

WEEKLY REPORTING OF OTC CONTRACTS: MONTHLY ANALYSIS (OCTOBER 2010)

[An analysis of all weekly reports received from licensee-traders for the month of October 2010]

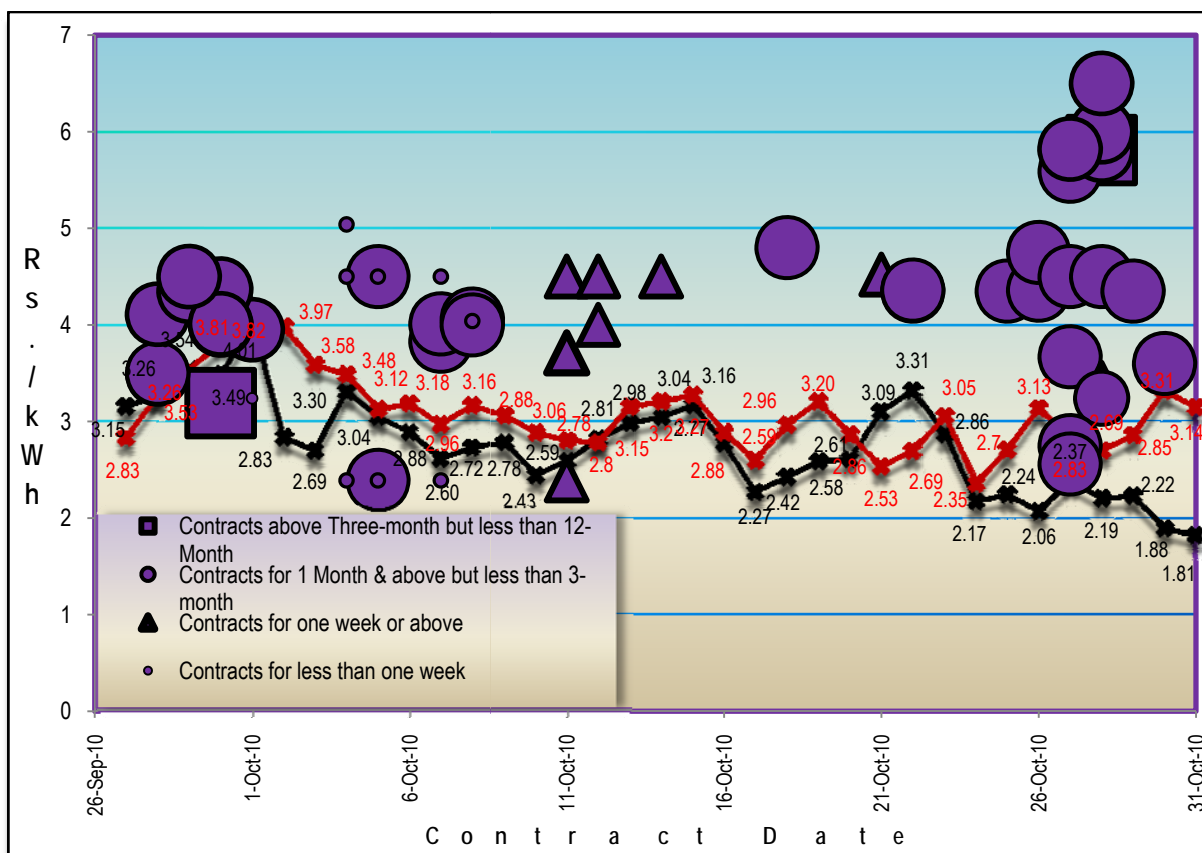
Prepared on 9th November 2010

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Economy & Market Monitoring
Cell, CERC

I. Comparison Of prices of Short Term OTC contracts with Power Exchange Prices (on Contracted Date)

Process of Formulation. The scatter diagram represents the details of OTC contracts undertaken by traders between 27th September to 31st October for short-term (upto three months) transactions of electricity (Annexure I). Each data-point represents contract sale-price on a particular contract date.

Chart 1: Price of Electricity for OTC contracts and Transactions in Power Exchanges



The varied shapes are to depict contracts for different time-span, e.g. the squares are for contracts of more than three months but less than a year, largest circles are for contracts which have been made for one or upto three months ahead, the triangles are to represent contracts made for a week or more but for less than one month and smallest ones (like dots) are for one day or more but less than a week period of contracts. In this diagram, no distinction has been made among the traders. The black and red markers connected with lines show the spot prices at the two power exchanges, viz. the Indian Energy Exchange (IEX) and the Power Exchange of India Ltd. (PXIL) on the respective contract dates.

Weekly reporting of OTC Contracts: Monthly Analysis

The chart shows a comparative analysis of price movement in both the OTC and Power Exchange markets during the period. The following table shows the weighted average sale prices of all the contracts reported on a particular week and total contracted volume for the same. (Weights are being the respective contracted volume).

Table 1: Price and Volume of OTC Contracts

Weeks	Range of Sale Price (Rs./ kWh)		Weighted Average of Sale Price (Rs./ kWh)	Total Volume (MU)
	Max	Min		
27 th September-3 rd October	4.50	3.19	3.63	1156.94
4 th -10 th October	5.04	2.39	3.98	152.88
11 th -17 th October	4.50	2.39	4.13	67.48
18 th -24 th October	4.80	4.35	4.38	165.00
25 th -31 st October	6.50	2.39	2.22	854.52
Total	-			2396.83

Source: Based on Traders' weekly reports

Table 2: Prices on Power Exchanges on OTC Contracts Dates

October 2010																		
Contract Date (2010)	28th Sep	29th Sep	30th Sep	1st Oct	4th Oct	5th Oct	7th Oct	8th Oct	11th Oct	14th Oct	18th Oct	21st Oct	25th Oct	26th Oct	27th Oct	28th Oct	29th Oct	
IEX (Rs. / kWh)	3.26	3.54	3.49	4.01	3.30	3.04	2.60	2.72	2.59	3.04	2.42	3.09	2.24	2.06	2.37	2.19	2.22	
PXIL (Rs. / kWh)	3.26	3.53	3.81	3.82	3.48	3.12	2.96	3.16	2.8	3.2	2.96	2.53	2.7	3.13	2.83	2.69	2.85	

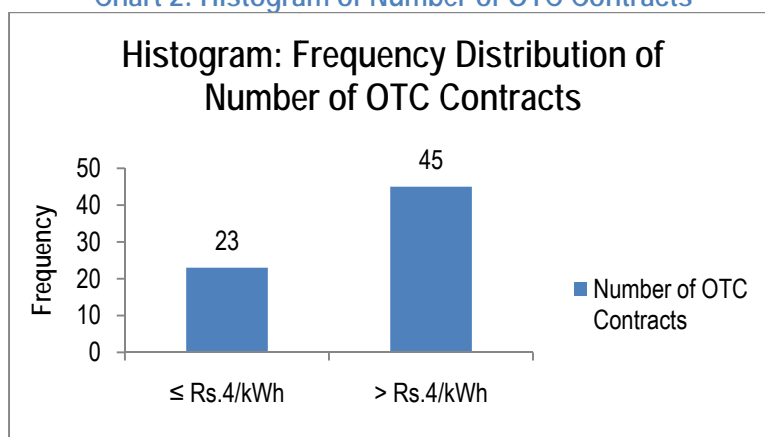
Source: Indian Energy Exchange & Power Exchange of India Ltd. Websites

Observations

1. During the period from 27th September to 31st October, most of the contracts in the OTC market are at higher prices than the prices prevailing in the exchanges. The minimum price in the exchange was Rs. 2.06/kWh (IEX, 26th Oct 2010) while that of in the OTC market was Rs. 2.39/kWh. Maximum price at the exchange reached Rs. 4.01/kWh (IEX, 1st Oct 2010) and in the OTC market it was Rs. 6.50/kWh.

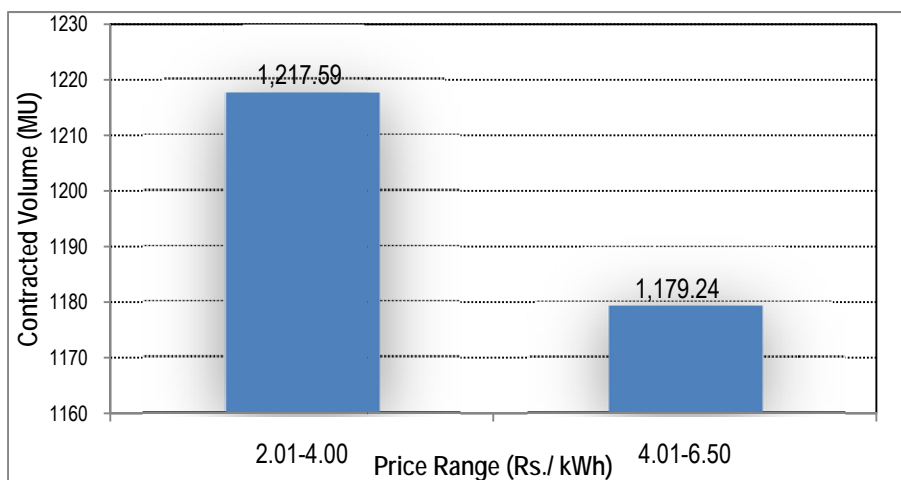
2. In October, OTC contracts mostly are for a month or more and the scheduling of these contracts is generally happening from one or two days to one month after contract date.
3. Two contracts have been done by a trader for eight months (from 1st October 2010 to 31st May 2011) and six months (from 1st October 2010 to 31st March 2011) of power supply.
4. In October, the number of contracts entered above Rs. 4/kWh were 45 * out of total 68 contracts.

Chart 2: Histogram of Number of OTC Contracts



5. In October, the cumulative volume traded above Rs. 4/kWh was 1179.24 MUs which is 49.20% of total OTC contracts for October 2010.

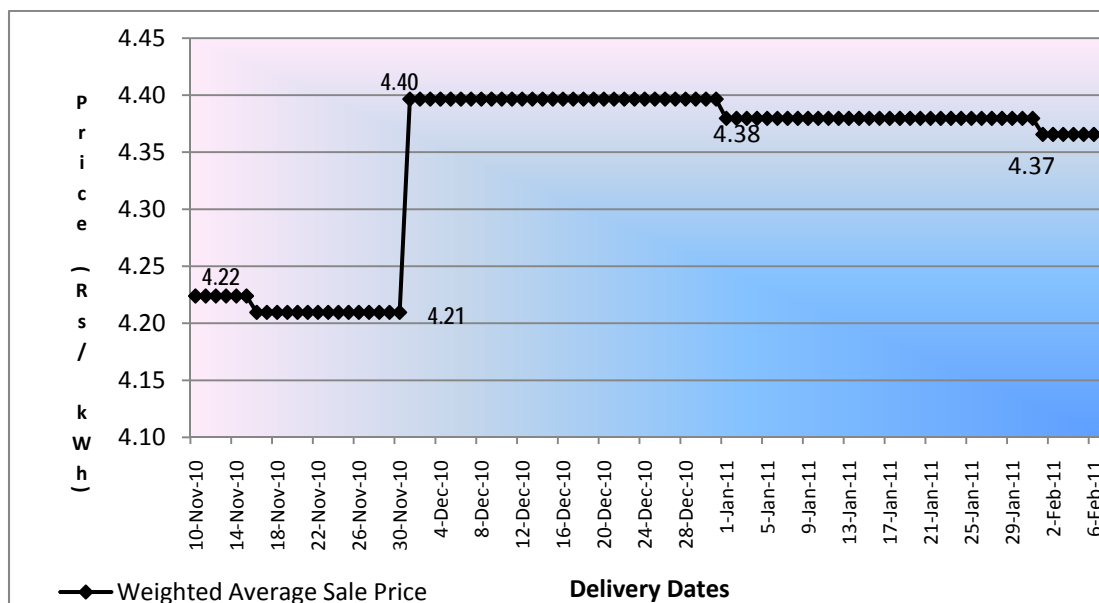
Chart 3: Cumulative Volume Traded below and above Rs. 4/kWh during October 2010, OTC Market



* Excluding swap /banking contracts since they do not have any sale price.

II. Three-Month Forward Curve of Electricity Prices in OTC Market

Chart 4: Forward Curve for OTC Market, November 2010- January 2011



A forward curve reflects expectation of prices for a future period. Accordingly a forward curve has been drawn based on prices of contracts executed for supply of power from 2nd week of November, December 2010, January and 1st week of February 2011.

Process of Formulation

The forward curve has been made based on OTC sale prices reported every week by the traders. For a contract of a full month, the average monthly contract price is considered discretely as the price for each day. Finally, the average daily price for the forward curve is the weighted average daily price for all contracts existing in these days. (Weights being the respective contracted daily volume). It may be noted that the number of contacts for the period November to December is higher (32) vis a vis the number of contracts reported for January 2011- 1st week Feb2011 (13). This has a bearing on the quality of information reflected in different parts of the forward curve.

Observations

1. The forward curve for the next three month period i.e. from 2nd week of November 2010 to 1st week of February 2011 is upward sloping till December end and prices start declining from January to 1st week of February 2011. During the month of November,

the OTC sale price is Rs. 4.22/kWh which decreases marginally to Rs. 4.21/ kWh on 16th November and remains at that level till 30th November. From 1st December 2010, it increases to Rs. 4.40/kWh and remains at this level till December end. Thereafter, the future price starts decreasing in January 2011 to Rs. 4.38/kWh and remains at this level through the month and further decreases to Rs. 4.37/kWh on 1st February 2011.

2. It may be noted that the prices for November – December period in the two forward curves is different. This is due to the fact that the prices for contracts for November – December period executed in September (Rs 4.73/ Kwh) have been higher than contracts for the same period ,November – December, executed in the month of October (Rs 4.23/ Kwh).

Chart 2: Forward Curve in October for OTC Market, November 2010- February 2011

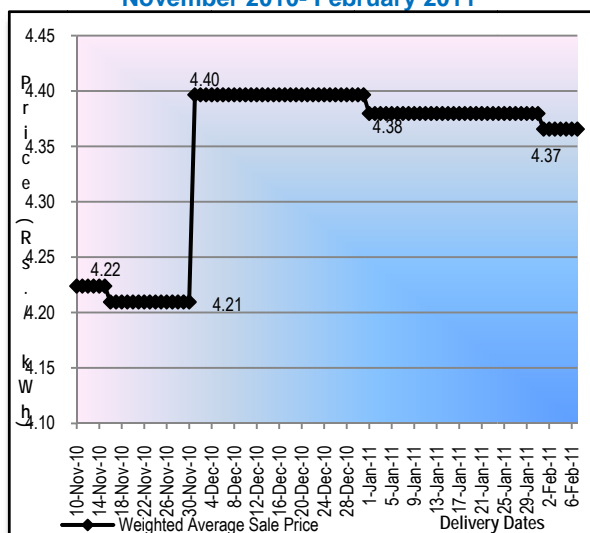
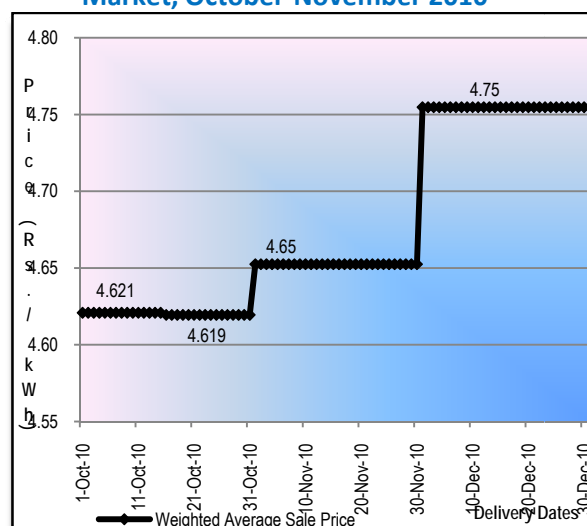


Chart 2.1: Forward Curve in September for OTC Market, October-November 2010

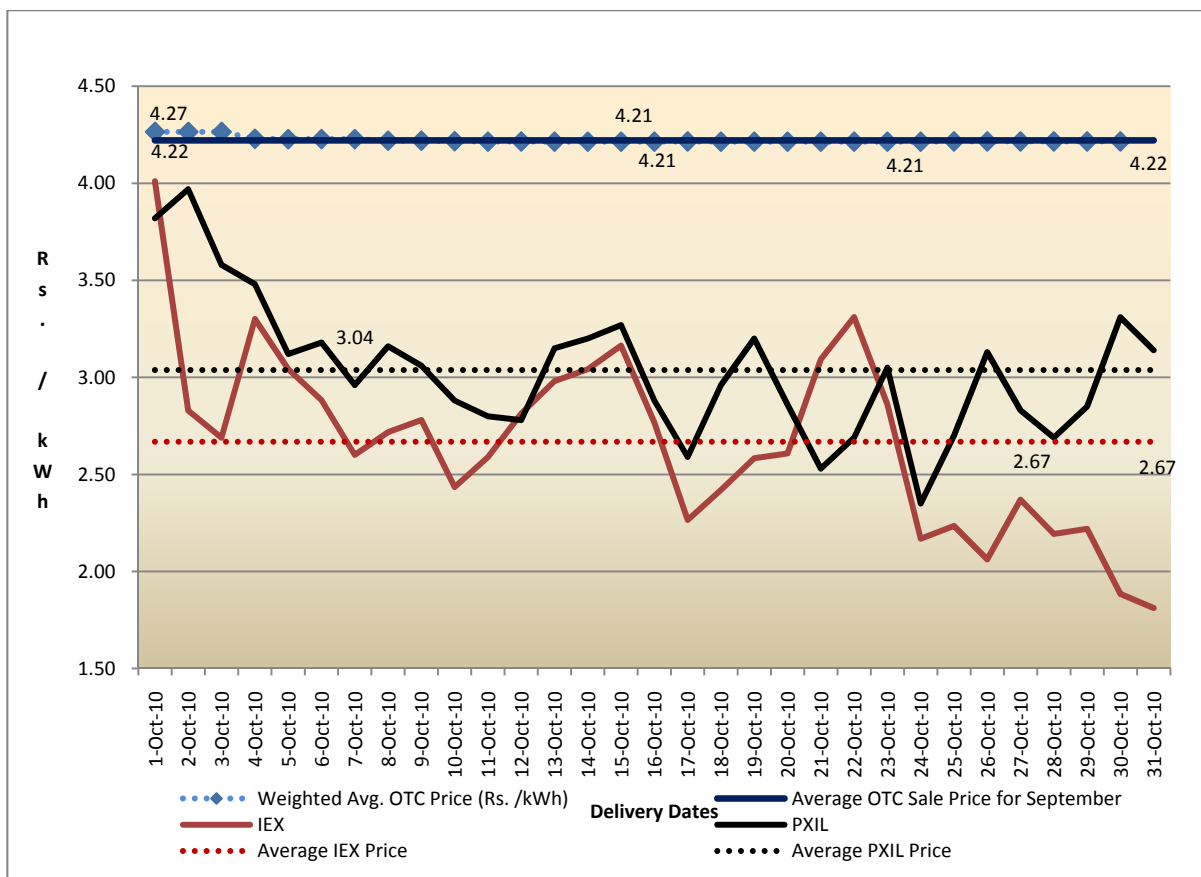


III. Post-facto Comparison of Prices in OTC Contracts and Power Exchanges (on Power Delivery Dates)

✚ Process of Formulation

The post facto graph shows the average OTC price vis-à-vis power exchanges prices for October month’s power deliveries .There is a visible difference in between the two prices and generally OTC prices remained at a level higher than the exchange prices. During the month of October, the average OTC price was at Rs. 4.22/ kWh and the same was at Rs. 3.04/ kWh in IEX and Rs. 2.67/kWh in PXIL.

Chart 5: OTC and Power Exchange Prices during October 2010



Overall Comparative View between September and October 2010

1. Following table shows the number of contracts reported during September and October categorized according to the period of power supply.

Table 3: Number of Contracts Reported in September and October 2010^ψ

	September-10	October-10
One month or above	50	43
One week or above	7	12
Less than a week	6	13
Total	63	68

From the above table it is clear that though the total number of contracts in September and October are approximately equal, the number of contracts undertaken for one month or above is higher in September (50) compared to that

^ψ Including swap/banking contracts between different DISCOMS

of in October (43). The contracts one week or above and less than a week in October are almost double the contracts that of in September.

2. In September, the OTC contract prices were within the range of Rs. 2.07/kWh to Rs. 4.96/kWh, whereas in October the range was quite dispersed from Rs. 2.39/KWh to Rs 6.5/KWh.
3. A comparative table to represent maximum and minimum prices at both the exchanges vis-à-vis OTC contracts prices.

Table 3: Maximum and Minimum Prices-A Comparative View Rs/ kWh (Dates)

	September 2010		October 2010	
	Maximum	Minimum	Maximum	Minimum
IEX	3.54 (29 th)	1.22 (19 th)	4.01(1 st)	2.06(28 th)
PXIL	3.81 (30 th)	2.37 (19 th)	3.82(1 st)	2.53(21 st)
OTC Contracts	4.96 (24 th)	2.07 (16 th)	6.5(28 th)	2.39(4 th)*

*Rs 2.39 kWh for several days (4th, 5th, 7th and 11th Oct)

Overall inferences

1. In general, from the two types of price analysis (Chart 1 & Chart 5), it is evident that the OTC market prices of electricity during the month of October were at a higher level as compared to the prices of power exchanges. The reason for higher OTC prices could be attributed to the inherent nature of the contracts. OTC contracts are for monthly, customized contracts whereas power exchange prices are for spot standardized contracts.
2. There is a change in shape of Forward curve in October vis a vis September. The Forward curve in September is in contango (upward sloping), showing an upward trend in expected future price of electricity, whereas in October the forward curve is upward sloping initially and then declining.

Annexure-I

Table 4: List of Trading-Licensees who have undertaken Contracts in October 2010 *

	Name of Licensee	27 th Sep- 3 rd Oct	4 th -10 th Oct	11 th -17 th Oct	18 th -24 th Oct	25 th -31 st Oct
1	PTC India Ltd.	Y(6)	NIL	Y(1)	NIL	Y(6)
2	Tata Power Trading Company Pvt. Ltd.	Y(2)	NIL	NIL	Y(1)	Y(3)
3	NTPC Vidyut Vyapar Nigam Ltd.	NR	Y(16)	Y (9)	Y (7)	Y(12)
4	RPG Power Trading Company Limited	Y(1)	NIL	NIL	NIL	NIL
5	Lanco Electric Utility Ltd	Y(1)	NIL	NIL	NIL	Y(1)
6	GMR Energy Trading Limited	Y (2)	NIL	NIL	NIL	Y(1)
Total No. of Contracts		12	16	10	8	23
Total for month for all traders						68

Note 1: NR: Not Reported

NIL: No Contracts was made during the week

Y (): Contracts had been struck (Number of Contracts)

*Note 2: This table shows list of traders who have reported & undertaken at least one contracts during the month. There could be some traders who have reported but did not undertake any contracts.