

WEEKLY REPORTING OF OTC CONTRACTS: MONTHLY ANALYSIS (JANUARY 2011)

[An analysis of all weekly reports (reporting period 27th Dec – 30th Jan) received from licensed-traders for the month of January 2011]

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Centre for Monitoring Indian Economy &
Market Monitoring Cell, CERC

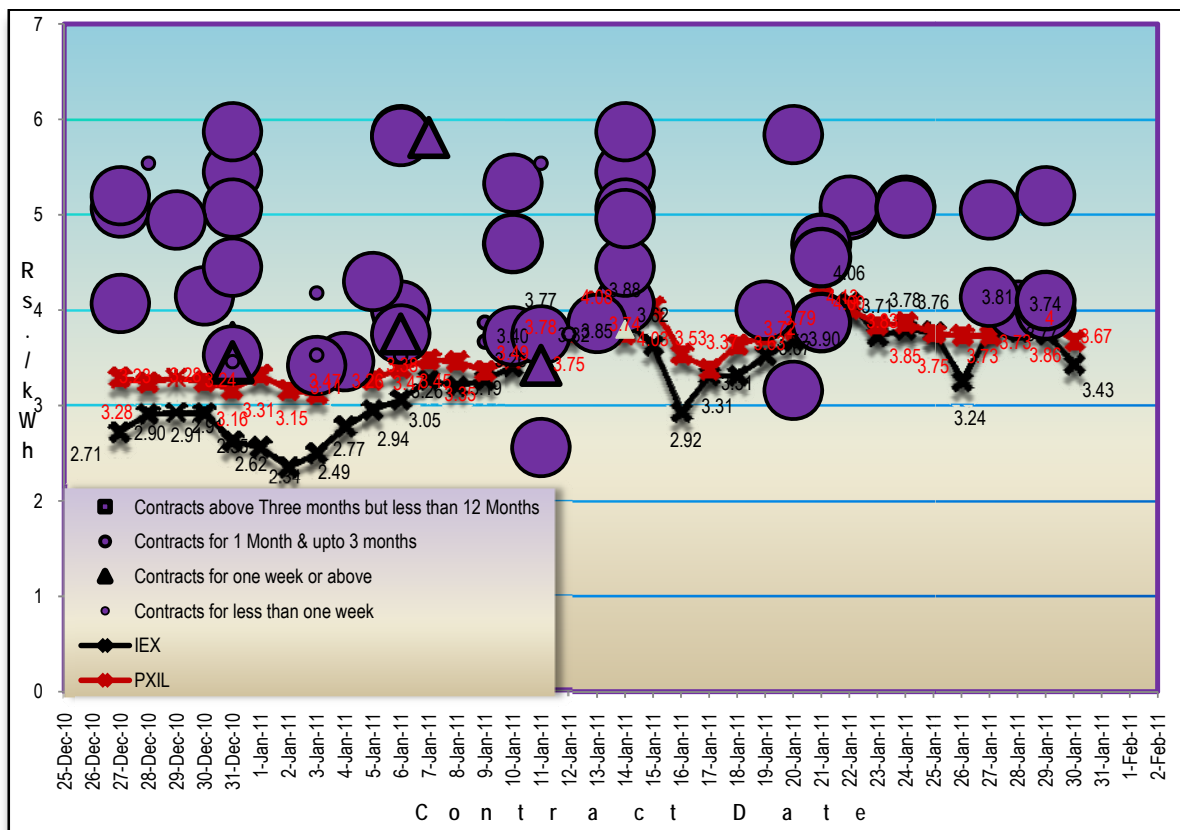
Snapshot for December 2010

- ✓ The reported short-term contract volume for the month of January was 2392.19 MUs whereas the same was 1984.50 MUs for the month of December. This is 21% increase in reported contract-volume.
- ✓ 72% of total volume has been contracted above price of Rs. 4/kWh.
- ✓ Total number of contracts (including swap & Banking) was 111 by 7 traders whereas in December it was 73 by 7 traders.

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 27th December 2010 to 30th January 2011. As is seen from the scatter diagram, the contracts are well spread through the month in a range of Rs. 2.56/kWh to Rs. 5.87/kWh. The contracts reported were mostly for one-month to upto three months.

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		
27 th December-2 nd January	5.87	3.45	5.00	636.01
3 rd - 9 th January	5.84	3.42	4.07	118.20
10 th -16 th January	5.87	2.56	4.58	583.21
17 th - 23 rd January	5.84	3.16	4.53	776.86
24 th - 30 th January	5.20	3.85	4.50	277.92
Total	-			2392.19

Source: Based on Electricity Traders' weekly reports

Table 2: Prices on Power Exchanges on OTC Contracts Dates

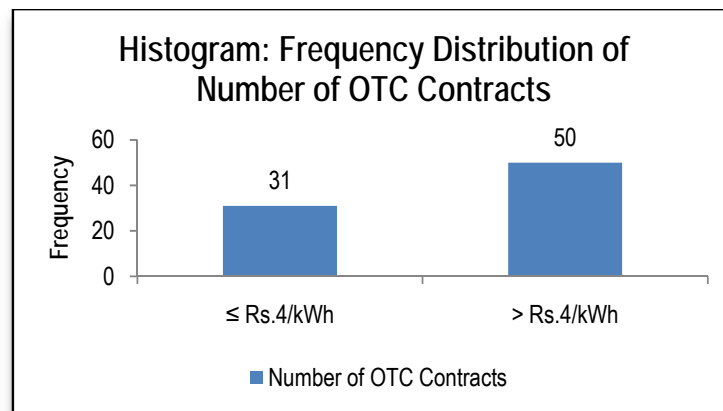
Contract Date (2010)	27 th Dec	28 th Dec	29 th Dec	30 th Dec	31 st Dec	3 rd Jan	4 th Jan	5 th Jan	6 th Jan	7 th Jan	9 th Jan	10 th Jan	11 th Jan	12 th Jan	13 th Jan	14 th Jan	19 th Jan	20 th Jan	21 st Jan	22 nd Jan	24 th Jan	27 th Jan	28 th Jan	29 th Jan
IEX (Rs. / kWh)	2.71	2.90	2.91	2.91	2.62	2.49	2.77	2.94	3.05	3.26	3.26	3.40	3.77	3.82	3.85	3.88	3.52	3.67	3.90	4.06	3.78	3.81	3.77	3.74
PXIL (Rs. / kWh)	3.28	3.23	3.28	3.24	3.16	3.11	3.47	3.26	3.38	3.47	3.35	3.49	3.78	3.75	4.08	3.74	3.72	3.79	4.13	4.00	3.85	3.73	4.00	3.86
OTC Contracts (Rs./ kWh)	Rs.5/kWh (27 th Dec – 2 nd Jan)					Rs. 4.07/kWh (3 rd Jan – 9 th Jan)						Rs. 4.58/kWh (10 th Jan-16 th Jan)					Rs. 4.53/kWh (17 th Jan- 23 rd Jan)			Rs. 4.50/kWh (24 th Jan- 30 th Jan)				

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

Observations

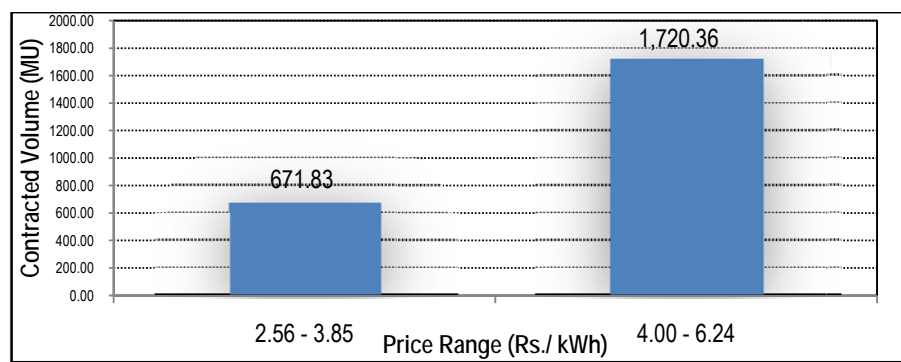
1. In month of January, the OTC sale prices were quite close to the power exchange spot prices. The minimum price in the exchange during 27th December – 30th January was Rs. 2.34/kWh (IEX, 2nd Jan. 2011) while that of in the OTC market was Rs. 2.56/kWh. Maximum price at the exchange reached Rs. 4.13/kWh (PXIL, 21st Jan. 2011) and in the OTC market it was Rs. 5.87/kWh.
2. In month of January, OTC contracts mostly are for a month or upto three months and the scheduling of these contracts is generally happening from one month to three months after contract date.
3. In January, the number of contracts entered above Rs. 4/kWh were 50 out of total 81* contracts (total III contracts including swap & banking).

Chart 2: Histogram of Number of OTC Contracts



4. In January, the cumulative volume traded above Rs. 4/kWh was 1,720.36 MUs which is 72% of total OTC contracts for January 2011.

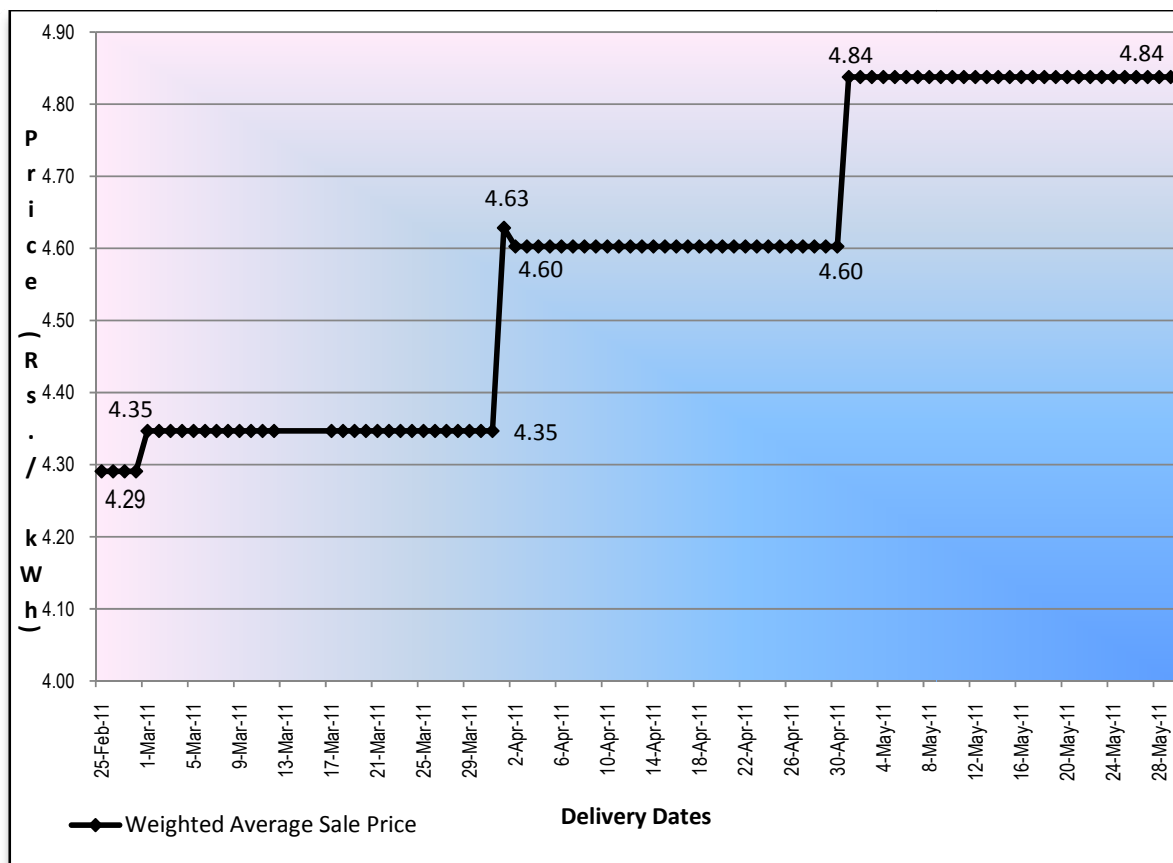
Chart 3: Cumulative Volume Traded below and above Rs. 4/kWh during January 2011



* 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, 25th February- 29th May 2011



A forward curve reflects present 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 25th February 2011 to 29th May 2011, i.e. 90 days ahead period of power supply.

Observations

1. The forward curve for the next three month period i.e. from 25th February 2011 to 29th May 2011 is upward sloping. In the month of March the price of electricity rises to Rs.4.35/kWh from Rs. 4.29/kWh in February. On 1st April 2011 the price rises further to Rs.4.63/kWh but next day, i.e. on 2nd April price fell a little to Rs. 4.60/kWh and remains at this level till 30th April 2011. In May, once again price rises to Rs.4.84/kWh and till 29th May it remains at this price level. The forward curve made in January is based on total 87 sale prices reported by traders.

Weekly reporting of OTC Contracts: Monthly Analysis

- The nature of the forward curves drawn in December and January is different. It may be noted that the prices for March and April period in the two forward curves are different. This is due to some new contracts which have been reported during the concerned period increased the average sale prices from Rs. 4.31/kWh earlier to Rs. 4.35/kWh this time for the month of March and from Rs.4.59/kWh to Rs. 4.60/ kWh for the month of April.

Chart 4: Forward Curve in January for OTC Market, February - May 2011

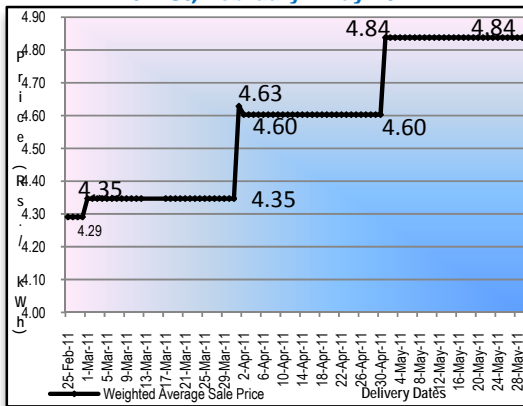
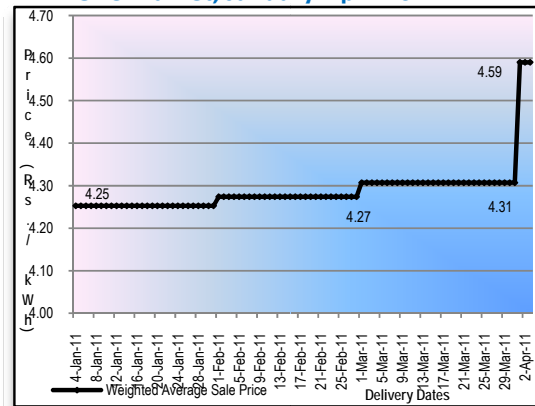


Chart 4.1: Forward Curve in December for OTC Market, January-April 2011

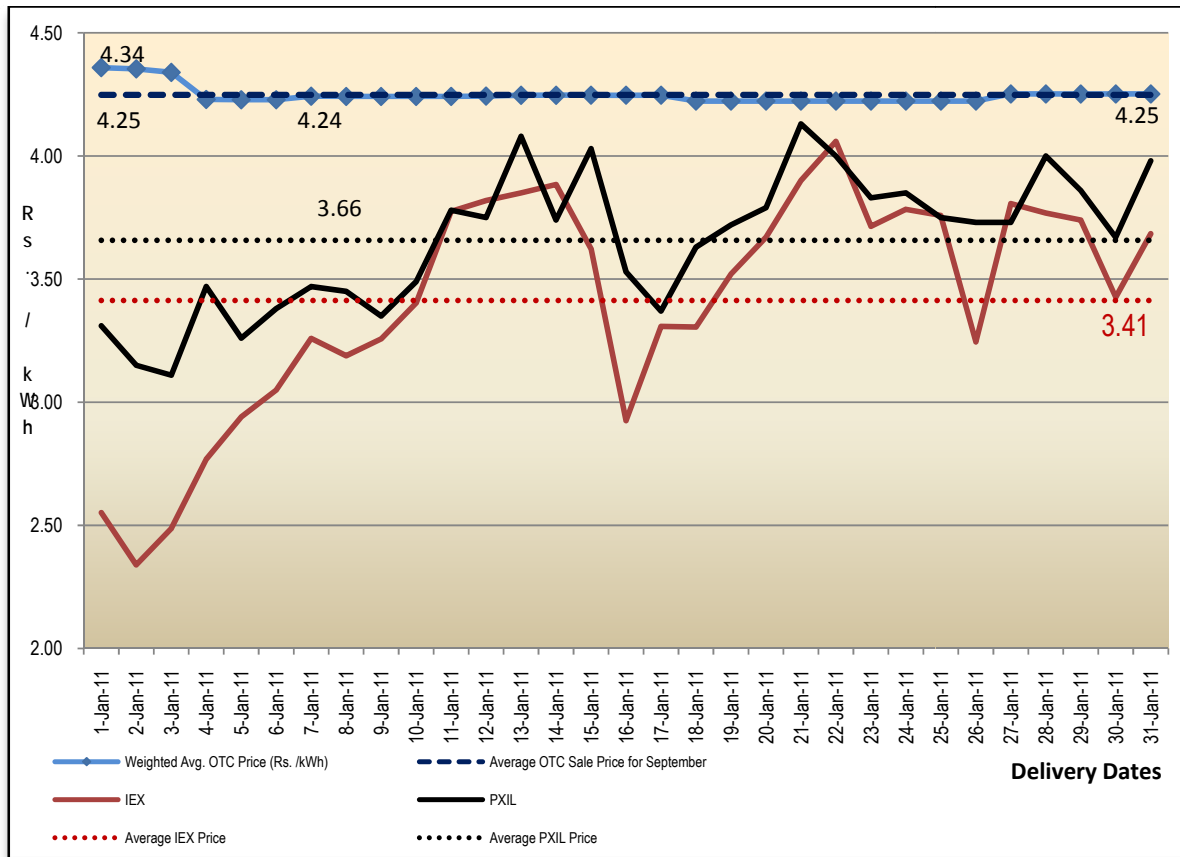


III. Post-facto Comparison of Prices in OTC Contracts and Power Exchanges (on Power Delivery Dates)

The post-facto curve for the month of January 2011 shows a variation from the usual nature of the OTC and power exchanges prices. OTC and power exchanges prices were rather close to each other this time and the difference between the two was only Rs. 0.84/kWh. During the month of January, the average OTC price was at Rs. 4.25/ kWh and the same was at Rs. 3.41/ kWh in IEX and Rs. 3.66/kWh in PXIL.

Weekly reporting of OTC Contracts: Monthly Analysis

Chart 5: OTC and Power Exchange Price Comparison during January 2011



Overall Comparative View between December 2010 and January 2011

1. Following table shows the number of contracts reported during December 2010 and January 2011 categorized according to the period of power supply.

Table 3: Number of Contracts Reported in October and December 2010^Ψ

	December-10	January-11
One month or above	50	72
One week or above	15	13
Less than a week	8	24
Total	73	109

From the above table it is clear that the total number of contracts in January 2011 was much higher than in December 2010. The number of contracts undertaken for one month or above was higher in January (72) compared to that of in December (50). The contracts undertaken for less than a week in December were only 8 whereas the same was 24 in January 2011.

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)

	December 2010		January 2011	
	Maximum	Minimum	Maximum	Minimum
IEX	2.91 (29 th)*	1.55 (11 th)	4.06 (22 nd)	2.34 (2 nd)
PXIL	3.68 (2 nd)	1.95 (12 th)	4.13 (21 st)	3.11 (3 rd)
OTC Contracts	6.00 (23 rd)	2.54 (23 rd)	5.87 (31 st Dec)	2.56 (11 th)

* Rs. 2.91/ kWh for another day (30th Dec)

^Ψ Including swap/banking contracts between different DISCOMS

Overall inferences

1. From Chart-1 (Contracted date price analysis), it is observed that the OTC contracts made during 27th December- 30th January period, some of the OTC sale prices were close to the power exchange spot prices.
2. From Chart-5 (post facto power delivery date analysis), this time it is seen that the average OTC sale price and the power exchange average price were closer to each other and the difference between the two was only Rs. 0.84/kWh. This means that convergence of forward price with spot prices did not happen.
3. The comparative forward curve between December 2011 and January 2011 is getting steeper which shows that prices are gradually going to increase over the next few months.

Annexure-I

Table 4: List of Trading-Licenses who have undertaken Contracts in January 2011*

	Name of Licensee	27 th Dec – 2 nd January	3 rd -9 th January	10 th -16 th January	17 th – 23 rd January	24 th – 30 th January	
1	Lanco Electricity Utility Limited (NETS)	Y (2)	Y (1)	Y (2)	Y (5)	Y (1)	
2	NTPC Vidyut Vyapar Nigam Ltd.	Y (12)	Y(13)	Y (13)	Y (8)	Y (5)	
3	PTC India Ltd.	Y (3)	Y (3)	NIL	Y (6)	Y (3)	
4	Tata Power Trading Company Pvt. Ltd.	Y (8)	Y (2)	Y (9)	NIL	Y (2)	
5	JSW Power Trading Company Ltd.	Y (2)	NIL	Y (2)	NIL	Y (3)	
6	Reliance Energy Trading Ltd.	Y(2)	NIL	Y(1)	NIL	Y (2)	
7	Adani Enterprises Ltd.	NIL	NIL	Y(1)	NR	NIL	
Total No. of Contracts		29	19	28	19	16	
Total for month for all traders							111

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 five 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. January 2011) power deliveries. The process of calculating the data points is same as in the forwards curve.