTC) traders to bring more innovative products and execute structured deals for power sector participants. Similarly exchanges would create its space by providing low transaction cost standardised contracts. In times to come, we can expect capacity markets, ancillary services markets, real time balancing markets to develop on the physical side and the derivatives on the financial side.

A competitive market leads to most efficient allocation of resources in an economy. However the market may not always be a self adjusting phenomenon and some participants/stakeholders could exploit the situation and which would give rise to exorbitant price of electricity being traded thus. Accordingly it is prudent that the regulators will have to keep a close watch and intervene appropriately as required.

Warm Regards,

Shri. V. S. Verma
Member,
Central Electricity Regulatory Commission



Development of Power Market through the Exchange Route

The power market in India is developing on the lines of Bilateral, traders and UI, traversing the conventional ways any reforming market has done so far around the globe. The latest addition is the presence and role of the power exchanges. Though they are in their nascent stage right now, they are expected to play a significant role in the years to come. Pace of progress has although been slow. Even though power exchanges have been in operation for more than a year, transactions through them only account for 0.6 per cent of the total power generation. Of the total power transacted in the short-term market, transactions through the exchanges account for a mere 8 per cent.

Since the Power Exchanges are the latest and emerging trends in the power market vis-à-vis the established conventional tools like the traders and bilateral, it is pertinent to assess their role in the 'Development of Power Market' in India. The system of exchanges are a huge success in the Scandinavian Countries, largely due to the power surplus situation there and the markets to a great extent being a buyers' market.

But, in the context of India, the scene is diametrically opposite. Power addition has been woefully short of target but there has been no dearth of power guzzling schemes under the benevolence of the State.

Though the power exchanges provide for a transparent platform for both the buyers and sellers, it is not a popular choice so far apparently for the reason that there is no surplus power available in the market to play. One hardly finds power in excess of 2000 MW in any given day in the market for exchanges.

The recently introduced mechanisms like TAM will hopefully make the exchanges a force to reckon with in the future.

Demand-supply gap and grid congestion are two spoil sports for exchange development. The north-east-west (NEW) grid has still not been connected to the southern region (SR) grid, impeding the seamless flow of power across regions. Also, demand from the northern and western regions is met by the eastern region, leading to a unidirectional flow of power. This congestion will only reduce with time, after the national grid gets fully implemented. Currently, the inter-regional transmission capacity stands at 20,750 MW, and the same will be hopefully raised to 37,150 MW by 2011-2012, leading to easing of the constraints.

The solace is in the upcoming power plants. Currently, power plants sell only their surplus capacity in the short-term market. Over the next 2-3 years, the short-term supply of power is slated to go up, as more merchant power plants are expected to be commissioned. It would be appropriate if a percentage of power is mandatory to be sold through the exchange only. Further, watchdog mechanism should be very stringent since gaming scandal of any kind in exchange operation will severely impede the growth of exchange mechanism. The Exchange Managers and other stakeholders should indeed be very alive to the threat.

Warm Regards,

Shri. Sutirtha Bhattacharya, IAS

Chairman & Managing Director,
Transmission Corporation of
Andhra Pradesh Limited

Development of Power Market - Trading through Power Exchanges



The year 2008 is a historic year for Indian power sector when the country witnessed for the first time commencement of operation of two power exchanges. A few years back even Power Trading was a totally new concept for the Indian power sector. The sector was used to sale and purchase of power on the basis of long term contracts with stakeholders or others. The integrated State Electricity Boards had simple systems of power generating stations supplying power to the grid and distribution wings taking care of supply of electricity to consumers. In the last few years power sector has seen different phases of commercial transformations.

Power Trading is a distinct licensed activity under Electricity Act, 2003. The Act has devolved responsibility on Central Regulator for development of power trading market in competitive and transparent manner. To achieve the goal, the government and regulator have paved the way by introducing supportive policy and regulatory framework which inter alia, include 'Issue of Guidelines for set up of power exchanges; Open Access regulations for inter-state Transmission, Guidelines for Scheduling of transactions on exchanges' etc. This has yielded some results, notwithstanding its slow progress due to various reasons, which could be enumerated as below:

- i) The activities of power sector are now focused facility-wise i.e. Generation, Transmission and Distribution of power. Now generating companies can plan to enhance electricity generation at different points of time during different seasons. Similar is the case with transmission company and distribution company who can plan their capacity addition based on the load and requirement of

power. This has, therefore, served the needs of all - those who can produce and supply and those who need power. This has enabled additional efficiency in the system by way of improved utilization of generation capacities on the one hand and has provided to consumers much needed electricity with its multiplying effect on overall economy.

- ii) For (i) above, the trading of power from generator to distribution company to end consumers gained their positions in the power sector. This led to a price discovery of power in a transparent way.

There are a number of issues, which need to be resolved to further refine the process of trading and facilitate this mechanism to help bring about much needed reform in the sector towards building a sustainable electricity market.

These include:

- a) implementation of regulatory decisions,
- b) better empowerment in terms of technical capability of transmission systems to handle movement of power across the country; and
- c) commercial changes to take care of demand and supply mismatches.

We all are aware that the power exchange trading volume, at present, is merely 3% approx. of the total electricity generated. In such a situation for bilateral transactions the prices arrived at may obviously not be the real price discovery of power in view of the large mismatches between demand and supply (where peak shortages have increased to 11%-13%).

The above is applicable to trade through power exchanges also.

Transactions through Power Exchange at present, is a sub-set of overall sale/purchase transactions through trading. However, it has better capability since this would be propelled by latest hardware and software to handle day ahead and term ahead demand and supply. It could capture, in a more sensitive way, these transactions which normal trading may be unable to handle.

The two power exchanges i.e. IEX and PXIL are promoted by companies who have experience in development of exchanges. Further the leaders from power sector like PFC, REC, IDFC, REL, TPC, Lanco, Adani, GUVNL etc. are also among the list of equity stakeholder in these two exchanges. Beside the response from participants in these exchanges is encouraging and leaders from different dimensions of the sector have already registered with the exchanges and trading power.

In our opinion, with the power exchanges in existence, the power sector shall be benefited in many ways which, some of them can be summarised as under:

- i) Attracting capacity addition by providing readymade market to interested parties.
- ii) Better capacity utilization.
- iii) Ensuring payment security.
- iv) Transparent price discovery.
- v) Saving in cost to consumers by reduced transaction costs, by providing a common platform to buyers and sellers.
- vi) Leading to more economic grid operation.
- vii) Providing long-term and short-term price signals in the market which cannot be seen in the current bilateral markets.
- Viii) Maximum utilization of available existing capacities.

With the introduction of term-ahead products by both the exchanges we expect that the market shall mature further and shall send price signal to other short term bilateral contracts.

From the past performance we have observed that the pie of trading through power exchanges have grown, through not in a desired pace. The main hindrances, in our opinion are 'transmission constraints', 'open access issue', 'lack of awareness among the middle management staff of the utilities about the working of power exchanges' and at last but not the least, 'lack of liquidity in the hand of utilities'. For providing adequate liquidity to utilities, PFC has taken a lead and is providing credit upto Rs. 50 crore per utility for purchase of power through Power Exchange India Ltd. (PXIL), at a competitive interest rate.

The power exchange would go a long way in maturing the Indian power trading market and would assist in bringing in the required depth, transparency and structure to the market. The emerging scenario is more competitive where we are moving from the present electricity market of long-term power purchase agreements (PPAs), short-term agreements, bilateral markets and UI to one which encompasses all these along with a common electricity marketplace for standard contracts with a nationwide reach, assuring a better price, payment security and transparency.

Warm Regards,

Shri. Satnam Singh
Chairman & Managing Director,
Power Finance Corporation

Power Market Development



Unorganised electricity markets have been in vogue since long. Utilities have been selling and purchasing electricity through bilateral as well as banking arrangements. The Electricity Act 2003 introduced the concept of trading in electricity in India. This Act envisages the development of power markets in accordance with the National Electricity Policy under the regulatory umbrella.

Electricity traders have made a significant contribution in developing electricity markets in the last six years. The power exchanges have further transformed our electricity markets in last one and half years. The power exchanges not only have provided a transparent market platform with standard products, these institutions has also addressed the concerns regarding payment security, and have also significantly reduced the search and information costs. Fortunately, we have two power exchanges which assure us of competition even in this segment of market. The launch of intraday and contingency electricity contracts on power exchanges has opened a new chapter in the development of electricity market which would greatly help the utilities in demand management. This should also reduce the dependence of utilities on UI as a source of power procurement. Overdependence on UI had adversely affected the new investments.

Development of power markets in India goes much beyond the trading licensees and power exchanges. We have recently seen the successful bidding of four ultra mega power projects and many more procurements through tariff based bidding. We can say with satisfaction that India has developed competitive markets for

long term power procurement also. The tariff discovered through competitive bidding, particularly of UMPPs, demonstrate that competitive markets would secure benefits to the consumers. In future, there is also a possibility of developing markets for ancillary services.

Development of competitive markets should reduce the need for regulation. But that would happen only when we have overcome the electricity shortages and the industry structure is conducive to fair competition. In the present scenario of shortages, Regulatory Commissions have a challenging role of developing power markets while at the same time taking care of market imperfections so that consumer interests are not compromised.

One important aspect regarding the development of power markets has not received due attention i.e. a rational transmission pricing framework is a must for ensuring level playing field for different players in the electricity markets. The present transmission system of postage stamp leads to pan-caking in which the consumers of importing region are penalized and the consumers of exporting region derive undue benefit. This system needs to be changed immediately. CERC has initiated the debate on this issue. I hope that the stakeholders would recognize the importance of introducing a rational transmission pricing framework at the earliest.

Warm Regards,

Shri. Alok Kumar, IAS

Secretary,
Central Electricity Regulatory Commission



Regulatory and Design Issues in Moving towards Markets

India is one country that is trying to craft a market in power on a cost plus (norms based) regime of tariff determination. This is problematic and instead of having either markets or vertically integrated monopolies with their own logic of efficiency and social optimality we would have a much distorted system where the market instead of creating a process of convergence of average traded prices (and hence costs) to what is the least cost would keep monopolies alive and waste to continue. The following points would be important and needs to be addressed as we move towards markets:

The very short term market cannot be the availability based tariffs (ABT) with its fixed prices that vary over frequencies. Continuance with the ABT would mean that allow what should have been a system (hygiene) factor to vary with the supply demand conditions. On these criteria alone we should have junked the ABT and moved to markets in the correct sense of using a price to bring about the equality between supply and demand.

It is important that not only bids (ultimately influenced by the marginal cost) for supply go towards to determination of prices, but the demand side should also bid in. This is important since when starting from a position of demand cut off being routine (supply interruptions are treated in a cavalier manner by all discoms except those in Ahmedabad, Mumbai and Calcutta) demand that is today administratively cut off would have to be "cut out" due to price, giving to prices therefore the true role of bringing in capacity.

The argument that markets in a world of supply shortages would only expose the consumer to high prices is completely wrong. Two statements can be made here. Much of the shortage is

due to the price based subsidies in agriculture which potentially creates a very large (and wasteful) demand which manifests as shortage. Conceptually at zero prices what else can the demand be? If the change is made to direct subsidies to the farmer all the wasteful consumption and so the "infinite" demand would vanish. This is a point that goes beyond the context of markets. The movement to markets can be on the back of long term contracts that reflect the supply arrangements of discoms as they stand today. Even then if all supply is brought on to the markets the discoms can have a large incentive to schedule and deliver keeping demand in mind. Thus imagine a genco today supplying its power at an achieved load of 85% to a particular discom at a regulated price (based on norms) say at Rs. 2.0 per KWH. A long term contract can be the basis to ensure that at 85% PLF the same number of units as at present are delivered to the discom at an effective price of 2.0. Nevertheless the entire supply can go through the markets since if more than 85% PLF is achieved that go towards additional income of the genco creating strong incentives to trade and behave in a manner as to bring this extra when the prices are high. This arrangement would of course be incompatible with cost plus and cost of supply; that is if the old arrangement is treated as right of the discom to ALL the power the genco can deliver. We need to move to the more market friendly understanding since only then is there meaning to unbundling and creating markets.

What kind of markets? It would be important to have markets for capacity and for energy to both have a higher probability for merit order emerging and for ensuring that there are strong incentives for timely addition of capacities, which would mitigate against alternate high price and low price regimes and make capacity

addition timely rather than bunched. The risks in competition for the market would be much lower then. There are many ways to ensure one of which would be allow bidders of energy to commit 20% in excess of their commercial bid as additional availability ready for the system operator to call upon, and for this additional capacity to be tradable among the participants and at a declared price/ market determined price to the independent system operator.

Similarly given the complex network that the Indian grid is, and capacity constraints, different prices are likely to emerge at different delivery points. These should feed back in the form of information to add transmission capacity and a transmission rights regime may be one way to go forward. The core transmission price needs to reflect distance (and of course volume) since distance is the most important determinant of the incremental cost of transmission lines.

Although not necessary but which can contribute to the vibrancy of the market and the convergence of market prices to true social costs, is the regulatory framework for the wires business of transmission and distribution. These are ideally cast as a price caps indexed to a relevant price indices that are announced for a period at least as long as five years. The reduced uncertainty that these would bring about in the cost of access to the network would allow markets to emerge quickly and for capacity addition to take place in generation, and also for discoms to go out and contract for capacity.

Warm Regards,

Prof. Sebastian Morris
Professor, Indian Institute of Management

GUVNL's Experience on the Development of Power Market in India



Electricity Trading is recognized as a distinct activity under Electricity Act 2003. Concept of power trading though established is ever evolving and taking forms and shapes from time to time. Trading of power earlier done through conventional bilateral agreements and banking arrangements has now been supplemented by the emergence of Power exchanges. In Indian scenario, 95% of base load power requirement is satisfied through Long term Power Purchase Agreement while balancing short term requirement is mitigated through exchange of power from surplus entities to deficit entities via medium of bilateral arrangements, banking, Traders, UI occurrence and now Power Exchanges.

Power Exchanges ushered into power market with dynamism offering regaling features like anonymous bidding, electronic platform, transparency, minimum bid size of 1 MW etc. with fair price discovery mechanism through electronic algorithms. We have experienced conduciveness of Day ahead Market in particular in taking position of buy / sell of power for next day. Platform of Power exchange has tamed domineering buyers / sellers exploiting market hitherto under bilateral arrangements

by providing day to day discovered reference prices for taking informed price decisions. At this juncture, when Power Exchange is almost having 1 year of maturity, we hope that it will offer convergence point for all gallivanting and stranded power players and act as great leveler in optimization of nation's most valuable resource.

Gujarat Urja Vikas Nigam Ltd congratulates PXIL on completion of one year of successful operation and look forward with increased expectation that PXIL will become single point solution in attending the full-business. Back to Back immediate induction of Term Ahead Products tagged with stringent margin requirements and penal provisions has put market participants in quandary. Nevertheless, we hope that by applying cursory due diligence and invoking market participation, PXIL will successfully shatter the clouds of doubts.

Warm Regards,

Shri. S. B. Khyalia

E. D. (Finance), Gujarat Urja Vikas Nigam Limited



Development of Power Market

The electricity sector in India is undergoing fundamental transformation of its institutional structure after the enactment of Electricity Act, 2003. One of the crucial transformations is the creation of Indian Power Market, the objective for creating power market is to unleash market forces to improve efficiencies, stimulate technical innovations and promote investments so as to bring economic benefits for consumers and societies in the long run. Long term PPAs, under which most of the capacities are tied up currently provides power security to buyers and payment security to the suppliers. But in order to cater to the seasonal demand variations, it is necessary for distribution utilities to look for short-term contracts.

After trading was identified as a distinct activity in the Electricity Act 2003 and licensing norms were developed by the CERC, electricity traders actively started intermediating between the buyers and sellers for sale/purchase of power. Although the majority of the power transacted in the country is through long term power purchase agreements and only a small percentage of total power is transacted through short term arrangements but still this small percentage carries a lot of weight in monetary terms in the overall power purchase cost of a utility. Short-term arrangements could be of few months to few hours and open access facilitates short-term contracts by providing the transmission path for power flow.

Development of Power Exchange is part of strategy of the Government strategy to carry on market reforms and build nationwide support of infrastructure support for providing market access. This strategy had also encouraged power companies to come up with more surplus capacities and also drive new investments to meet India's growing power requirements. Power exchanges enabled the DISCOMs to achieve a better balance between demand and generation on a day-ahead basis. This had helped in stabilizing grid frequency and reducing over drawl from the grid.

It has been over a year that the power exchanges have commenced operations. They have been playing a crucial role in helping price discovery of electricity in the day-ahead markets and the prices are gradually getting accepted as a reference price by all power market players. The electronic price dissemination is also empowering buyers and sellers throughout the country to take informed pricing decisions even in the bilateral negotiated markets. It is acting as a great leveler between large and small players and democratizing information for all of them.

Another remarkable development in the power market is the recently launched longer duration power products by the Power Exchanges for the Indian Power Market called as "Term Ahead Products". These 'Weekly', 'Intra-

day' and 'Day-ahead Contingency' products had enabled the market players in the Indian Power Market to buy and sell electricity up to a month in advance and on intra-day basis as well. This is expected to help the power sector players in taking decision with a more organized and planned view of their portfolio position and pricing. These products would also greatly facilitate the power procurement process of the utilities and would be operated through the bilateral open access system. Power exchange would manage the counter party risks on both sides of the trade thereby mitigating the credit risk.

Although Indian Power Market with support of government, regulators and other stakeholders is developing in the right direction but impediments like inadequate supply, lack of adequate transmission capacity and improper congestion management are still acting as hurdles in way of smoother power market development.

Warm Regards,

Shri. Sunil Wadhwa

CEO & ED, North Delhi Power Limited

Transmission pricing for Short Term Trading



Introduction

Transmission of power is a capital intensive activity and its pricing is vital for operation of power sector with commercial approach. Integrated system operation and flow of power by displacement makes the transmission pricing a complex problem that may have no straight answer and any system of transmission pricing would have its own strength and weakness.

Nature of the transmission service required e.g. for firm power or infirm power; long-term requirement that needs investment or short-term requirement that could be serviced out of incidentally available surplus in the existing transmission system etc. are other important factors of transmission pricing. This paper addresses the issues concerning transmission pricing for short-term power transactions in the Indian power sector with probable solutions that may fit best therein.

Nature of Short-Term Transactions

Nature of short term transactions visible in the Indian power market are as under:

- i) Short Term allocation of the share from Central Generating Stations to state distribution licensees
- ii) Bilateral transactions amongst State Power Utilities - directly or through traders.
- iii) Sale of surplus power by distribution licensees
- iv) Sale of surplus power by Captive Power Plants
- v) Sale of power by IPPs/Co-Gen Power Plants
- vi) Sale of power from the renewable sources
- vii) Purchase/ Sale of power through exchange
- viii) Unscheduled Interchange (UI)

Principles of Transmission Pricing

In the matter of the principles of transmission pricing, several

experts/studies have highlighted that transmission pricing is a complex issue. Amongst other implications of tariff design, effective administration of transmission tariff is an issue in itself and it should be practically and politically implementable. Following 6 principles of transmission pricing were stated in a presentation (1):

- i) Promote the efficient day-to-day operation of the bulk power market
- ii) Signal locational advantages for investment in generation and demand
- iii) Signal the need for investment in the transmission system
- iv) Compensate the owners of the existing transmission assets
- v) Be simple and transparent
- vi) Be politically implementable

Over and above these six principles, most important is the seventh principle that no solution can satisfy all six principles. Thus, the transmission pricing mechanism needs to satisfy them in the best possible manner with due consideration to the circumstances prevailing in the country and implementability of the mechanism. First two principles are more important from the consideration of achieving economy in the power system on the overall basis and next two principles signal towards fair return to the investors.

Similar concepts were highlighted by a study constituted by the Government of India (2).

Use of Transmission System for Short-Term Transactions

Transmission system is built by the transmission licensees for long term transactions. As per the Act (3), short term transactions could take place for a period of not exceeding one year. Taking into account the gestation period of transmission system, short

term transactions would take place by use of the existing transmission system to the extent of incidental margin available in the system. Since the system is built for long term transactions and for the given purpose, in case of any transmission constraint due to outage of any element of transmission system or any other reason, priority has to be given for transfer of power that the system was originally built for, and short term transactions have to suffer. This element of uncertainty in short term open access also needs due consideration in the transmission pricing for short term transactions which is incidental use of the existing system without any extra input cost from the transmission licensees and any income generated through short term transactions is an extra income over and above the admissible returns as per relevant Regulations.

Revenue Requirement of Transmission Licensee

As per the existing practice in India, there is no merchant transmission system. All the transmission systems have been built and owned by transmission licensees (except some lines owned by the generating companies and the systems with State Electricity Boards) with the capacity allocated to long term users, mainly the distribution licensees. The compensation payable to the transmission licensee is determined by the Appropriate Commission as per relevant Regulations to ensure the reasonable and permissible return to the investor. All the charges are borne by the specific users to whom the capacity has been allocated for long term. Therefore, long term user of the system becomes the virtual owner of the transmission system for the period of agreement (4).

Transmission of short term power through open access does not cause any extra cost to the transmission licensee. Therefore, application of transmission charges on short term transactions and sharing of the same by the transmission licensee/long term allottees of the system need careful consideration that may not result in undue extra return to the transmission and burden some other user at the cost of the consumers.

Transmission Pricing for Short-Term Transactions

Even though short-term transactions in some form have been taking place for quite long, Power Trading Corporation of India (PTC) started it in the structured form in the year 2001. In the initial years, transactions were limited amongst SEBs/SPUs and Central / State Generating Companies through traders. To start with, it was considered that the power flows by displacement. SEBs were having allocation of substantial power from the CGS and paying for the transmission charges for their share of power. Sale of power by the SEBs was considered to be diversion of power from their share in CGS and no transmission charges/losses for use of ISTS of that region were levied on short term sale of power by them. If the purchaser was located in any other region, he was required to bear the transmission charges and losses of that region. In any case, total monthly charges of POWERGRID were shared by the long/short-term customers combined together and there was no extra income for the transmission licensee.

CERC issued Open Access in inter-State Transmission Regulations, 2004 on 30.01.2004 and issued further amendments/Regulations on the subject from time to time. Highlights of these Regulations are as under:

Regulation Dated 30.01.2004 - Transmission charges applicable @ 25% of the average transmission charges applicable to long-term customers during the previous year for the regional ISTS as well as inter-regional links (5).

Amendment Dated 21.02.2005 - Other things remaining the same, charges for use of inter-regional links were increased to 50% of the average charges applicable during the previous year (6).

Regulation Dated 25.01.2008 - Transmission charges applicable for use of a regional ISTS were fixed at Rs. 30 per MWh (say 3 paise per kWh) and charges for use of inter-regional link were done away with (7). In respect of collective transactions (transaction through exchange), the above charges are payable separately by the seller and the buyer

Amendment Dated 20.05.2009 - Transmission charges applicable for the use of regional ISTS were increased to Rs. 80 per MWh (say 8 paise per kWh) (8). For the collective transactions, the charges were increased to Rs 100 per MWh (say 10 paise per kWh)

In the Discussion Paper dated 13.2.2007 (9), CERC proposed to reduce the transmission charges applicable to short term transactions to zero and sufficient grounds for the same were recorded in the paper.

Short-Term Transactions by State Distribution Licensees

For all short term transactions by the distribution licensees, whether purchase or sale of power, it will have to make use of the state transmission system. 100% ARR of the STU is met by the distribution licensees within the state through the transmission tariff applicable for long term transactions.

As detailed in the foregoing paragraph, they become the virtual owner of the transmission system. In the event that the distribution licensees within the state make incidental use of the STU System for any short term purchase/sale of power, there is no justification for them to pay transmission charges for the STU System. In view of the above no transmission charges for the STU system of the state, irrespective of where the seller /buyer is located should be applicable for any short term purchase/ sale of power by the distribution licensees within the state from any source within the state or outside the state. In any case, if the STU System is used for sale of power by any CPP/ IPP etc. of the state to any agency outside the state, or for purchase of power by a consumer from any source other than the distribution licensees within the state, transmission charges for the STU system could be applicable as directed by the Appropriate Commission.

Applications of Transmission Charges for Short-Term Transactions and Revenue Sharing

In view of the fact that open access for short term transactions is granted only if surplus capacity is available in the existing transmission capacity, it does not cause any extra cost to the transmission licensee, transmission charges applicable for such transactions should be very nominal (say 10 to 15% of the charges applicable for long term transactions). Since the transmission licensee has already recovered full costs from the distribution licensees, all or major part (say 90%) of such collections could be passed on to the long term customers.

Application of transmission charges and priority for incidental use of the surplus capacity available with the transmission systems for short term

transactions should be non-discriminatory, irrespective of the nature of use e.g. bilateral contracts (directly or through trader), purchase /sale through exchange or overdrawal / underdrawal through UI. For the sake of simplicity, for purchase/sale of power through the exchange or overdrawal / underdrawal through UI, total transmission network of India could be treated as a pooled network and each agency (seller as well as buyer) could pay the short term open access charges applicable for one ISTS.

Abbreviations

ARR	Annual Revenue Requirement
Act	The Electricity Act 2003
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Station
GOI	Government of India
IPP	Independent Power Producer
ISTS	Interstate Transmission System
POWERGRID	Powergrid Corporation of India Limited
RLDC	Regional Load Dispatch Center
STU	State Transmission Utility
SEB	State Electricity Board (including State Power Departments)
SPU	State Power Utility
UI	Unscheduled Interchange

References

- 1) Janusz W Bialek, Transmission Pricing and Congestion Management in a Competitive Power Market, International Conference on Power Market Development in India, IIT Kanpur, April 19-21, 2005
- 2) ECC, INC., Study of Bulk Power and Transmission Tariff for Govt. of India and the Asian Development Bank in Cooperation with the World Bank.
- 3) The Electricity Act, 2003
- 4) Karsten Neuhoff, Transmission Rights for the Indian Power Market, International Conference on Power Market Development in India, IIT Kanpur, April 19-21, 2005
- 5) Central Electricity Commission (Open Access in inter-State Transmission) Regulations, 2004
- 6) Central Electricity Regulatory Commission (Open Access in inter-State Transmission) (First Amendment) Regulations, 2005
- 7) Central Electricity Commission (Open Access in inter-State Transmission) Regulations 2008.
- 8) Central Electricity Regulatory Commission (Open Access in inter-State Transmission) (First Amendment) Regulations, 2009
- 9) Central Electricity Regulatory Commission discussion paper entitled "Proposed approach for sharing of charges for and losses in Interstate Transaction System (ISTS)

Warm Regards,

Shri. Lalit Jalan

Chairman, Reliance Infrastructure Limited

Top News

German EEX, grid firms issue more data from Oct 30: October 28, 2009

German energy exchange EEX and the grid transmission arms of four leading utilities are to release wider and more unified production data from October 30 to raise transparency in the market, the bourse said on Wednesday. The move expands on voluntary data sets available from EEX since 2007 and merges these with new mandatory reports which grid operators must send to regulators...

Source: <http://www.reuters.com/article/rbssIndustryMaterialsUtilitiesNews/idUSLS70317220091028>

EEX and Eurex Expand Cooperation to Power Derivatives - Phelix Contracts Also Tradable For Eurex Clients as Of 25 November 2009: October 28, 2009

The European Energy Exchange (EEX) and the international derivatives exchange Eurex are expanding their cooperation. As of 25 November 2009, Eurex customers will also be able to trade and clear EEX power derivatives via their existing Eurex access. The new products in the cooperation comprise Phelix Baseload Futures and Options and Phelix Peakload Futures and Options...

Source: <http://www.mondovisione.com/index.cfm?section=news&action=detail&id=86356>

China sets first transmission fee for direct power sale: October 19, 2009

China has for the first time set power transmission rates on a generator's direct power sale to an end-user in a new pilot scheme, raising the hopes of some industry users for cheaper electricity costs. Beijing announced plans this year to open up to 20 percent of China's power market for direct trading between power generators and power users, but little progress had been made because both sides were hampered by uncertainties including transmission fees...

Source: <http://in.reuters.com/article/oilRpt/idINPEK14647520091019>

Cap on trading margins may be raised 75%: October 15, 2009

In what may provide a fillip to the nascent power trading market in the country, the Central Electricity Regulatory Commission (CERC), India's apex power sector regulator, has proposed raising the cap on power trading margin substantially. A draft notification posted by CERC on its website for public discussion has recommended raising the present cap by 3 paise to 7 paise on sales undertaken at a rate higher than Rs3 per unit of power. Since the average rate at which power is traded at the moment is Rs 4 per unit, the proposed changes will affect most of the transactions...

Source: <http://www.livemint.com/2009/10/15010257/Cap-on-trading-margins-may-be.html?h=B>

Transmission privatisation clause removed from power policy: October 2, 2009

The government on Thursday amended its Mega Power policy that removed the pre-condition for states to privatise their power distribution business for buying power from mega units. Instead, they shall undertake distribution reforms as laid out by the union power ministry, the government said here in an official release after the cabinet meeting. The change in the policy would encourage setting up of mega power plants as well as local production of super critical power equipment...

Source: <http://economictimes.indiatimes.com/news/news-by-industry/energy/power/Transmission-privatisation-clause-removed-from-power-policy/articleshow/5079413.cms>

15% power tariff hike in Uttarakhand: October 27, 2009

Punching a hole in the pockets of consumers, the Uttarakhand Electricity Regulatory Commission (UERC) today fixed power tariffs in the hill state with an average increase of 15 per cent, effective from October 1 this year for a period of six months...

Source: <http://www.business-standard.com/india/news/15-power-tariff-hike-in-ukhand/374382/>

Disclaimer

All information, comments and / or opinions as provided herein are to the best of PXIL's knowledge. However, PXIL does not guarantee the accuracy of information taken from secondary sources. Without prejudice to anyone or anything herein, all articles and information contained herein are the personal opinions and comments of the respective authors. In no event shall PXIL be liable for damages of any kind, direct, incidental or consequential (including without limitations damages for lost profits, business interruption and loss of programmes or information) arising out of the use of or inability to use any information, comments or opinions provided in the PXIL newsletter.

