



CH Advisory 16-143

TO: Clearing Member Firms  
Chief Financial Officers  
Back Office Managers  
Margin Managers

FROM: CME Clearing

SUBJECT: Performance Bond Requirements

DATE: Thursday, March 31, 2016

***To receive advanced notification of Performance Bond (margin) changes, through our free automated mailing list, go to***

***<http://www.cmegroup.com/newsletter/web2lead/web2sf-old.html>***

***and subscribe to the Performance Bond Rates Advisory Notice listserver.***

As per the normal review of market volatility to ensure adequate collateral coverage, the Chicago Mercantile Exchange Inc., Clearing House Risk Management staff approved the performance bond requirements for the following products listed below.

The rates will be effective after the close of business on

**Friday, April 01, 2016.**

Current rates as of:

**Thursday, March 31, 2016.**

In this current advisory there are changes to the Short Option Minimum and/or the Volatility Scan Range. Below are descriptions of what each change affects:

The Short Option Minimum (SOM) is a charge that is applied only to portfolios concentrated in short options that do not generate a minimum margin requirement level when margins are calculated using the normal 16 SPAN scenarios. The SOM charge per short calls or short puts is a percentage of the outright margin on one underlying futures contract.

The volatility scan range is the change in implied volatility that is used in each of SPAN's 16 scenarios.

The advisory includes changes to certain products' splitting methodology from Split to Modified Split. The specific products can be found on page 10 of the advisory.

Please refer to Advisory #12-259 for more detail regarding the Modified Split methodology.

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

CC	Rate Type	Description	Change	ISO	Current Initial	Current Maintenance	New Initial	New Maintenance
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### Outright Rates

#### FX - Outright Rates

##### CME BLOOMBERG DOLLAR SPOT INDEX FUT (BDI)

BDI	Spec		New	USD			2,420	2,200
BDI	Hedge/Member		New	USD			2,200	2,200

#### NATURAL GAS - Outright Rates

##### SAN JUAN BASIS FUT (NJ)

NJ	Spec	Mths 13+	Increase	USD	220	200	242	220
NJ	Hedge/Member	Mths 13+	Increase	USD	200	200	220	220

#### PETROLEUM CRACKS AND SPREADS - Outright Rates

##### CHICAGO UNL GAS PL VS RBOB SPR (3C)

3C	Spec	Mnth 1	Increase	USD	5,869	5,335	6,600	6,000
3C	Hedge/Member	Mnth 1	Increase	USD	5,335	5,335	6,000	6,000

##### EUR1%FUEL OIL CARG FOB MED V FOBNWE (ENS)

ENS	Spec	Mths 2+	Increase	USD	1,287	1,170	1,485	1,350
ENS	Hedge/Member	Mths 2+	Increase	USD	1,170	1,170	1,350	1,350

##### EURO 3.5% FUEL OIL SPREAD (FK)

FK	Spec	Mnth 1	Increase	USD	4,950	4,500	5,500	5,000
FK	Hedge/Member	Mnth 1	Increase	USD	4,500	4,500	5,000	5,000

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

CC	Rate Type	Description	Change	ISO	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Intra Spreads</b>								
<b>ELECTRICITY - Intra Spreads</b>								
<b>PJM Financially Settled Monthly Futures - Peak - All Months (PJM MONTHLY)</b>								
JM	Spec		Increase	USD	3,080	2,800	3,300	3,000
JM	Hedge/Member		Increase	USD	2,800	2,800	3,000	3,000
<b>FX - Intra Spreads</b>								
<b>(CME BLOOMBERG DOLLAR SPOT INDEX FUT)</b>								
BDI	Spec		New	USD			484	440
BDI	Hedge/Member		New	USD			440	440
<b>PETROLEUM CRACKS AND SPREADS - Intra Spreads</b>								
<b>GROUP THREE UNLEADED GASOLINE (PLATTS) VS. RBOB Spread Swap - All Months (GRP THREE SUB-OCT GS (PLT) VS RBOB)</b>								
A8	Spec		Increase	USD	2,420	2,200	2,750	2,500
A8	Hedge/Member		Increase	USD	2,200	2,200	2,500	2,500
<b>Singapore Fuel Oil 380 cst (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures - All Months (MINI 380CST VS 3.5% FUEL OIL FUT)</b>								
MSB	Spec		Increase	USD	330	300	374	340
MSB	Hedge/Member		Increase	USD	300	300	340	340
<b>Singapore Fuel Oil 380 cst (Platts) vs. European 3.5% Fuel Oil Barges FOB Rdam (Platts) Futures - All Months (SING 380 FUEL OIL VS FUEL OIL ROTDM)</b>								
EVC	Spec		Increase	USD	3,300	3,000	3,740	3,400
EVC	Hedge/Member		Increase	USD	3,000	3,000	3,400	3,400

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Change	Ratio	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Inter-commodity Spread Rates</b>						
<b>ELECTRICITY - Inter-commodity Spread Rates</b>						
<b>AEP DAYTON HUB PEAK MONTHLY (NYM-VM - CME) vs HENRY HUB NATURAL GAS (NYM-NG, NN, HP)</b>						
Spread Credit Rate	Increase	+1:-1	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ERCOT NORTH 345 KV HUB DAY-AHEAD PEAK SWAP FUTURES (NY-ERE - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	55%	55%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ISO NEW ENGLAND NORTH EAST MASSACHUSETTS ZONE 5 MW OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-P8 - CME)</b>						
Spread Credit Rate	Decrease	+1:-194	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ISO NEW ENGLAND SOUTH EAST MASSACHUSETTS ZONE 5 MW OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-P5 - CME)</b>						
Spread Credit Rate	Decrease	+1:-194	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs MIDWEST ISO ILLINOIS HUB 5 MW PEAK CALENDAR-MONTH DAY-AHEAD SWAP FUTURES (NY-4Q - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs MIDWEST ISO MICHIGAN HUB 5 MW PEAK CALENDAR-MONTH DAY-AHEAD SWAP FUTURES (NY-HMW - CME)</b>						
Spread Credit Rate	Increase	+1:-11	40%	40%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs NYISO ZONE A PEAK LBMP SWAP FUTURES (NY-KA - CME)</b>						
Spread Credit Rate	Decrease	+1:-2	45%	45%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ONTARIO OFF-PEAK CALENDAR-MONTH SWAP FUTURES (NY-OFM - CME)</b>						
Spread Credit Rate	Increase	+1:-194	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ONTARIO PEAK CALENDAR-MONTH SWAP FUTURES (NY-OPM - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM AEP DAYTON HUB PEAK CALENDAR-MONTH LMP SWAP FUTURES (NY-VM - CME)</b>						
Spread Credit Rate	Increase	+1:-1	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM APS ZONE OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-W4 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	30%	30%	50%	50%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM APS ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-S4 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM BGE ZONE OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-R3 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	35%	35%	50%	50%

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Change	Ratio	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Inter-commodity Spread Rates</b>						
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM BGE ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-E3 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM DUQUESNE ZONE 5 MW PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-D5 - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM JCPL ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-J2 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	50%	50%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM METED ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-47 - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	50%	50%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM PECO ZONE 5 MW OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-4P - CME)</b>						
Spread Credit Rate	Increase	+1:-194	30%	30%	45%	45%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM PPL ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-L5 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-E4 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	40%	40%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH REAL-TIME LMP SWAP FUTURES (NY-N9 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	40%	40%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-J4 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB PEAK CALENDAR-MONTH REAL-TIME LMP SWAP FUTURES (NY-L1 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>PJM OFF-PEAK CALENDAR-MONTH LMP SWAP FUTURES (NY-JP - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Increase	+1:-1	35%	35%	60%	60%
<b>PJM PSEG ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-L6 - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Decrease	+11:-1	60%	60%	30%	30%
<b>PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP (NYM-E4 - CME) vs HENRY HUB NATURAL GAS (NYM-NG, NN, HP)</b>						
Spread Credit Rate	Increase	+194:-1	40%	40%	60%	60%

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Change	Ratio	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Inter-commodity Spread Rates</b>						
<b>PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH REAL-TIME LMP SWAP (NYM-N9 - CME) vs HENRY HUB NATURAL GAS (NYM-NG, NN, HP)</b>						
Spread Credit Rate	Increase	+194:-1	40%	40%	55%	55%
<b>PJM WESTERN HUB PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-J4 - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Increase	-11:+1	30%	30%	60%	60%
<b>PJM WESTERN HUB PEAK CALENDAR-MONTH REAL-TIME LMP SWAP FUTURES (NY-L1 - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Increase	-11:+1	30%	30%	60%	60%
<b>FX - Inter-commodity Spread Rates</b>						
<b>BDI USD Index vs. Europe (EC:BP:SF)</b>						
Spread Credit Rate	New	+100:+70:+20:+10			35%	35%
<b>BDI USD Index vs. G10 (JY:CD:BP:AD:SF:EC)</b>						
Spread Credit Rate	New	+100:+23:+14:+12:+7:+5:+39			70%	70%
<b>BDI USD Index vs. Largest Turnover (EC:JY:CD:MP:BP:AD:SF:KRW)</b>						
Spread Credit Rate	New	+100:+33:+20:+12:+10:+10:+6:+5:+4			85%	85%
<b>BDI USD Index vs. Pacific Rim (JY:CD:AD:KRW:CNH)</b>						
Spread Credit Rate	New	+100:+44:+27:+14:+7:+8			30%	30%
<b>BDI USD Index vs. Top 3 (EC:JY:MP)</b>						
Spread Credit Rate	New	+100:+51:+30:+19			50%	50%
<b>BDI USD Index vs. Top 5 (EC:JY:CD:MP:BP)</b>						
Spread Credit Rate	New	+100:+38:+23:+14:+13:+12			80%	80%
<b>BDI USD Index vs. Top 7 (EC:JY:CD:MP:BP:AD:SF)</b>						
Spread Credit Rate	New	+100:+34:+20:+13:+11:+10:+7:+5			85%	85%
<b>CME BLOOMBERG DOLLAR SPOT INDEX FUTURE (BDI - CME) vs EURO FX (EC - CME)</b>						
Spread Credit Rate	New	+1:+3			20%	20%

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Change	Ratio	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Inter-commodity Spread Rates</b>						
<b>NATURAL GAS - Inter-commodity Spread Rates</b>						
<b>AEP DAYTON HUB PEAK MONTHLY (NYM-VM - CME) vs HENRY HUB NATURAL GAS (NYM-NG, NN, HP)</b>						
Spread Credit Rate	Increase	+1:-1	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ERCOT NORTH 345 KV HUB DAY-AHEAD PEAK SWAP FUTURES (NY-ERE - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	55%	55%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ISO NEW ENGLAND NORTH EAST MASSACHUSETTS ZONE 5 MW OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-P8 - CME)</b>						
Spread Credit Rate	Decrease	+1:-194	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ISO NEW ENGLAND SOUTH EAST MASSACHUSETTS ZONE 5 MW OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-P5 - CME)</b>						
Spread Credit Rate	Decrease	+1:-194	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs MIDWEST ISO ILLINOIS HUB 5 MW PEAK CALENDAR-MONTH DAY-AHEAD SWAP FUTURES (NY-4Q - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs MIDWEST ISO MICHIGAN HUB 5 MW PEAK CALENDAR-MONTH DAY-AHEAD SWAP FUTURES (NY-HMW - CME)</b>						
Spread Credit Rate	Increase	+1:-11	40%	40%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs NYISO ZONE A PEAK LBMP SWAP FUTURES (NY-KA - CME)</b>						
Spread Credit Rate	Decrease	+1:-2	45%	45%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ONTARIO OFF-PEAK CALENDAR-MONTH SWAP FUTURES (NY-OFM - CME)</b>						
Spread Credit Rate	Increase	+1:-194	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs ONTARIO PEAK CALENDAR-MONTH SWAP FUTURES (NY-OPM - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM AEP DAYTON HUB PEAK CALENDAR-MONTH LMP SWAP FUTURES (NY-VM - CME)</b>						
Spread Credit Rate	Increase	+1:-1	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM APS ZONE OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-W4 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	30%	30%	50%	50%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM APS ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-S4 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM BGE ZONE OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-R3 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	35%	35%	50%	50%

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Change	Ratio	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Inter-commodity Spread Rates</b>						
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM BGE ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-E3 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM DUQUESNE ZONE 5 MW PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-D5 - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	40%	40%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM JCPL ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-J2 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	50%	50%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM METED ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-47 - CME)</b>						
Spread Credit Rate	Decrease	+1:-11	50%	50%	30%	30%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM PECO ZONE 5 MW OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-4P - CME)</b>						
Spread Credit Rate	Increase	+1:-194	30%	30%	45%	45%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM PPL ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-L5 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-E4 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	40%	40%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH REAL-TIME LMP SWAP FUTURES (NY-N9 - CME)</b>						
Spread Credit Rate	Increase	+1:-194	40%	40%	55%	55%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-J4 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>HENRY HUB NATURAL GAS FUTURES (NY-NG - CME) vs PJM WESTERN HUB PEAK CALENDAR-MONTH REAL-TIME LMP SWAP FUTURES (NY-L1 - CME)</b>						
Spread Credit Rate	Increase	+1:-11	30%	30%	60%	60%
<b>PJM OFF-PEAK CALENDAR-MONTH LMP SWAP FUTURES (NY-JP - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Increase	+1:-1	35%	35%	60%	60%
<b>PJM PSEG ZONE PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-L6 - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Decrease	+11:-1	60%	60%	30%	30%
<b>PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP (NYM-E4 - CME) vs HENRY HUB NATURAL GAS (NYM-NG, NN, HP)</b>						
Spread Credit Rate	Increase	+194:-1	40%	40%	60%	60%



## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Change	Ratio	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Inter-commodity Spread Rates</b>						
<b>PJM WESTERN HUB OFF-PEAK CALENDAR-MONTH REAL-TIME LMP SWAP (NYM-N9 - CME) vs HENRY HUB NATURAL GAS (NYM-NG, NN, HP)</b>						
Spread Credit Rate	Increase	+194:-1	40%	40%	55%	55%
<b>PJM WESTERN HUB PEAK CALENDAR-MONTH DAY-AHEAD LMP SWAP FUTURES (NY-J4 - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Increase	-11:+1	30%	30%	60%	60%
<b>PJM WESTERN HUB PEAK CALENDAR-MONTH REAL-TIME LMP SWAP FUTURES (NY-L1 - CME) vs HENRY HUB NATURAL GAS FUTURES (NY-NG - CME)</b>						
Spread Credit Rate	Increase	-11:+1	30%	30%	60%	60%
<b>REFINED PRODUCTS - Inter-commodity Spread Rates</b>						
<b>NY HARBOR RBOB (BLENDSTOCK) GAS (NYM-RB, RL, RT) vs GASOLINE EURO-BOB OXY (ARGUS) NWE BARGES SWAP (NYM-7H - CME)</b>						
Spread Credit Rate	Increase	+25:-3	80%	80%	89%	89%
<b>NY HARBOR RBOB (BLENDSTOCK) GAS (NYM-RB, RL, RT) vs GASOLINE EURO-BOB OXY (ARGUS) NWE BARGES SWAP (NYM-7H - CME)</b>						
Spread Credit Rate	Increase	+25:-3	80%	80%	89%	89%

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Tier Description	Change	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Short Option Minimum (SOM) Rate</b>						

### FX - Short Option Minimum (SOM) Rate

#### CME BLOOMBERG DOLLAR SPOT INDEX FUTURE (BDI) - SOM

Clearing Member Rate	New	1.430%	1.300%
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Splitting Methodology			
CC	Name	Current Splitting	New Splitting
7K	Gasoline Euro-bob Oxy NWE Barges (Argus) Crack Spread Futures	None	Modified Split
EOB	Argus Gasoline Eurobob Oxy Barges NWE Crack Spread (1000mt) Futures	None	Modified Split
GCE	Gasoline Euro-bob Oxy NWE Barges (Argus) Crack Spread Average Price Options	None	Modified Split
MAC	Mini Argus Gasoline Eurobob Oxy Barges NWE Crack Spread (100mt) Futures	None	Modified Split
EXR	RBOB Gasoline vs. Euro-bob Oxy NWE Barges (Argus) (350,000 gallons) Futures	None	Modified Split
XER	RBOB Gasoline vs. Euro-bob Oxy NWE Barges (Argus) Futures	None	Modified Split
RGE	RBOB Gasoline vs. Euro-bob Oxy NWE Barges (Argus) (1000mt) Average Price Options	None	Modified Split
MXB	Mini RBOB Gasoline vs. Gasoline Euro-bob Oxy NWE Barges (Argus) Futures	None	Modified Split

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	<u>Tier Description</u>	Change	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Volatility Scan (volScan) Rate</b>						
<b>FX - Volatility Scan (volScan) Rate</b>						
<b>CME BLOOMBERG DOLLAR SPOT INDEX FUTURE (BDI) - volScan</b>						
Clearing Member Rate		New				0.050

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	Tier Description	Change	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Volatility Scan (volScan) Rate</b>						

### NATURAL GAS - Volatility Scan (volScan) Rate

**HENRY HUB NATURAL GAS FUTURES (HHQ, KD, LN, LNW, MNG, NG, NGT, ON, ONW, U01, U02, U03, U04, U05, U06, U07, U08, U09, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31) - volScan**

Clearing Member Rate	Mnth45	Increase		0.010		0.013
Clearing Member Rate	Mnth46	Increase		0.010		0.013
Clearing Member Rate	Mnth47	Increase		0.010		0.013
Clearing Member Rate	Mnth48	Increase		0.010		0.013
Clearing Member Rate	Mnth49	Increase		0.010		0.013
Clearing Member Rate	Mnth50	Increase		0.010		0.013
Clearing Member Rate	Mnth51	Increase		0.010		0.013
Clearing Member Rate	Mnth52	Increase		0.010		0.013
Clearing Member Rate	Mnth53	Increase		0.010		0.013
Clearing Member Rate	Mnth54	Increase		0.010		0.013
Clearing Member Rate	Mnth55	Increase		0.010		0.013
Clearing Member Rate	Mnth56	Increase		0.010		0.013
Clearing Member Rate	Mnth57	Increase		0.010		0.013
Clearing Member Rate	Mnth58	Increase		0.010		0.013
Clearing Member Rate	Mnth59	Increase		0.010		0.013
Clearing Member Rate	Mnth60	Increase		0.010		0.013
Clearing Member Rate	Mnth61	Increase		0.010		0.013
Clearing Member Rate	Mnth62	Increase		0.010		0.013
Clearing Member Rate	Mnth63	Increase		0.010		0.013
Clearing Member Rate	Mnth64	Increase		0.010		0.013
Clearing Member Rate	Mnth65	Increase		0.010		0.013
Clearing Member Rate	Mnth66	Increase		0.010		0.013
Clearing Member Rate	Mnth67	Increase		0.010		0.013
Clearing Member Rate	Mnth68	Increase		0.010		0.013
Clearing Member Rate	Mnth69	Increase		0.010		0.013
Clearing Member Rate	Mnth70	Increase		0.010		0.013
Clearing Member Rate	Mnth71	Increase		0.010		0.013
Clearing Member Rate	Mnth72	Increase		0.010		0.013
Clearing Member Rate	Mnth73+	Increase		0.010		0.013

### **HENRY HUB NATURAL GAS PENULTIMATE FINANCIAL FUTURES (E7, HH, HP, NP, QG) - volScan**

Clearing Member Rate	Mnth45	Increase		0.010		0.013
Clearing Member Rate	Mnth46	Increase		0.010		0.013
Clearing Member Rate	Mnth47	Increase		0.010		0.013
Clearing Member Rate	Mnth48	Increase		0.010		0.013
Clearing Member Rate	Mnth49	Increase		0.010		0.013
Clearing Member Rate	Mnth50	Increase		0.010		0.013
Clearing Member Rate	Mnth51	Increase		0.010		0.013
Clearing Member Rate	Mnth52	Increase		0.010		0.013

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

Rate Type	<u>Tier Description</u>	Change	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Volatility Scan (volScan) Rate</b>						
Clearing Member Rate	Mnth53	Increase		0.010		0.013
Clearing Member Rate	Mnth54	Increase		0.010		0.013
Clearing Member Rate	Mnth55	Increase		0.010		0.013
Clearing Member Rate	Mnth56	Increase		0.010		0.013
Clearing Member Rate	Mnth57	Increase		0.010		0.013
Clearing Member Rate	Mnth58	Increase		0.010		0.013
Clearing Member Rate	Mnth59	Increase		0.010		0.013
Clearing Member Rate	Mnth60	Increase		0.010		0.013
Clearing Member Rate	Mnth61	Increase		0.010		0.013
Clearing Member Rate	Mnth62	Increase		0.010		0.013
Clearing Member Rate	Mnth63	Increase		0.010		0.013
Clearing Member Rate	Mnth64	Increase		0.010		0.013
Clearing Member Rate	Mnth65	Increase		0.010		0.013
Clearing Member Rate	Mnth66	Increase		0.010		0.013
Clearing Member Rate	Mnth67	Increase		0.010		0.013
Clearing Member Rate	Mnth68	Increase		0.010		0.013
Clearing Member Rate	Mnth69	Increase		0.010		0.013
Clearing Member Rate	Mnth70	Increase		0.010		0.013
Clearing Member Rate	Mnth71	Increase		0.010		0.013
Clearing Member Rate	Mnth72	Increase		0.010		0.013
Clearing Member Rate	Mnth73+	Increase		0.010		0.013
<b>NYMEX NATURAL GAS (H.HUB LTD) FUT (E7, HH, HHT, NN, NNT) - volScan</b>						
Clearing Member Rate	Mnth45	Increase		0.010		0.013
Clearing Member Rate	Mnth46	Increase		0.010		0.013
Clearing Member Rate	Mnth47	Increase		0.010		0.013
Clearing Member Rate	Mnth48	Increase		0.010		0.013
Clearing Member Rate	Mnth49	Increase		0.010		0.013
Clearing Member Rate	Mnth50	Increase		0.010		0.013
Clearing Member Rate	Mnth51	Increase		0.010		0.013
Clearing Member Rate	Mnth52	Increase		0.010		0.013
Clearing Member Rate	Mnth53	Increase		0.010		0.013
Clearing Member Rate	Mnth54	Increase		0.010		0.013
Clearing Member Rate	Mnth55	Increase		0.010		0.013
Clearing Member Rate	Mnth56	Increase		0.010		0.013
Clearing Member Rate	Mnth57	Increase		0.010		0.013
Clearing Member Rate	Mnth58	Increase		0.010		0.013
Clearing Member Rate	Mnth59	Increase		0.010		0.013
Clearing Member Rate	Mnth60	Increase		0.010		0.013
Clearing Member Rate	Mnth61	Increase		0.010		0.013
Clearing Member Rate	Mnth62	Increase		0.010		0.013
Clearing Member Rate	Mnth63	Increase		0.010		0.013
Clearing Member Rate	Mnth64	Increase		0.010		0.013

## **SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS**

Rate Type	<u>Tier Description</u>	Change	Current Initial	Current Maintenance	New Initial	New Maintenance
<b>Volatility Scan (volScan) Rate</b>						
Clearing Member Rate	Mnth65	Increase		0.010		0.013
Clearing Member Rate	Mnth66	Increase		0.010		0.013
Clearing Member Rate	Mnth67	Increase		0.010		0.013
Clearing Member Rate	Mnth68	Increase		0.010		0.013
Clearing Member Rate	Mnth69	Increase		0.010		0.013
Clearing Member Rate	Mnth70	Increase		0.010		0.013
Clearing Member Rate	Mnth71	Increase		0.010		0.013
Clearing Member Rate	Mnth72	Increase		0.010		0.013
Clearing Member Rate	Mnth73+	Increase		0.010		0.013