

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

[An analysis of all weekly reports (reporting period 28th November – 25th December 2011) received from licensed-traders for the month of December 2011]

Corrigendum:

- a) There are four contracts which were not included in the report published in 9th January 2012 report and one contract which was wrongly included.
- b) Three contracts of trader - Shree Cement Ltd. and one contract of Instinct Infra & Power Ltd. are included in the revised report. One contract of Reliance Energy Trading Ltd. was wrongly added has been deleted in the revised report.
- c) The data analyzed has therefore changed and accordingly being reported.

Prepared on 9th January 2012

Market Monitoring Cell, CERC

Snapshot for December 2011

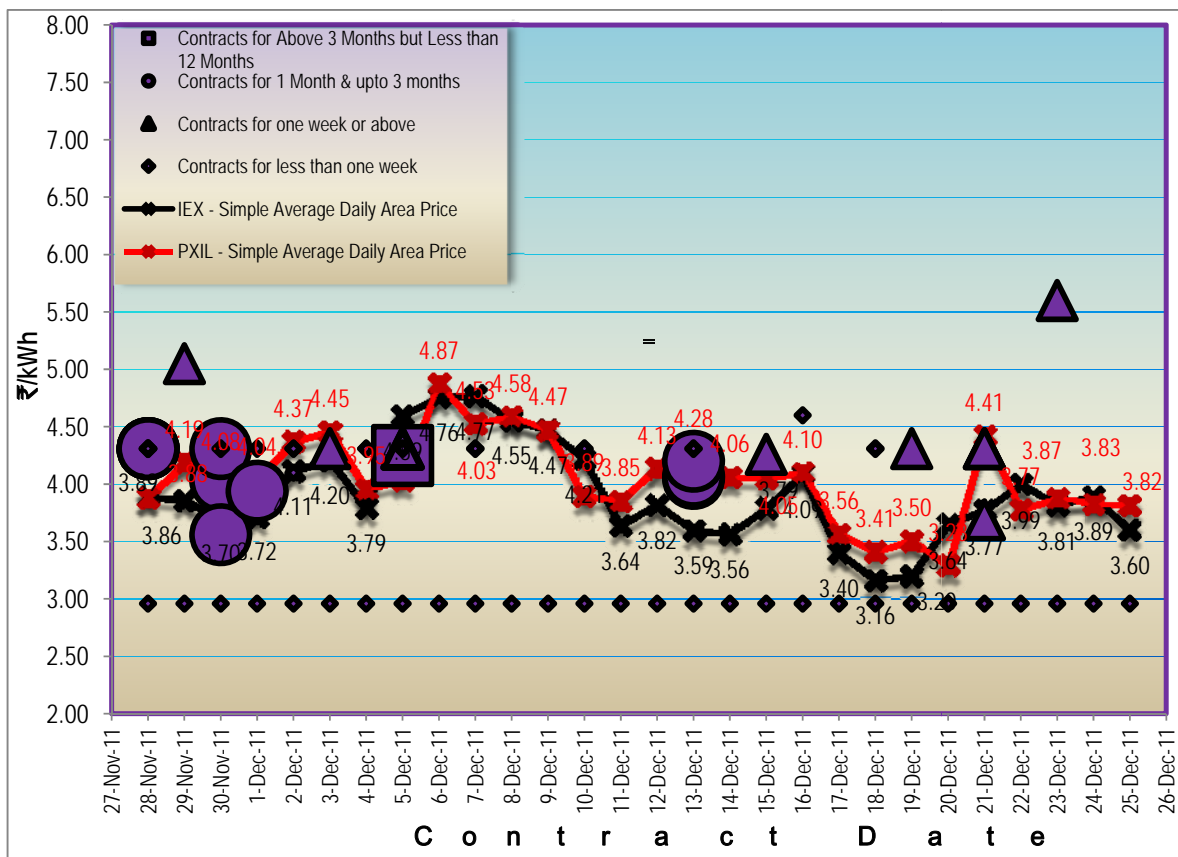
- ✓ The reported short-term contract volume for the month of December was 1611.92MUs whereas the same was 1568.57MUs for the month of November. There is a 3% increase in reported contract-volume.
- ✓ 81% of total volume has been contracted at above price of ₹ 4/kWh.
- ✓ Total number of contracts (including Swap & Banking) in December was 120 by 5 traders whereas in November it was 102 by 4 traders.

Weekly Reporting of OTC Contracts: Monthly Analysis

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 for the period of 28th November – 25th December 2011. As is seen from the scatter diagram, most of the contracts were concentrated in the 1st week of the reported period and the price was in a range of ₹ 2.96/kWh to ₹5.60/ kWh. The contracts reported were mostly for less than a week (76 Contracts) and for a months and above (29 Contracts) 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 being the respective contracted volume).

Weekly Reporting of OTC Contracts: Monthly Analysis

Table 1: Price and Volume of OTC Contracts

Weeks	Range of Sale Price (₹/kWh)		Weighted Average of Sale Price (₹/kWh)	Total Volume (MUs)
	Min	Max		
28 th November- 4 th December	2.96	5.05	4.02	507.42
5 th - 11 th December	2.96	4.31	4.24	120.94
12 th - 18 th December	2.96	4.63	4.10	365.46
19 th -25 th December	2.96	5.60	4.29	183.17
Total	-			1176.99

Table 2: Comparison of Prices in Day Ahead Market with OTC Contracts (Includes Term Ahead Contracts at Power Exchanges)

Contract Date (2011)	28 th Nov.	29 th Nov.	30 th Nov.	1 st Dec.	2 nd Dec.	3 rd Dec.	4 th Dec.	5 th Dec.	6 th Dec.	7 th Dec.	8 th Dec.	9 th Dec.	10 th Dec.	11 th Dec.
IEX (₹ / kWh)	3.89	3.86	3.70	3.72	4.11	4.20	3.79	4.59	4.76	4.77	4.55	4.47	4.21	3.64
PXIL (₹ / kWh)	3.88	4.19	4.08	4.04	4.37	4.45	3.95	4.03	4.87	4.53	4.58	4.47	3.89	3.85
OTC Contracts (₹ / kWh)	4.02							4.24						
	28th November- 4th December							5th -11th December						

Contract Date (2011)	12 th Dec.	13 th Dec.	14 th Dec.	15 th Dec.	16 th Dec.	17 th Dec.	18 th Dec.	19 th Dec.	20 th Dec.	21 st Dec.	22 th Dec.	23 th Dec.	24 th Dec.	25 th Dec.
IEX (₹ / kWh)	3.82	3.59	3.56	3.79	4.09	3.40	3.16	3.20	3.64	3.77	3.99	3.81	3.89	3.60
PXIL (₹ / kWh)	4.13	4.28	4.06	4.05	4.10	3.56	3.41	3.50	3.28	4.41	3.77	3.87	3.83	3.82
OTC Contracts (₹ / kWh)	4.10							4.29						
	12th - 18th December							19th -25th December						

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

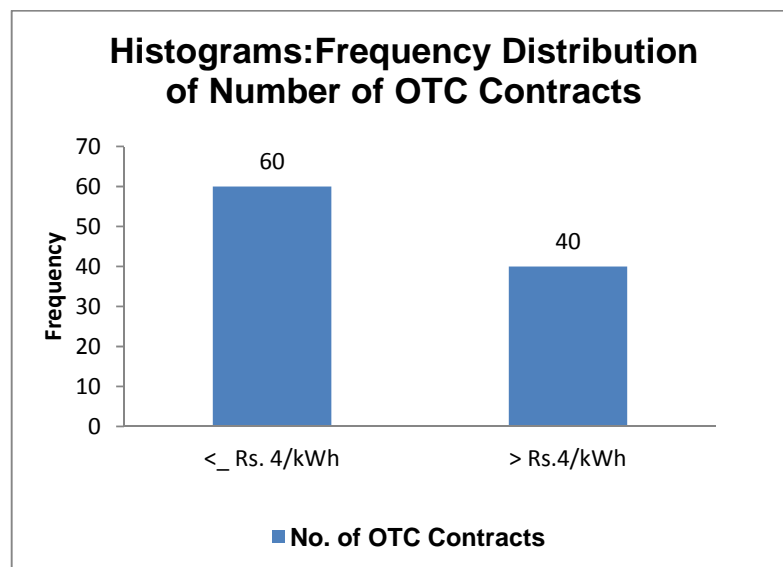
Observations

- In the month of December, OTC contract prices were lower than the Indian Energy Exchange (IEX) and Power Exchange of India Ltd (PXIL) spot prices except in the last week of the reported period where prices at Power Exchanges were slightly lower than that of OTC. The minimum price in the exchanges during reported period was ₹3.16/kWh

Weekly Reporting of OTC Contracts: Monthly Analysis

(IEX, 18th December 2011) while that in the OTC market was ₹2.96/kWh (28th November – 25th December 2011). Maximum price in Day-Ahead market at the exchange reached ₹4.87/kWh (PXIL, 6th December 2011) and in OTC Market it was ₹5.60/kWh (23rd December 2011) which was an 'other than peak and RTC' power contract. As far as the number of contracts are concerned, 40 out of totals 100* contracts were entered above ₹4/kWh. There were a total 120 contracts including swap & banking during the month.

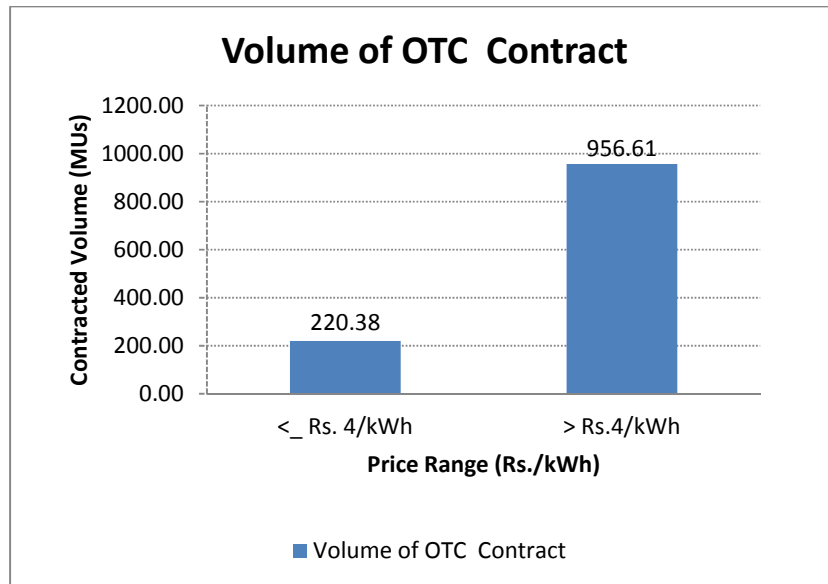
Chart 2: Histogram of Number of OTC Contracts



2. The cumulative volume traded above ₹ 4/kWh was 956.61* MUs which is 81% of total OTC contracts for the reported period 28th November – 25th December 2011).

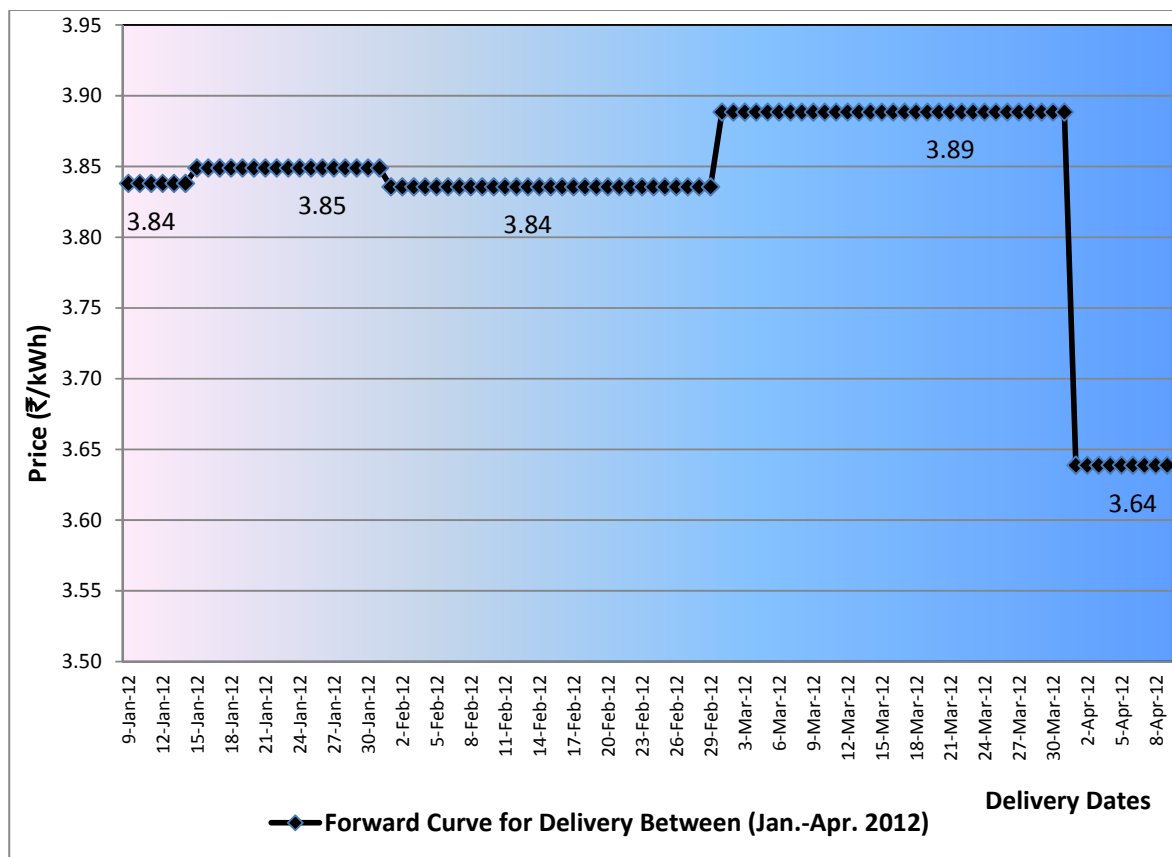
* Excluding swap /banking contracts since they do not have any sale price.

Chart 3: Cumulative Volume Traded below and above ₹ 4/kWh during 28th November – 25th December 2011



II. Three-Month Forward Curve of Power Prices

Chart 4: Forward Curve for 9th January - 9th April 2012



A forward curve reflects present day's 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 9th January - 9th April 2012, i.e. 90 days ahead period of power supply. This forward curve is as on 9th January 2012 but based on 100 contract prices reported by trader's upto 25th December 2011.

Observations

1. The forward curve for the next three month period i.e. 9th January - 9th April 2012 generally remained flat till March 2012 and then followed a declining trend. The prices for January and February 2012 deliveries have remained flat around ₹3.84/kWh in contracts executed in December, 2011. This is due to the fact that new contracts for January and February 2012 delivery executed in December (around ₹4.31/kWh) have been contracted at higher prices than contracts executed in November.

Chart 4: Forward Curve in November for OTC Market, January - April 2012

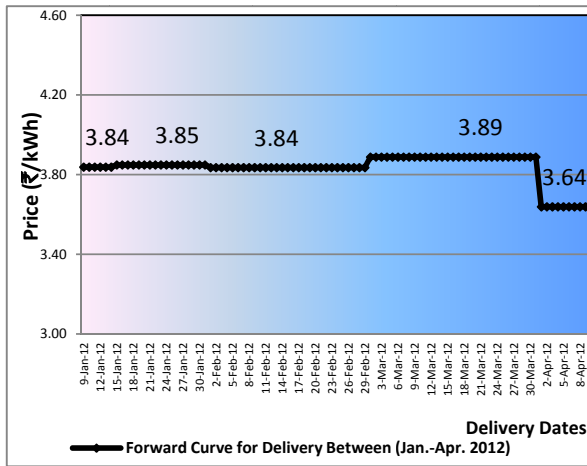
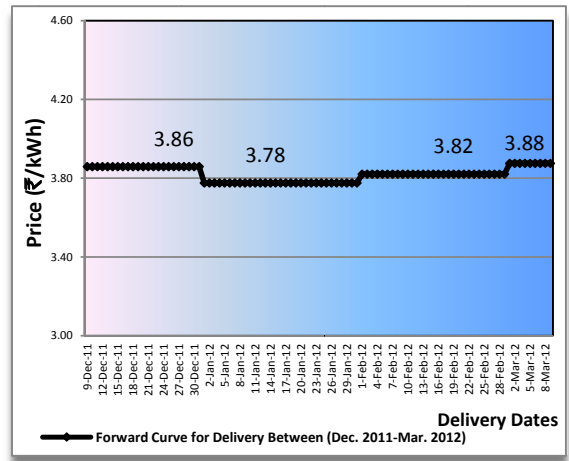


Chart 4.1: Forward Curve in October for OTC Market, December 2011 - March 2012

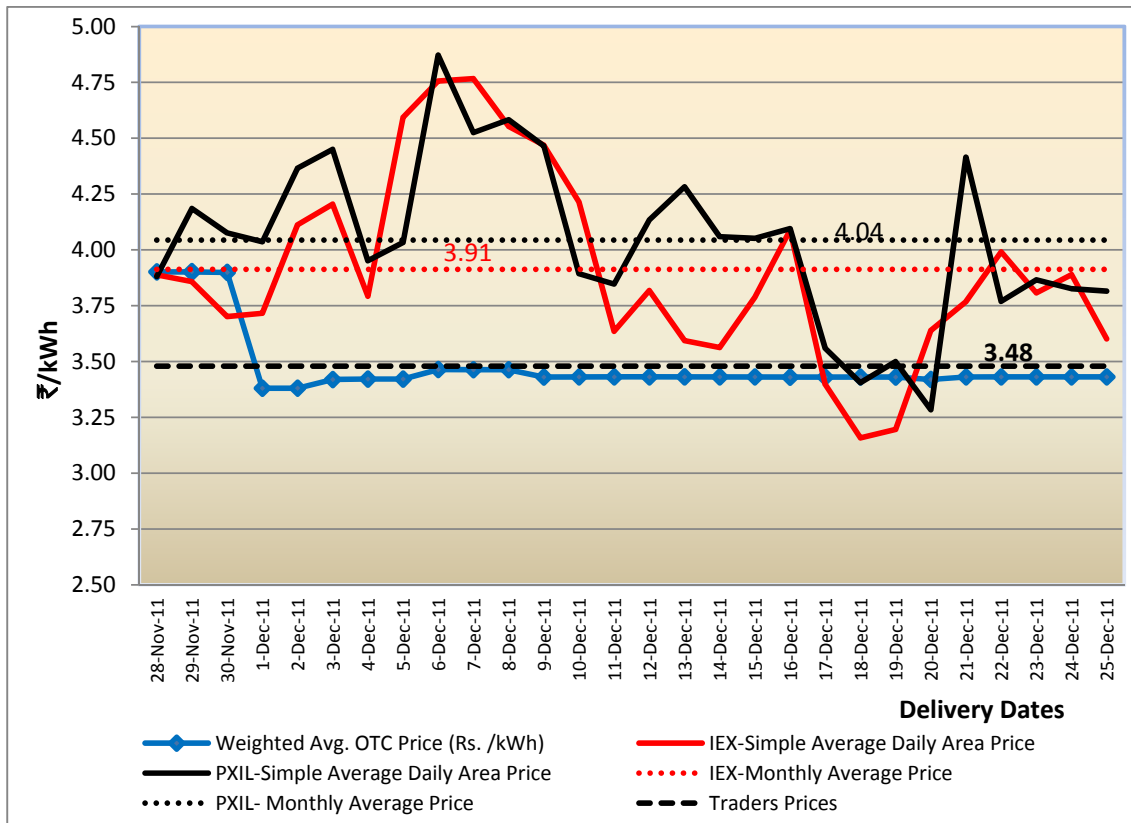


III. Post-facto Comparison of Prices in OTC Contracts and Power Exchanges (on Power Delivery Dates)

The post facto graph shows the average OTC price vis-à-vis power exchanges prices for the last month's power deliveries. Hence this compares the spot delivered prices with OTC deliveries (OTC contracts may have been executed earlier but delivered on these same days). The process of calculating the data points is same as in the forward curve.

It is observed that IEX and PXIL prices were above the average OTC contract prices except at the end of the reported period.

Chart 5: Comparison OTC deliveries and Power Exchange Spot Delivery Price for December 2011



Overall Comparative View between November and December 2011

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

Table 3: Number of Contracts Reported in November and December 2011^ψ

	Nov-11	Dec-11
Above three months and upto 12 months	0	1
One month or above	22	28
One week or above	9	15
Less than a week	71	76
Total	102	120

From the above table it is clear that the total numbers of contracts for power deliveries for the category one month or above; were more in December (29 Contracts) than in November, 2011(22 Contracts).

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 ₹/ kWh (Dates)

	November 2011 (31th October-27th November)		December 2011 (28th November - 25th December)	
	Maximum	Minimum	Maximum	Minimum
IEX	5.15 (17th November)	3.10 (31st October)	4.77 (7th December)	3.16 (18th December)
PXIL	5.78 (1st November)	3.07 (6th November)	4.87 (6th December)	3.28 (20th December)
OTC Contracts	2.96 (31st Oct. - 27th November)	5.39 (9th November)	5.60 (23rd December)	2.96 (28th Nov. - 25th December)

^ψ Including swap/ banking contracts between different DISCOMS

Overall inferences

1. From Chart-1 (Contracted date price analysis), it is observed that for most of OTC contract, prices were lower than the IEX and PXIL spot prices during the month. This deviation in price behavior has been observed over the last three months.
2. From Chart-5 (post facto power delivery date analysis), it is observed that the average OTC price was lower than the average exchange prices. It can be concluded that if a buyer had entered into an OTC contract in November for December delivery, his average monthly price would have been less than the monthly average power price in day ahead Power Exchange in December.
3. It is also seen that there have been a large number (76) of contracts for less than week period of delivery in the reported period.
4. In Chart 4, the Forward Curve for 90 days ahead period (for 9th January - 9th April 2012 period of power delivery) is almost flat in the range of ₹3.84 - ₹3.89/kWh till March 2012.

Annexure-I

Table 4: List of Trading Licensees who have undertaken Contracts in the period 28th November – 25th December 2011*

Sr.No.	Name of Licensee	28th Nov- 4th Dec -11	5th Dec-11th Dec -11	12th Dec- 18th Dec-11	19th Dec- 25th Dec 11
1	PTC India Ltd.	Y(27)	Y(19)	Y(16)	Y(16)
2	NTPC Vidyut Vyapar Nigam Ltd.	Y(17)	Y(3)	Y(7)	Y(9)
3	Shree Cement Ltd.	NIL	NIL	Y(3)	NIL
4	Tata Power Trading Company Ltd.	Y(2)	NR	NR	NR
5	Instinct Infra & Power Ltd.	NIL	Y(1)	NIL	NIL
Total No. of Contracts		46	23	26	25
Total for month for all traders		120			

Note 1: Y (): Contracts had been struck (Number of Contracts)


NIL: No Contracts was made during the week

NR: Not Reported

*Note 2: This table shows list of traders who have reported & undertaken at least one contracts during the reported period. 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 diamond) 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 power deliveries. Hence this compares the spot delivered prices with OTC deliveries (OTC contracts may have been executed earlier but delivered on these same days). The process of calculating the data points is same as in the forwards curve.