

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

[An analysis of all weekly reports (reporting period 26th September – 30th October) received from licensed-traders for the month of October 2011]

Prepared on 8th November 2011

Market Monitoring Cell, CERC

Snapshot for October 2011

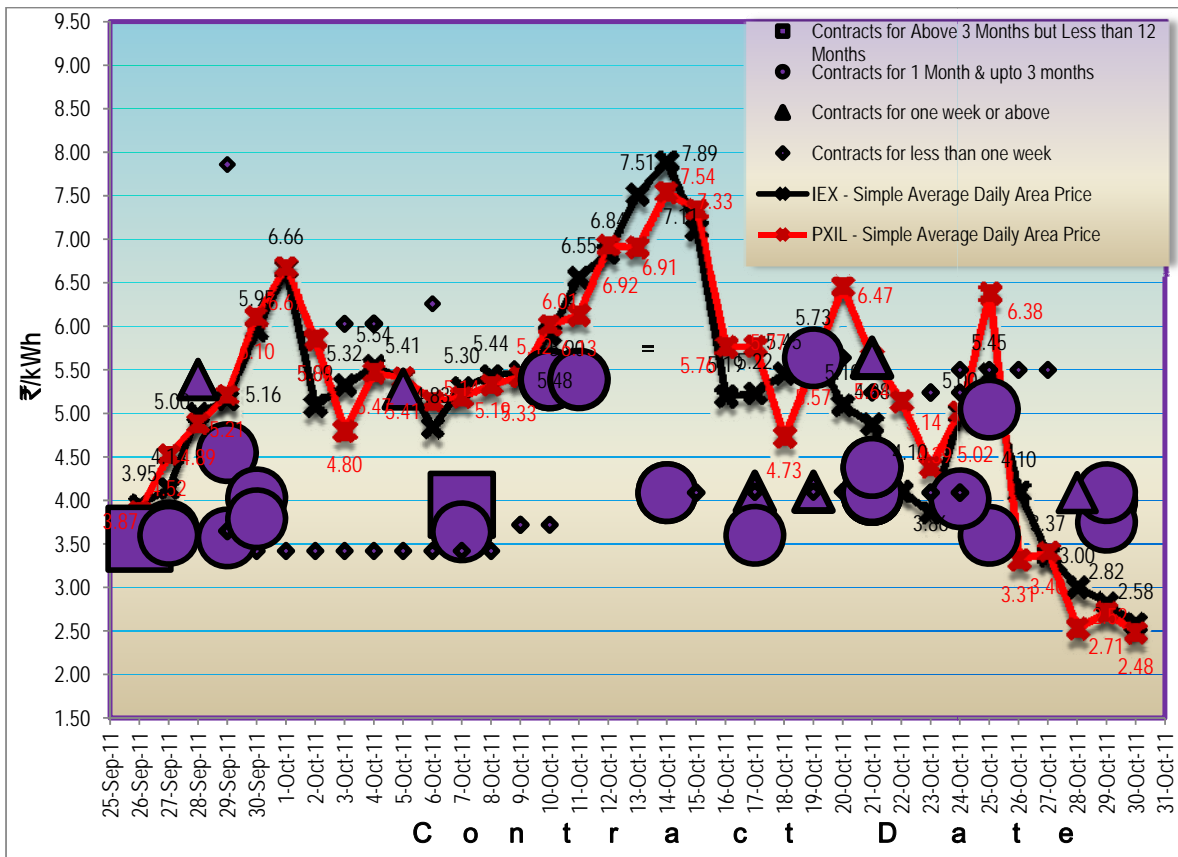
- ✓ The reported short-term contract volume for the month of October was 3474.94 MUs whereas the same was 3603.35 MUs for the month of September. There is a 4% decrease in reported contract-volume.
- ✓ 56% of total volume has been contracted at above price of ₹ 4/kWh.
- ✓ Total number of contracts (including Swap & Banking) in October was 97 by 7 traders whereas in September it was 48 by 8 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 26th September –30th October 2011. As is seen from the scatter diagram, most of the contracts were evenly spread during the reported period and the price was in a range of ₹ 3.42/kWh to ₹7.86/ kWh. The contracts reported were mostly for less than a week (43 Contracts) and for a months and above (39) 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).

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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		
26th Sep. - 2nd October	3.42	7.86	3.53	743.49
3rd - 9th October	3.42	6.26	4.10	688.34
10th-16th October	3.72	6.00	4.50	413.78
17th - 23rd October	3.60	5.64	4.24	530.82
24th - 30th October	3.60	5.50	3.94	466.38
Total	-			2842.81

Source: Based on Electricity Traders' weekly reports

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

Contract Date (2011)	26th Sept	27th Sept	28th Sept	29th Sept	30th Sept	1st Oct	2nd Oct	3rd Oct	4th Oct	5th Oct	6th Oct	7th Oct	8th Oct	9th Oct	10th Oct	11th Oct	12th Oct	13th Oct	14th Oct	15th Oct	16th Oct
IEX (₹ / kWh)	3.95	4.14	5.00	5.16	5.95	6.66	5.09	5.32	5.54	5.41	4.83	5.30	5.44	5.48	5.90	6.55	6.84	7.51	7.89	7.11	5.19
PXIL (₹ / kWh)	3.87	4.52	4.89	5.21	6.10	6.67	5.84	4.80	5.47	5.41	5.14	5.19	5.33	5.42	6.01	6.13	6.92	6.91	7.54	7.33	5.76
OTC Contracts (₹ / kWh)	3.53							4.10							4.50						
	26th Sep. - 2nd October							3rd - 9th October							10th-16th October						

Contract Date (2011)	17th Oct	19th Oct	20th Oct	21st Oct	22nd Oct	23rd Oct	24th Oct	25th Oct	26th Oct	27th Oct	28th Oct	29th Oct	30th Oct
IEX (₹ / kWh)	5.22	5.73	5.10	4.88	4.10	3.86	5.00	5.45	4.10	3.37	3.00	2.82	2.58
PXIL (₹ / kWh)	5.77	5.57	6.47	5.64	5.14	4.39	5.02	6.38	3.31	3.40	2.52	2.71	2.48
OTC Contracts (₹ / kWh)	4.24						3.94						
	17th - 23rd October						24th - 30th October						

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

Observations

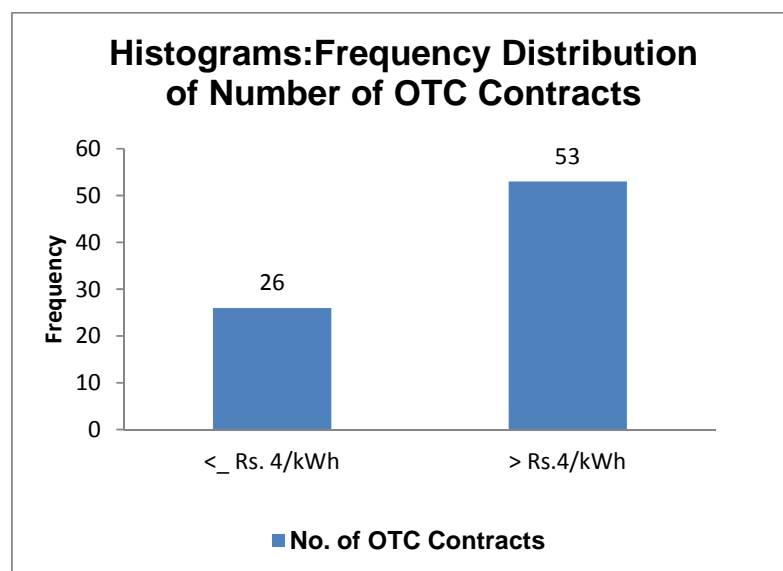
1. In the month of October, OTC contract prices were lower than the Indian Energy Exchange (IEX) and Power Exchange of India Ltd (PXIL) spot prices. During the month, prices at both the exchanges followed an upward trajectory except at the end of the

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reported period where prices at Power Exchanges were slightly lower than that of OTC. This is an interesting deviation from the normal trend observed during last 3 months. The minimum price in the exchanges during reported period was ₹ 2.48/kWh (PXIL, 30th October 2011) while that in the OTC market was ₹3.42/kWh (1st – 7th October 2011). Maximum price in Day-Ahead market at the exchange reached ₹7.89/kWh (IEX, 14th October 2011) and in OTC Market it was ₹7.86/kWh (29th September 2011) which was a peak power contract.

2. As for the number of contracts, 53 out of totals 79* contracts were entered above ₹4/kWh. There were a total 97 contracts including swap & banking during the month.
3. There has been one peak contract at ₹7.86/kWh executed for one day and floating rate contracts (at different hours of the day) benchmarked to day ahead Power Exchange price for 13 and 14 days duration respectively.

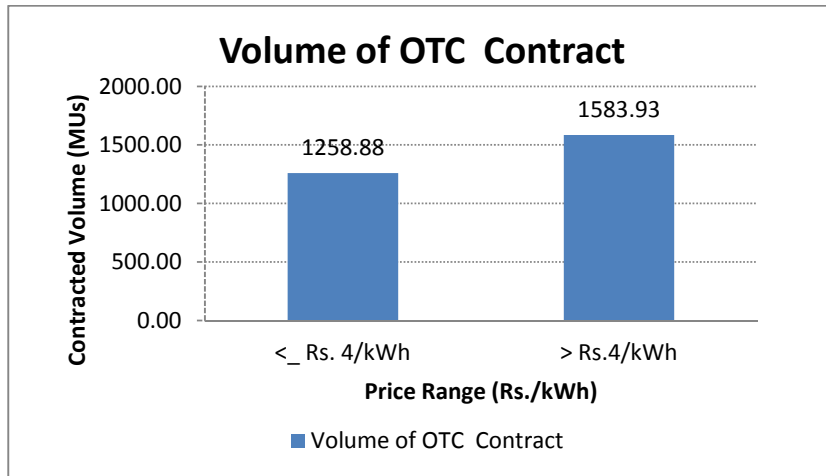
Chart 2: Histogram of Number of OTC Contracts



4. The cumulative volume traded above ₹ 4/kWh was 1583.93* MUs which is 56% of total OTC contracts for the reported period 26th September – 30th October).

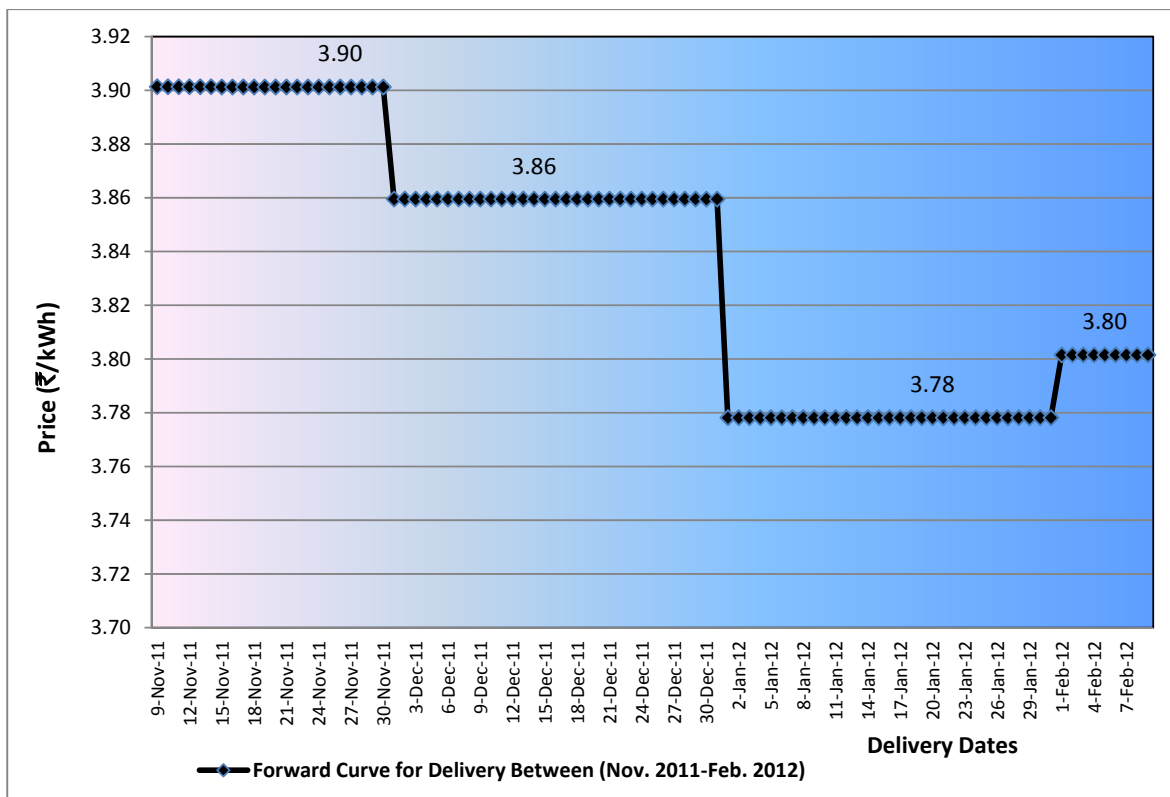
* Excluding swap /banking contracts since they do not have any sale price.

Chart 3: Cumulative Volume Traded below and above ₹ 4/kWh during 26th September – 30th October 2011



II. Three-Month Forward Curve of Power Prices

Chart 4: Forward Curve for 9th November 2011 - 9th February 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 November 2011 - 9th February 2012, i.e. 90 days ahead period of power supply. This forward curve is as on 9th November 2011 but based on 79 contract prices reported by trader's upto 30th October 2011.

Observations

1. The forward curve for the next three month period i.e. 9th November 2011 - 9th February 2012 generally followed a downward trajectory across the period. The prices for November and December deliveries have remained almost same ₹3.85/kWh in contracts executed in October. This is due to the fact that new contracts for November & December delivery executed in October have been contracted at prices similar to contacts executed in September (around ₹3.8/kWh).

Chart 4: Forward Curve in November for OTC Market, November 2011 - February 2012

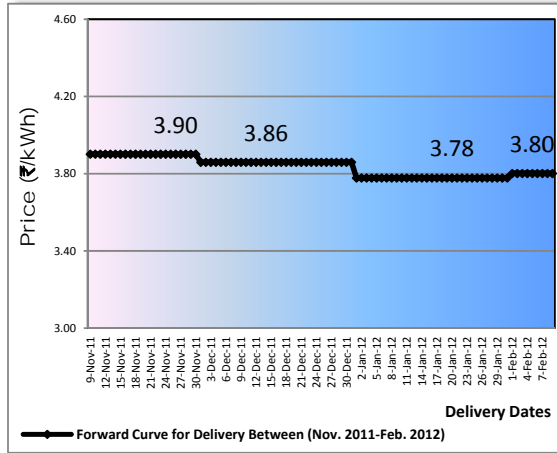
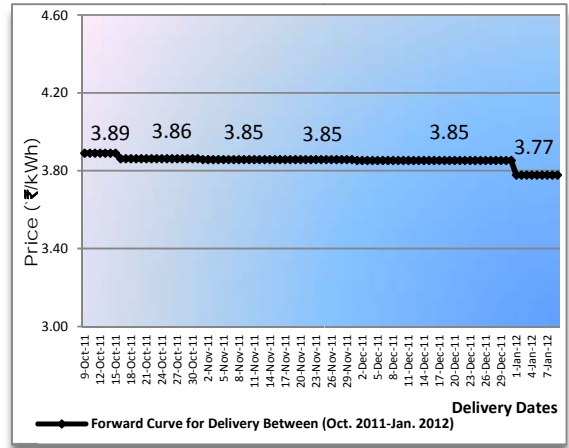


Chart 4.1: Forward Curve in October for OTC Market, October 2011 - January 2012

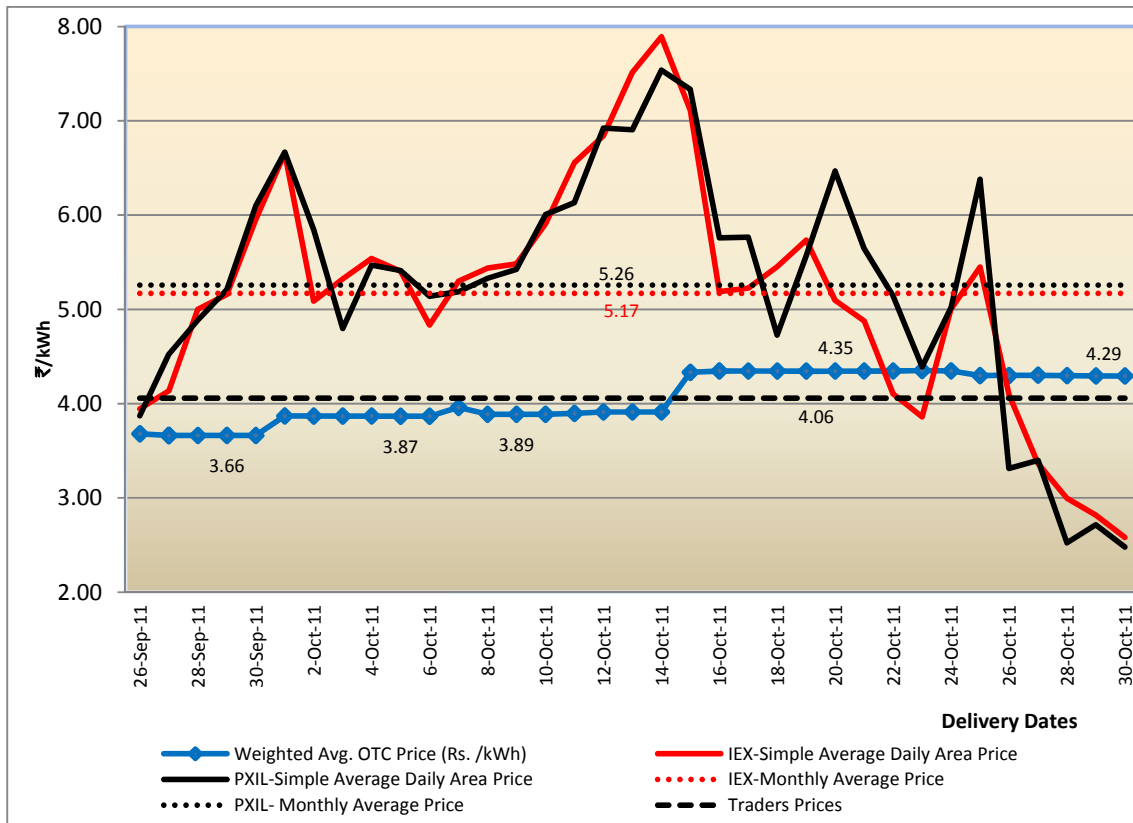


III. Post-facto Comparison of Prices in OTC Contracts and Power Exchanges (on Power Delivery Dates)

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 October 2011



Overall Comparative View between September and October 2011

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

Table 3: Number of Contracts Reported in September and October 2011^ψ

	Sep-11	Oct-11
Above three months and upto 12 months	2	2
One month or above	19	37
One week or above	14	15
Less than a week	13	43
Total	48	97

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 October (39 Contracts) than September, 2011 (21 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)

	September 2011 (29th August-25th September)		October 2011 (26th September - 30th October)	
	Maximum	Minimum	Maximum	Minimum
IEX	3.70 (24th September)	2.10 (18th September)	7.89 (14th October)	2.58(30th October)
PXIL	3.30 (25th September)	2.14 (11th September)	7.54 (14th October)	2.48(30th October)
OTC Contracts	7.07 (30th August)	3.03 (14th September)	7.86 (29th September)	3.42(1st-7th October)

^ψ Including swap/ banking contracts between different DISCOMS

Overall inferences

1. From Chart-1 (Contracted date price analysis), it is observed that a most of OTC contract prices were lower than the IEX and PXIL spot prices during the month. This is generally not the case.
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 for a buyer entering into OTC contract in September month for October delivery the price would be much lesser than the purchasing power in day ahead market Power Exchange in October . It is also seen that there have been a large number (43) of contracts for less than week period of delivery.
3. In Chart 4, the Forward Curve for 90 days ahead period (for 9th November 2011 to 9th February 2012 period of power delivery) is almost flat in the range of ₹3.80 - ₹3.90/kWh.

Annexure-I

Table 4: List of Trading Licensees who have undertaken Contracts in the period 26th September – 30th October 2011*

	Name of Licensee	26th Sep. - 2nd October	3rd - 9th October	10th-16th October	17th - 23rd October	24th - 30th October
1	PTC India Ltd.	Y(10)	Y(13)	Y(6)	Y(15)	Y(8)
2	NTPC Vidyut Vyapar Nigam Ltd.	Y(4)	Y(2)	Y(3)	Y(8)	Y(8)
3	JSW-PTCL	Y(2)	Y(2)	NIL	NIL	NIL
4	RPG	NIL	NIL	NIL	NIL	Y(1)
5	GMR	NIL	NIL	NIL	Y(2)	NIL
6	TPTCL	Y(2)	Y(1)	Y(4)	NIL	Y(5)
7	SCL	Y(1)	NIL	NIL	NIL	NIL
Total No. of Contracts		19	18	13	25	22
Total for month for all traders						97

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 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 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 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.