

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

[An analysis of all weekly reports (reporting period 1st Nov-28th Nov) received from licensed-traders for the month of November 2010]

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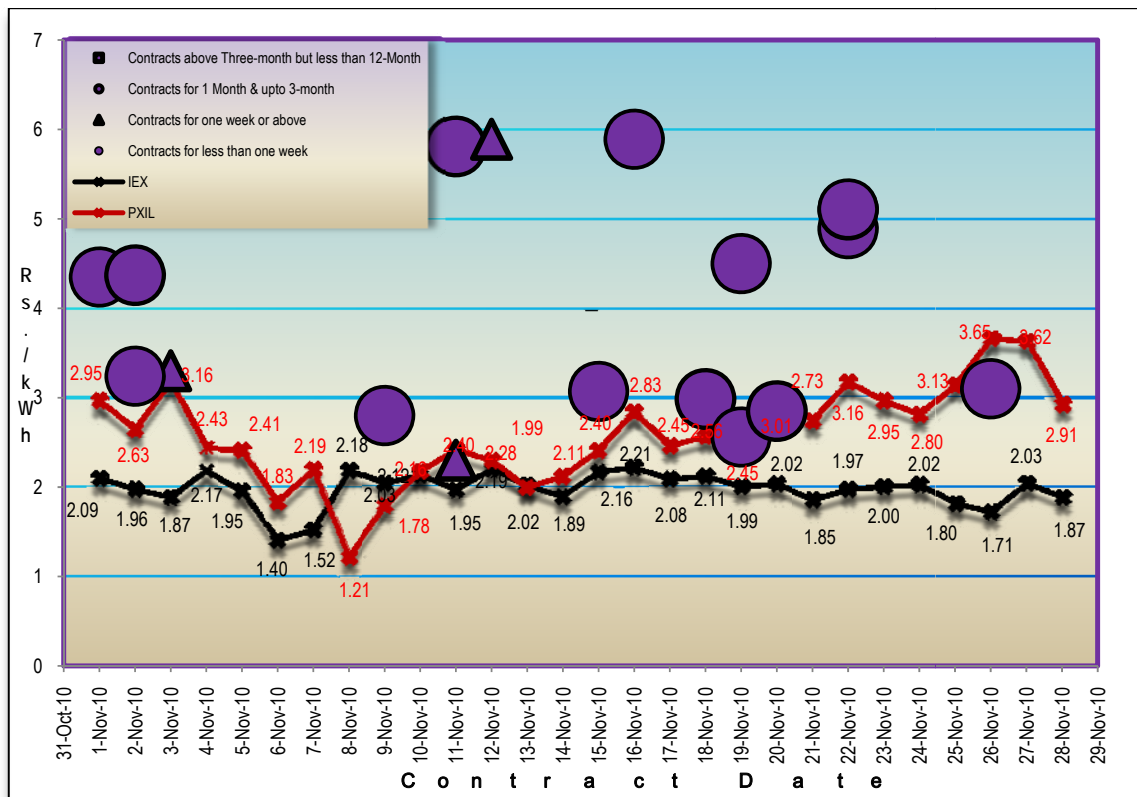
Snapshot for November 2010

- ✓ The short-term contract volume in the month of November was 1053.93 MUs whereas the same was 2396.83 MUs in October. This is a drop of 127%.
- ✓ 71% of total volume has been contracted above price of Rs. 4/kWh.
- ✓ Total number of contracts (including swap & Banking) was 44 only by 8 traders in November vs. 78 contracts by 9 traders in October.

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

The scatter diagram shows a comparative analysis of price movement in both the OTC and Power Exchange markets during 1st November to 28th November 2010. As is seen from the scatter diagram, the contracts are evenly spread through the month. Maximum sale price for this period went upto Rs. 5.89/kWh and the minimum was Rs. 2.30/kWh. The contracts reported were mostly for one-month or more but less than three month's period of power delivery.

Chart 1: Scatter Diagram depicting Price of Electricity for OTC contracts and in Power Exchanges



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		
1 st -7 th November	4.37	3.24	4.27	350.50
8 th -14 th November	5.89	2.30	2.93	114.19
15 th -21 st November	5.89	2.56	3.42	258.12
22 nd -28 th November	5.11	3.10	4.95	331.12
Total	-			1053.93

Source: Based on Electricity Traders' weekly reports

Table 2: Prices on Power Exchanges on OTC Contracts Dates

Contract Date (2010)	1 st Nov	2 nd Nov	3 rd Nov	9 th Nov	11 th Nov	12 th Nov	15 th Nov	16 th Nov	18 th Nov	19 th Nov	20 th Nov	22 nd Nov	26 th Nov
IEX (Rs. / kWh)	2.09	1.96	1.87	2.03	1.95	2.19	2.16	2.21	2.11	1.99	2.02	1.97	1.71
PXIL (Rs. / kWh)	2.95	2.63	3.16	1.78	2.4	2.28	2.4	2.83	2.56	2.45	3.01	3.16	3.65
OTC Contracts (Rs./ kWh)	4.27 (1 st -7 th)			2.93 (8 th -14 th)			3.42 (15 th -21 st)			4.95 (22 nd - 28 th)			

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

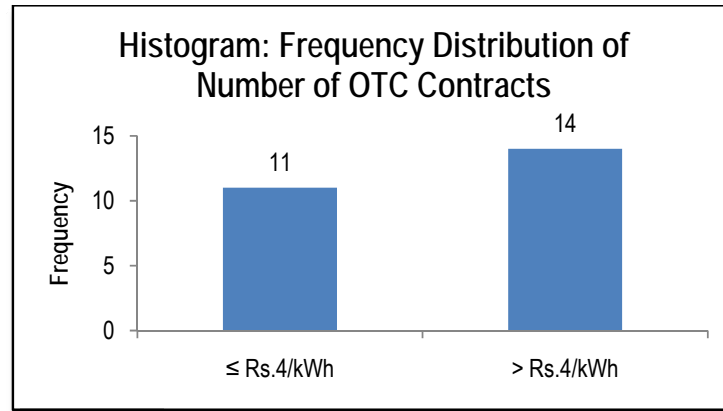
Observations

1. In month of November, the OTC sale prices were closer to the power exchange spot prices. The minimum price in the exchange during 1st-28th November was Rs. 1.21/kWh (PXIL, 8th Nov 2010) while that of in the OTC market was Rs. 2.30/kWh. Maximum price at the exchange reached Rs. 3.65/kWh (PXIL, 26th Nov 2010) and in the OTC market it was Rs. 5.89/kWh.
2. In month of November, OTC contracts mostly are for a month or upto three months and the scheduling of these contracts is generally happening from five days to one month after contract date.

Weekly reporting of OTC Contracts: Monthly Analysis

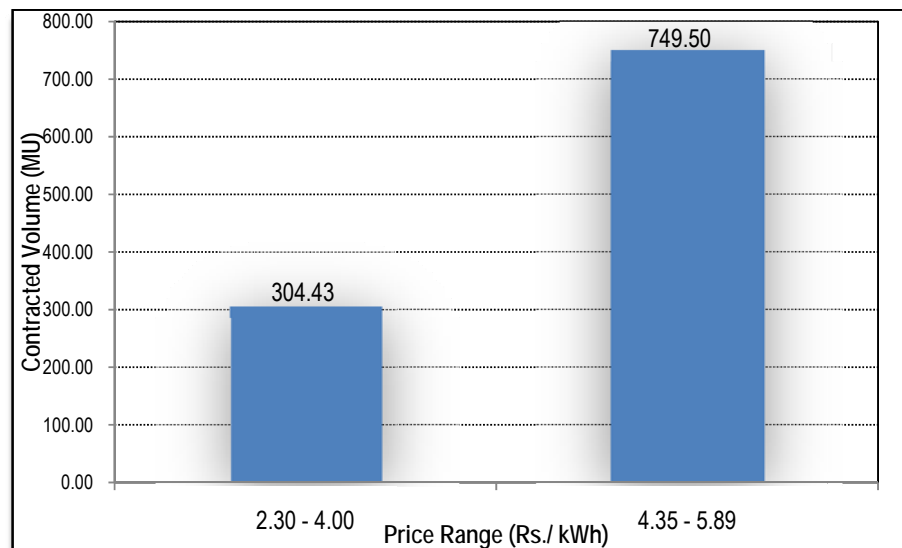
- In November, the number of contracts entered above Rs. 4/kWh were 14 out of total 25* contracts (total 44 contracts including swap & banking).

Chart 2: Histogram of Number of OTC Contracts



- In November, the cumulative volume traded above Rs. 4/kWh was 749.50 MUs which is 71% of total OTC contracts for November 2010.

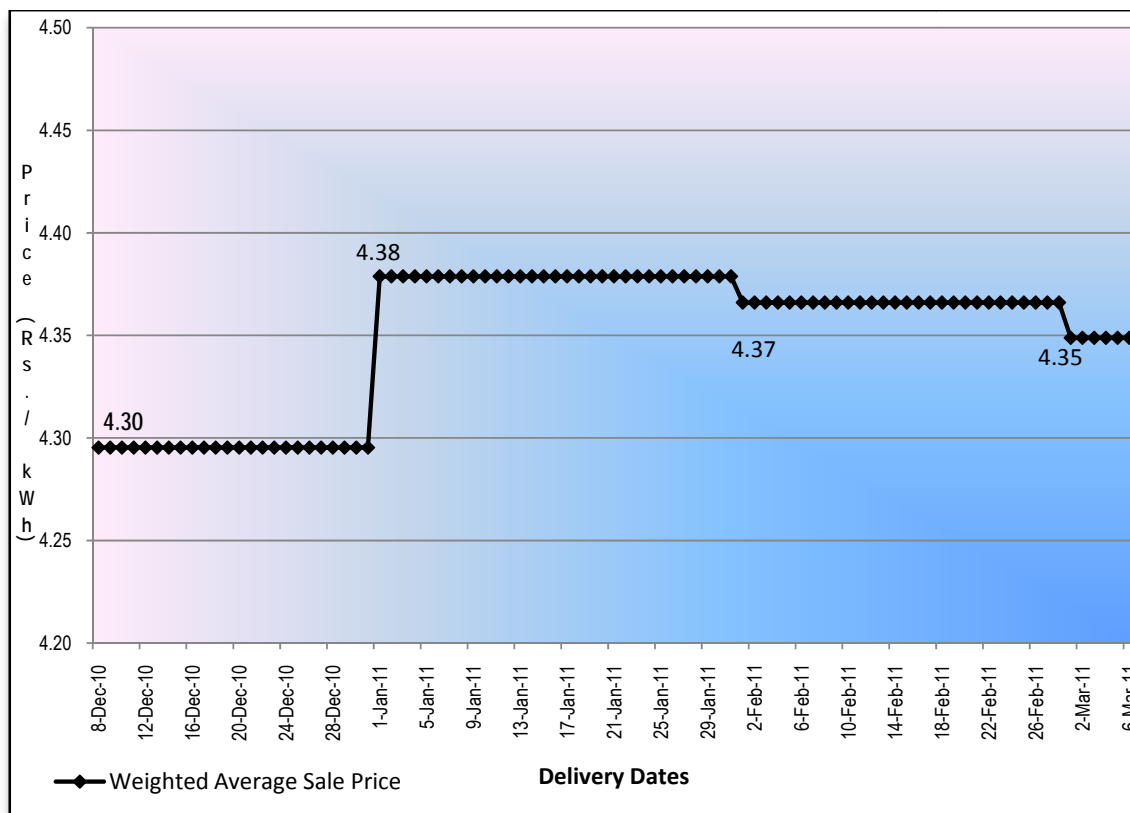
Chart 3: Cumulative Volume Traded below and above Rs. 4/kWh during November 2010



* 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, 8th December 2010- 6th March 2011



A forward curve reflects expectation of spot prices for a future period. Accordingly a forward curve has been drawn based on prices of contracts executed for supply of power from 8th December 2010 to 6th March 2011, i.e. 90 days ahead period of power supply.

Observations

1. The forward curve for the next three month period i.e. from 8th December 2010 to 6th March 2011 is upward sloping till January end and prices start declining from February 2011. In 1st week of March, prices fall further down. During the month of December, the OTC sale price is Rs. 4.30/kWh which increases to Rs. 4.38/ kWh in January 2011 and remains at that level till 31st January. From 1st February 2011, it decreases to Rs. 4.37/kWh and remains at this level till 28th February. Thereafter, the future price fall further down to Rs. 4.35/kWh in March. The forward curve made in November is based on total 40 sale prices reported by traders.

Weekly reporting of OTC Contracts: Monthly Analysis

2. The nature of the forward curves drawn in October and November is similar. But it may be noted that the prices for December period in the two forward curves is different. This is due to some new contracts which have been reported during the concerned period reduced the average sale prices from Rs. 4.40/kWh earlier to Rs. 4.30/kWh this time for the month of December.

Chart 4: Forward Curve in November for OTC Market, December 2010- March 2011

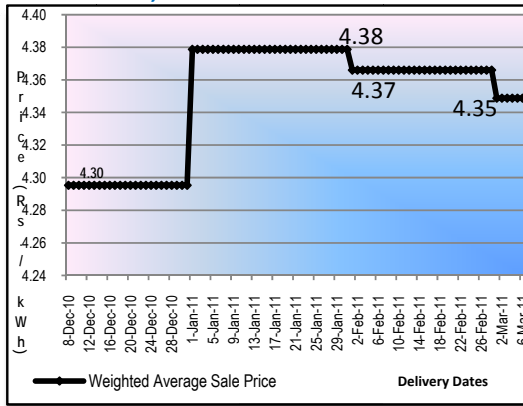
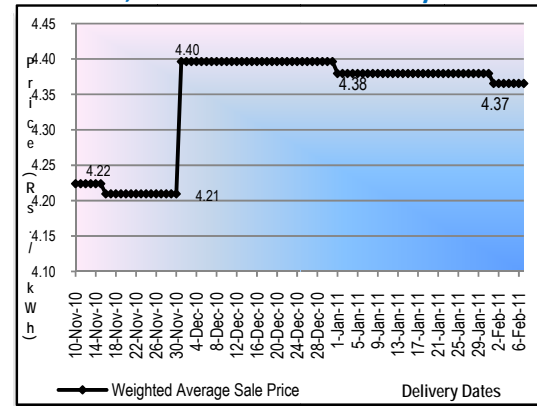


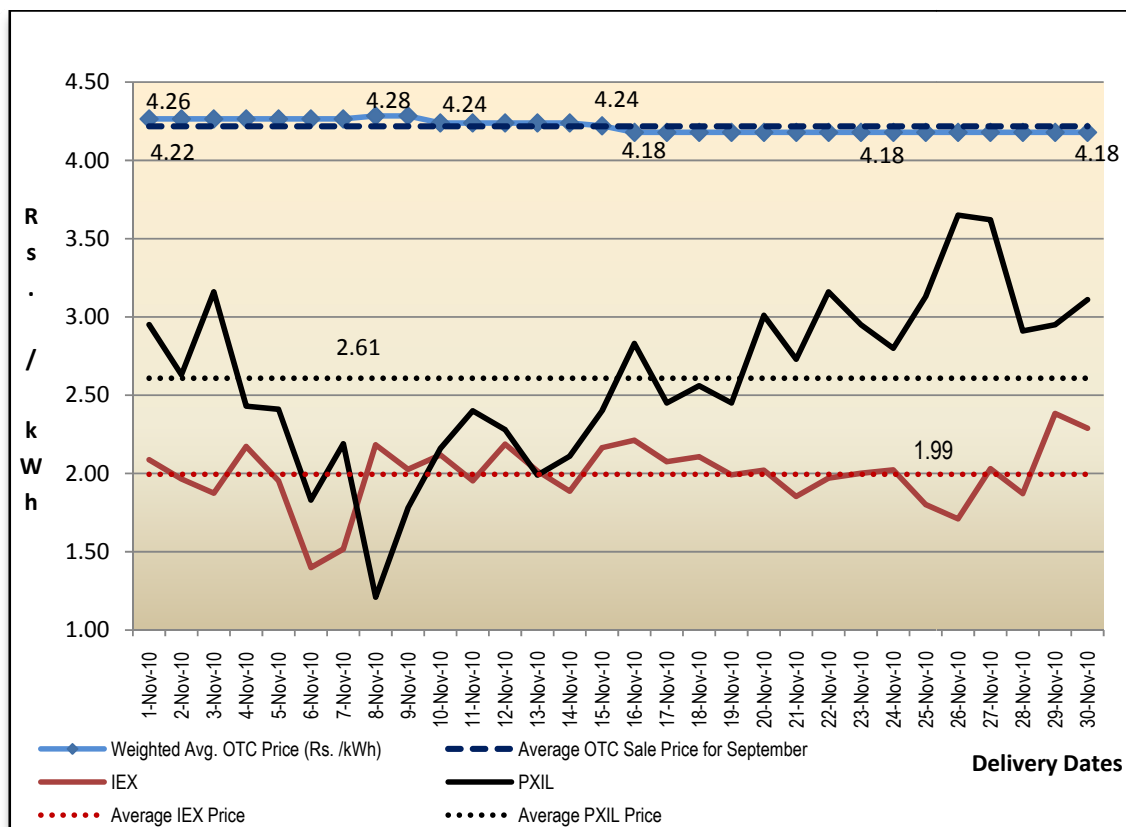
Chart 4.1: Forward Curve in October for OTC Market, November 2010-February 2011



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

There is a visible difference between OTC and power exchange prices. OTC prices remained at a level higher than the power exchange prices by around Rs. 1.6/kWh. During the month of November, the average OTC price was at Rs. 4.22/ kWh and the same was at Rs. 1.99/ kWh in IEX and Rs. 2.61/kWh in PXIL.

Chart 5: OTC and Power Exchange Price Comparison during November 2010



Overall Comparative View between October and November 2010

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

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

	October-10	November-10
One month or above	49	34
One week or above	14	6
Less than a week	15	4
Total	78	44

From the above table it is clear that the total number of contracts in October was much higher than in November. The number of contracts undertaken for one

^ψ Including swap/banking contracts between different DISCOMS

month or above was higher in October (49) compared to that of in November (34). The contracts one week or above and less than a week in November are almost half the contracts that of in October.

2. 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)

	October 2010		November 2010	
	Maximum	Minimum	Maximum	Minimum
IEX	4.01(1 st)	2.06(28 th)	2.38 (29 th)	1.40 (6 th)
PXIL	3.82(1 st)	2.53(21 st)	3.65 (26 th)	1.21 (8 th)
OTC Contracts	6.5(28 th)	2.39(4 th)*	5.89 (12 th)	2.30 (11 th)**

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

***Rs. 5.89/kWh for another day (16th Nov)*

Overall inferences

1. From Chart-1 (Contacted date price analysis), it is observed that the OTC contracts made during 1st November-28th November period, the OTC sale prices were closer to the power exchange spot prices.
2. From Chart-5 (post facto power delivery date analysis), it is seen that the average OTC sale price were at a level higher by around Rs.1.6/ kWh than the power exchange average price. This means that convergence of forward price with spot prices did not happen. The OTC should remain higher only to the extent that it depicts a premium attributable to the inherent nature of OTC contracts. OTC contracts are for a month and customized contracts whereas power exchange prices are spot standardized contracts.
3. The Forward curve for 90 days ahead period is showing a downward trend.

Annexure-I**Table 4: List of Trading-Licensees who have undertaken Contracts in November 2010***

	Name of Licensee	1 st -7 th November	8 th -14 th November	15 th -21 st November	22 nd -28 th November
1	PTC India Ltd.	Y (2)	Y (2)	Y (1)	Y (4)
2	NTPC Vidyut Vyapar Nigam Ltd.	Y (4)	Y(4)	Y (6)	Y (5)
3	GMR Energy Trading Limited	Y (1)	Y (1)	Y (1)	NIL
4	Reliance Energy Ltd.	Y (2)	NIL	Y (1)	NIL
5	RPG Power Trading Company Limited	NIL	Y(1)	NIL	Y(1)
6	Tata Power Trading Company Pvt. Ltd.	NIL	NIL	Y (1)	Y (5)
7	JSW Power Trading Company Ltd.	Y (1)	NIL	NIL	NIL
8	Jindal Power Trading Corp. Ltd.	NIL	Y (1)	NIL	NIL
Total No. of Contracts		10	9	10	15
Total for month for all traders		44			

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 atleast one contracts during the month. There could be some traders who have reported but did not undertake any contracts.


Annexure-II

I. The Scatter Diagram

 *Process of Formulation:* The scatter diagram represents the details of OTC contracts undertaken by traders during any particular time period (e.g. for last four weeks) for short-term (upto less than a year) transactions of electricity. Each data-point represents contract sale-price on a particular contract date.

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.

II. The Forward Curve

 *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).

III. The Post-Facto Graph

 *Process of Formulation*

The post facto graph shows the average OTC price vis-à-vis power exchanges prices for the last month's (i.e. November 2010) power deliveries. The process of calculating the data points is same as in the forwards curve.