



As on 01 September 2009, PXIL has received regulatory approval for longer tenure products, through which power can be transacted for up to a month in advance. The development of these products is the result of a widespread consultative exercise, which included almost all the power utilities, regulators, policy makers as well as economists.

The result has been the creation of a product which would change the way that India trades power. The trading engine, matching system, risk management and other related infrastructure for these products have been developed completely in-house by PXIL. Significant innovations introduced by PXIL in trading of these products is enhanced information while transacting these products and most importantly, the flexibility of pricing to various participants unlike the uniform market clearing price adopted in Day Ahead Market.

The introduction of longer tenure products on the transparent platform of PXIL will greatly facilitate the power procurement processes of the utilities. PXIL has always believed in providing innovative and credible solutions to transform the Indian Power Market and launch of these longer tenure products on the PXIL platform is a crucial step towards that direction.

The launch of these products would be on 15 September 2009 in Mumbai, the trading capital of India. I take this opportunity to invite all of you to come and join us at this historic moment in the course of development of Indian Power markets.

Warm Regards,

Rupa Devi Singh
MD & CEO

PXIL & PFC starts PCM Service



In a landmark development, Professional Clearing Member (PCM) arrangement with Power Finance Corporation (PFC) has become operational from last week of August. This arrangement offers clearing services and credit arrangements to members of Power Exchange India Limited at very cost effective rates...

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Trading data for the month of August - 2009

Total Buy Bids (MUs)	199.12
Total Sell Bids (MUs)	188.77
Total Market Cleared Volume (MUs)	70.30
Total Unconstrained Market Cleared Volume (MUs)	104.08
Max MCP (Rs/KWh)	15.00
Min MCP (Rs/KWh)	2.14
Avg. MCP (Rs/KWh)	6.28
Max Volume in a day (MUs)	5.32
Total Market Clearing Volume (MUs till 31 st Aug'09)	378.54

International Peace Day 21st September



International peace day is being celebrated since 1981 towards development of a world of non-violence and ceasefire. It also works as a "reminder of the human cost to war".

Launch of PXIL's Longer Tenure Products

On 15th September, 2009

At

The Auditorium, Exchange Plaza, BKC, Mumbai

Within the pages...

1. **Top news:** India and International
2. **Synopsis:** IT in Power: Selection & Challenges
3. **PXIL News:** Longer Tenure Products, PCM
4. **Knowledge Center:** did you know?

Top News: India

- ❖ **Transmission woes take fuse out of traded power - Continued pressure on volumes could choke the growth of power market, feel experts** August 25, 2009
Inadequate power transmission capacity, one of the worst fears of operators of the Indian power exchanges, has finally come alive. While volumes of electricity traded at the electronic platform have jumped multifold in the past one year...
(source: <http://www.business-standard.com/india/news/transmission-woes-take-fuse-outtraded-power/368013/>)
- ❖ **CERC plans restraining measures for price escalation of electricity in short-term trading** August 31, 2009
The Central Electricity Regulatory Commission (CERC) has released a draft order containing the proposed regulatory measures for restraining escalation of the prices of electricity in short-term sale/trading...
(source: <http://www.cercind.gov.in/2009/August09/Signed-Public-Notice-on-Price-cap-proposal.pdf>)
- ❖ **Direct grid access for small power plants** August 10, 2009
In a bid to provide seamless inter-state connectivity to power projects, the Central Electricity Regulatory Commission has permitted thermal units with 500 mw capacity and hydel units with 250 mw capacity to connect directly to the grid bypassing SLDC...
(source: <http://economictimes.indiatimes.com/News/News-By-Industry/Energy/Power/Direct-grid-access-for-small-power-plants/articleshow/4869670.cms>)
- ❖ **CERC notifies regulations on 'Grant of Connectivity, Long Term Access and Medium-Term Open Access in Interstate Transmission'** August 9, 2009
After detailed consultation with the stakeholders, the Central Electricity Regulatory Commission, CERC has notified the regulations on "Grant of Connectivity, Long Term Access and Medium-Term Open Access in Interstate Transmission"...
(source: www.cercind.gov.in)

Top News: International

- ❖ **Power exchange meet begins in Delhi** August 9, 2009
A delegation of eleven members headed by the Managing Director of Nepal Electricity Authority (NEA) Dr Jivendra Jha left for India on August 9th to attend the much-awaited ninth meeting of Nepal-India Power Exchange Committee (PEC)...
(source: http://www.myrepublica.com/portal/index.php?action=news_details&news_id=8427)
- ❖ **TSOs ready for Czech-Slovak power market coupling** August 18, 2009
Power market coupling between the Czech Republic and Slovakia will begin on 1 September, according to Czech transmission systems operator Ceps and Slovak operator Seps. Daily cross-border capacity auctions on the Czech-Slovak border will end on 31 August and the countries will switch to implicit capacity allocation...
(source: <http://www.argusmedia.com/pages/NewsBody.aspx?frame=yes&id=681407>)
- ❖ **Localized demand sets power market prices in America** August 25, 2009
Markets in the West all moved several dollars higher as loads in the region began to increase on the back of warmer conditions, while increasing spot gas prices added a minor premium to generation costs. Southwestern markets saw the biggest price moves, with Mead and Palo Verde moving \$3 to \$5 higher...
(source: <http://www.snl.com/Interactivex/article.aspx?CdId=A-9970569-8545>)

IT in Power: Selection of Technology & Developmental Challenges

Information Technology (IT) has, from the very early stages contributed to the power sector and influenced its growth. In the very early days, the concept of Power Line Carrier Communication systems (PLCC) mooted long distance, voice communication over hundreds of kilometers. Then came the age of Fiber Optic system, Supervisory Control and Data Acquisition System (SCADA) runs on this technology while allowing processing of data to be transmitted to the remote end on a real time basis. If necessary, it also allows remote control of equipment at the other end. Then came Energy Management Systems (EMS) and its variants using SCADA systems for operators of electric utility grids to monitor, control & optimize the performance of the generation and/or transmission system.

Challenges in selecting right IT application

IT has now become part and parcel of the Power sector and solutions. Hence selection of most suitable and cost effective solution becomes imperative. Selection of Technology is based on both, the Short term and Long term business requirements, with a balanced flavour of ensuring business continuity risks. Some of the factors usually considered are:

System response time is most critical key success factor and is defined as the response provided by any system to its connected users or customers. The acceptable levels are usually less than 1-1.5 second within a local environment or between 2-4 seconds when connected to a remote system.

Ability to develop customised solutions in a time bound & cost effective manner. In a deficit market like India, it is necessary to despatch maximum power and balance the market in an optimised manner. It is therefore necessary that solutions are devised to meet the requirements of the utilities in acceptable time limits and keep the costs under control.

Architecture Design with High availability in a real time environment. It is mandatory to ensure continued service availability at an acceptable performance level. The choice of hardware like: servers and devices should be done with fully redundant, Fault tolerant designs.

Interoperability & Scalability, while the systems are designed to do their primary tasks, they have to interoperate with other adjacent system and networks. A good system design would factor the current usage and future growth, both in terms of users, transactions and location spread.

Multiple level of Authentication & security levels with role-based system access. Usually, a User ID with a password is a common form of authentication. Going beyond the normal levels, would improve security levels. As such, use of additional authentication based on Global IP address locking, Local IP address, MAC address, etc. offer enhanced level of security.

Disaster Recovery (DR) and Business Continuity Planning (BCP), DR is a methodology by which an organisation is able to quickly restart its business operations through use of technology by ensuring sufficient availability of IT infrastructure to maintain business sustainability. Whereas, BCP is a systematic approach to ensure availability of not only IT systems but also people and other related infrastructure in the event of a disaster.

IT investments are large and hence an effective business plan would assist in managing the cost and reduce expenditures. With well defined budgets, it would be possible to forecast regular IT investment while aiming to derive higher benefits. Power Industry works on lots of data from multiple locations. While it is a challenge to obtain all such data, it requires moving towards defining & automating internal processes to reduce cycle-time, strengthen the authentication of users and automate all process to the extents possible. In today's world, information is the key to success and transparency of information is the key for business sustenance.

(Detailed write-up is available at: <http://www.powerexindia.com/download/PXIL-Aug2009-article.pdf>)

NEW products at PXIL: Weeks-ahead Products & Day-Ahead Contingency Products

Power Exchange India Limited has reached another milestone with the grant of approval from the Hon'ble Commission for launch of longer-tenure products. These products would enable the market participants to buy and sell electricity on weeks-ahead basis and contingency basis.

Weeks-Ahead products provide the market participants with opportunity to minimize their electricity portfolio risk by minimizing price and quantity by securing trades on weeks-ahead basis.

Day-Ahead Contingency (DAC) products have been developed in response to the expressed requirements of electricity buyers and sellers to provide an option to trade those bids that could not be matched during Day-Ahead Spot (DAS) market session. The objective of this product is to maximize generation capacity utilization by providing second chance to trade electricity once the DAS market is closed.

The salient features of these products are:

- Designed in-line with the existing bilateral transactions through a nation-wide consultation process
- "Differential Pricing Mechanism" as devised by PXIL provides the members complete flexibility in pricing their power procurement and sales based upon their organization's pricing preferences, rather than being an outcome of uniform price mechanism
- The price movements are unaffected by panicked and high volume buyers and sellers
- Buyers can submit fixed bids and up to four optional bids, thus multiplying chances of getting cleared
- More than one auction session will be held on each trading day thereby increasing chances of dispatch or procurement of power

PXIL & PFC starts PCM Service

In a landmark development, Professional Clearing Member (PCM: concept pioneered by PXIL) arrangement with Power Finance Corporation (PFC) has become operational from last week of August. In this arrangement PFC, in addition to offering clearing services to members of PXIL, would also offers credit arrangement at very cost effective rates. Member's credit limits with PFC can be used to provide margins as per the risk management guidelines of the Exchange and can also be used to pay for the power purchased.

The Week-ahead product being launched by PXIL on 15 Sep 2009, require **both buyers and sellers to place appropriate margins** to ensure the sanctity of the contract. This PCM service provided by PFC is therefore important as it is well suited for meeting the necessary margin requirements for the new products as well. PFC has enhanced the credit limit per member to accommodate the enhanced needs for margin and credit requirements under weekly products.



Did you know?

1. India's energy intensity (energy consumption per unit GDP) is 1.5 times of world average.
2. The National Mission for Enhanced Energy Efficiency aims to create an energy-efficiency market worth Rs. 75,000 Crore in India

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