



21-336

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

FROM: CME Clearing

SUBJECT: Performance Bond Requirements

DATE: Tuesday, September 21, 2021

***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

**Wednesday, September 22, 2021.**

Current rates as of:

**Tuesday, September 21, 2021.**

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                               | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Outright Rates</b>                            |           |             |          |     |                 |                     |             |                 |
| <b>AGRICULTURE - Outright Rates</b>              |           |             |          |     |                 |                     |             |                 |
| <b>BLACK SEA WHEAT FIN STL PLATTS FUT (BWF)</b>  |           |             |          |     |                 |                     |             |                 |
| BWF                                              | HRP       |             | Increase | USD | 825             | 750                 | 880         | 800             |
| BWF                                              | NON HRP   |             | Increase | USD | 750             | 750                 | 800         | 800             |
| <b>UAN FOB NOLA FUTURES (UNO)</b>                |           |             |          |     |                 |                     |             |                 |
| UNO                                              | HRP       |             | Increase | USD | 2,860           | 2,600               | 3,740       | 3,400           |
| UNO                                              | NON HRP   |             | Increase | USD | 2,600           | 2,600               | 3,400       | 3,400           |
| <b>UKRAINIAN WHEAT (PLATTS) FUTURES (UWF)</b>    |           |             |          |     |                 |                     |             |                 |
| UWF                                              | HRP       |             | Increase | USD | 825             | 750                 | 880         | 800             |
| UWF                                              | NON HRP   |             | Increase | USD | 750             | 750                 | 800         | 800             |
| <b>UREA (GRANULAR) FOB EGYPT FUTURES (UFE)</b>   |           |             |          |     |                 |                     |             |                 |
| UFE                                              | HRP       |             | Increase | USD | 3,300           | 3,000               | 4,400       | 4,000           |
| UFE                                              | NON HRP   |             | Increase | USD | 3,000           | 3,000               | 4,000       | 4,000           |
| <b>UREA (GRANULAR) FOB MIDDLE EAST FUT (UME)</b> |           |             |          |     |                 |                     |             |                 |
| UME                                              | HRP       | Month 1     | Increase | USD | 3,300           | 3,000               | 4,620       | 4,200           |
| UME                                              | NON HRP   | Month 1     | Increase | USD | 3,000           | 3,000               | 4,200       | 4,200           |
| UME                                              | HRP       | Months 2+   | Increase | USD | 3,300           | 3,000               | 4,620       | 4,200           |
| UME                                              | NON HRP   | Months 2+   | Increase | USD | 3,000           | 3,000               | 4,200       | 4,200           |
| <b>UREA (GRANULAR) FOB US GULF FUTURES (UFV)</b> |           |             |          |     |                 |                     |             |                 |
| UFV                                              | HRP       | Months 1-6  | Increase | USD | 3,080           | 2,800               | 3,630       | 3,300           |
| UFV                                              | NON HRP   | Months 1-6  | Increase | USD | 2,800           | 2,800               | 3,300       | 3,300           |
| UFV                                              | HRP       | Months 7+   | Increase | USD | 3,080           | 2,800               | 3,630       | 3,300           |
| UFV                                              | NON HRP   | Months 7+   | Increase | USD | 2,800           | 2,800               | 3,300       | 3,300           |
| <b>CRUDE OIL SPREADS - Outright Rates</b>        |           |             |          |     |                 |                     |             |                 |
| <b>MARS (ARGUS) V WTI FUT (YX)</b>               |           |             |          |     |                 |                     |             |                 |
| YX                                               | HRP       | Mnth 1      | Increase | USD | 946             | 860                 | 1,100       | 1,000           |
| YX                                               | NON HRP   | Mnth 1      | Increase | USD | 860             | 860                 | 1,000       | 1,000           |
| YX                                               | HRP       | Mnth 2-7    | Increase | USD | 913             | 830                 | 1,100       | 1,000           |
| YX                                               | NON HRP   | Mnth 2-7    | Increase | USD | 830             | 830                 | 1,000       | 1,000           |
| <b>MARS (ARGUS) V WTI TRD MTH FUT (YV)</b>       |           |             |          |     |                 |                     |             |                 |
| YV                                               | HRP       | Mnth 1      | Increase | USD | 990             | 900                 | 1,210       | 1,100           |
| YV                                               | NON HRP   | Mnth 1      | Increase | USD | 900             | 900                 | 1,100       | 1,100           |
| YV                                               | HRP       | Mnth 2      | Increase | USD | 990             | 900                 | 1,210       | 1,100           |
| YV                                               | NON HRP   | Mnth 2      | Increase | USD | 900             | 900                 | 1,100       | 1,100           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                               | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Outright Rates</b>                            |           |             |          |     |                 |                     |             |                 |
| <b>ELECTRICITY - Outright Rates</b>              |           |             |          |     |                 |                     |             |                 |
| <b>GERMAN POWER BASELOAD CAL MONTH FUT (DEB)</b> |           |             |          |     |                 |                     |             |                 |
| DEB                                              | HRP       | Mnth 1      | Increase | EUR | 11,550          | 10,500              | 15,400      | 14,000          |
| DEB                                              | NON HRP   | Mnth 1      | Increase | EUR | 10,500          | 10,500              | 14,000      | 14,000          |
| DEB                                              | HRP       | Mnth 2      | Increase | EUR | 11,550          | 10,500              | 15,400      | 14,000          |
| DEB                                              | NON HRP   | Mnth 2      | Increase | EUR | 10,500          | 10,500              | 14,000      | 14,000          |
| DEB                                              | HRP       | Mnth 3      | Increase | EUR | 11,440          | 10,400              | 15,400      | 14,000          |
| DEB                                              | NON HRP   | Mnth 3      | Increase | EUR | 10,400          | 10,400              | 14,000      | 14,000          |
| DEB                                              | HRP       | Mnths 4-9   | Increase | EUR | 11,330          | 10,300              | 15,400      | 14,000          |
| DEB                                              | NON HRP   | Mnths 4-9   | Increase | EUR | 10,300          | 10,300              | 14,000      | 14,000          |
| <b>GERMAN POWER PEAKLOAD CAL MONTH FUT (DEP)</b> |           |             |          |     |                 |                     |             |                 |
| DEP                                              | HRP       | Mnth 1      | Increase | EUR | 2,970           | 2,700               | 4,400       | 4,000           |
| DEP                                              | NON HRP   | Mnth 1      | Increase | EUR | 2,700           | 2,700               | 4,000       | 4,000           |
| DEP                                              | HRP       | Mnth 2      | Increase | EUR | 2,530           | 2,300               | 3,850       | 3,500           |
| DEP                                              | NON HRP   | Mnth 2      | Increase | EUR | 2,300           | 2,300               | 3,500       | 3,500           |
| DEP                                              | HRP       | Mnth 3      | Increase | EUR | 2,420           | 2,200               | 3,630       | 3,300           |
| DEP                                              | NON HRP   | Mnth 3      | Increase | EUR | 2,200           | 2,200               | 3,300       | 3,300           |
| DEP                                              | HRP       | Mnths 4-9   | Increase | EUR | 2,200           | 2,000               | 3,300       | 3,000           |
| DEP                                              | NON HRP   | Mnths 4-9   | Increase | EUR | 2,000           | 2,000               | 3,000       | 3,000           |
| <b>ITALIAN POWER BASELOAD GME CAL FUT (ITB)</b>  |           |             |          |     |                 |                     |             |                 |
| ITB                                              | HRP       | Mnth 1      | Increase | EUR | 4,620           | 4,200               | 6,820       | 6,200           |
| ITB                                              | NON HRP   | Mnth 1      | Increase | EUR | 4,200           | 4,200               | 6,200       | 6,200           |
| ITB                                              | HRP       | Mnth 2      | Increase | EUR | 4,400           | 4,000               | 6,600       | 6,000           |
| ITB                                              | NON HRP   | Mnth 2      | Increase | EUR | 4,000           | 4,000               | 6,000       | 6,000           |
| ITB                                              | HRP       | Mnth 3      | Increase | EUR | 4,125           | 3,750               | 6,160       | 5,600           |
| ITB                                              | NON HRP   | Mnth 3      | Increase | EUR | 3,750           | 3,750               | 5,600       | 5,600           |
| ITB                                              | HRP       | Mnths 4-9   | Increase | EUR | 4,125           | 3,750               | 6,160       | 5,600           |
| ITB                                              | NON HRP   | Mnths 4-9   | Increase | EUR | 3,750           | 3,750               | 5,600       | 5,600           |
| <b>ITALIAN POWER PEAKLOAD GME CAL FUT (ITP)</b>  |           |             |          |     |                 |                     |             |                 |
| ITP                                              | HRP       | Mnth 1      | Increase | EUR | 2,475           | 2,250               | 3,850       | 3,500           |
| ITP                                              | NON HRP   | Mnth 1      | Increase | EUR | 2,250           | 2,250               | 3,500       | 3,500           |
| ITP                                              | HRP       | Mnth 2      | Increase | EUR | 2,475           | 2,250               | 3,850       | 3,500           |
| ITP                                              | NON HRP   | Mnth 2      | Increase | EUR | 2,250           | 2,250               | 3,500       | 3,500           |
| ITP                                              | HRP       | Mnth 3      | Increase | EUR | 2,200           | 2,000               | 3,300       | 3,000           |
| ITP                                              | NON HRP   | Mnth 3      | Increase | EUR | 2,000           | 2,000               | 3,000       | 3,000           |
| ITP                                              | HRP       | Mnths 4-9   | Increase | EUR | 2,200           | 2,000               | 3,300       | 3,000           |
| ITP                                              | NON HRP   | Mnths 4-9   | Increase | EUR | 2,000           | 2,000               | 3,000       | 3,000           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC | Rate Type | Description | Change | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|----|-----------|-------------|--------|-----|-----------------|---------------------|-------------|-----------------|
|----|-----------|-------------|--------|-----|-----------------|---------------------|-------------|-----------------|

### Outright Rates

#### **METALS - Outright Rates**

#### **UXC URANIUM U3O8 FUTURES (UX)**

|    |         |  |          |     |     |     |     |     |
|----|---------|--|----------|-----|-----|-----|-----|-----|
| UX | HRP     |  | Increase | USD | 660 | 600 | 792 | 720 |
| UX | NON HRP |  | Increase | USD | 600 | 600 | 720 | 720 |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                               | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Outright Rates</b>                            |           |             |          |     |                 |                     |             |                 |
| <b>NATURAL GAS - Outright Rates</b>              |           |             |          |     |                 |                     |             |                 |
| <b>DUTCH TTF NAT GAS FIN M-1 AVG PRC (TTB)</b>   |           |             |          |     |                 |                     |             |                 |
| TTB                                              | HRP       | Mnth 1      | Increase | USD | 37,950          | 34,500              | 44,990      | 40,900          |
| TTB                                              | NON HRP   | Mnth 1      | Increase | USD | 34,500          | 34,500              | 40,900      | 40,900          |
| TTB                                              | HRP       | Mnths 2     | Increase | USD | 35,970          | 32,700              | 42,900      | 39,000          |
| TTB                                              | NON HRP   | Mnths 2     | Increase | USD | 32,700          | 32,700              | 39,000      | 39,000          |
| TTB                                              | HRP       | Mnths 3     | Increase | USD | 34,320          | 31,200              | 41,360      | 37,600          |
| TTB                                              | NON HRP   | Mnths 3     | Increase | USD | 31,200          | 31,200              | 37,600      | 37,600          |
| TTB                                              | HRP       | Mnths 4-6   | Increase | USD | 34,320          | 31,200              | 41,360      | 37,600          |
| TTB                                              | NON HRP   | Mnths 4-6   | Increase | USD | 31,200          | 31,200              | 37,600      | 37,600          |
| <b>DUTCH TTF NATURAL GAS CAL MONTH FUT (TTF)</b> |           |             |          |     |                 |                     |             |                 |
| TTF                                              | HRP       | Mnth 1      | Increase | EUR | 8,030           | 7,300               | 9,570       | 8,700           |
| TTF                                              | NON HRP   | Mnth 1      | Increase | EUR | 7,300           | 7,300               | 8,700       | 8,700           |
| TTF                                              | HRP       | Mnth 2      | Increase | EUR | 7,590           | 6,900               | 9,130       | 8,300           |
| TTF                                              | NON HRP   | Mnth 2      | Increase | EUR | 6,900           | 6,900               | 8,300       | 8,300           |
| TTF                                              | HRP       | Mnth 3      | Increase | EUR | 7,260           | 6,600               | 8,800       | 8,000           |
| TTF                                              | NON HRP   | Mnth 3      | Increase | EUR | 6,600           | 6,600               | 8,000       | 8,000           |
| TTF                                              | HRP       | Mnths 4-6   | Increase | EUR | 7,260           | 6,600               | 8,800       | 8,000           |
| TTF                                              | NON HRP   | Mnths 4-6   | Increase | EUR | 6,600           | 6,600               | 8,000       | 8,000           |
| <b>DUTCH TTF NATURAL GAS FIN CAL M (TTG)</b>     |           |             |          |     |                 |                     |             |                 |
| TTG                                              | HRP       | Mnth 1      | Increase | EUR | 8,030           | 7,300               | 9,570       | 8,700           |
| TTG                                              | NON HRP   | Mnth 1      | Increase | EUR | 7,300           | 7,300               | 8,700       | 8,700           |
| TTG                                              | HRP       | Mnth 2      | Increase | EUR | 7,590           | 6,900               | 9,130       | 8,300           |
| TTG                                              | NON HRP   | Mnth 2      | Increase | EUR | 6,900           | 6,900               | 8,300       | 8,300           |
| TTG                                              | HRP       | Mnth 3      | Increase | EUR | 7,260           | 6,600               | 8,800       | 8,000           |
| TTG                                              | NON HRP   | Mnth 3      | Increase | EUR | 6,600           | 6,600               | 8,000       | 8,000           |
| TTG                                              | HRP       | Mnths 4-6   | Increase | EUR | 7,260           | 6,600               | 8,800       | 8,000           |
| TTG                                              | NON HRP   | Mnths 4-6   | Increase | EUR | 6,600           | 6,600               | 8,000       | 8,000           |
| <b>DUTCH TTF NATURAL GAS FIN DAY AHEAD (TTI)</b> |           |             |          |     |                 |                     |             |                 |
| TTI                                              | HRP       | Mnth 1      | Increase | EUR | 8,030           | 7,300               | 9,570       | 8,700           |
| TTI                                              | NON HRP   | Mnth 1      | Increase | EUR | 7,300           | 7,300               | 8,700       | 8,700           |
| TTI                                              | HRP       | Mnth 2      | Increase | EUR | 7,590           | 6,900               | 9,130       | 8,300           |
| TTI                                              | NON HRP   | Mnth 2      | Increase | EUR | 6,900           | 6,900               | 8,300       | 8,300           |
| TTI                                              | HRP       | Mnth 3      | Increase | EUR | 7,260           | 6,600               | 8,800       | 8,000           |
| TTI                                              | NON HRP   | Mnth 3      | Increase | EUR | 6,600           | 6,600               | 8,000       | 8,000           |
| TTI                                              | HRP       | Mnths 4-6   | Increase | EUR | 7,260           | 6,600               | 8,800       | 8,000           |
| TTI                                              | NON HRP   | Mnths 4-6   | Increase | EUR | 6,600           | 6,600               | 8,000       | 8,000           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                               | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Outright Rates</b>                            |           |             |          |     |                 |                     |             |                 |
| <b>DUTCH TTF NATURAL GAS FRONT MTH FUT (TTE)</b> |           |             |          |     |                 |                     |             |                 |
| TTE                                              | HRP       | Mnth 1      | Increase | USD | 37,950          | 34,500              | 44,990      | 40,900          |
| TTE                                              | NON HRP   | Mnth 1      | Increase | USD | 34,500          | 34,500              | 40,900      | 40,900          |
| TTE                                              | HRP       | Mnths 2     | Increase | USD | 35,970          | 32,700              | 42,900      | 39,000          |
| TTE                                              | NON HRP   | Mnths 2     | Increase | USD | 32,700          | 32,700              | 39,000      | 39,000          |
| TTE                                              | HRP       | Mnths 3     | Increase | USD | 34,320          | 31,200              | 41,360      | 37,600          |
| TTE                                              | NON HRP   | Mnths 3     | Increase | USD | 31,200          | 31,200              | 37,600      | 37,600          |
| TTE                                              | HRP       | Mnths 4-6   | Increase | USD | 34,320          | 31,200              | 41,360      | 37,600          |
| TTE                                              | NON HRP   | Mnths 4-6   | Increase | USD | 31,200          | 31,200              | 37,600      | 37,600          |
| <b>LNG JAPAN KOREA MARKER PLATTS FUT (JKM)</b>   |           |             |          |     |                 |                     |             |                 |
| JKM                                              | HRP       | Month 1     | Increase | USD | 37,400          | 34,000              | 44,000      | 40,000          |
| JKM                                              | NON HRP   | Month 1     | Increase | USD | 34,000          | 34,000              | 40,000      | 40,000          |
| JKM                                              | HRP       | Month 2     | Increase | USD | 37,400          | 34,000              | 44,000      | 40,000          |
| JKM                                              | NON HRP   | Month 2     | Increase | USD | 34,000          | 34,000              | 40,000      | 40,000          |
| JKM                                              | HRP       | Month 3     | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKM                                              | NON HRP   | Month 3     | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |
| JKM                                              | HRP       | Mnths 4-5   | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKM                                              | NON HRP   | Mnths 4-5   | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |
| JKM                                              | HRP       | Mnths 6     | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKM                                              | NON HRP   | Mnths 6     | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |
| <b>LNG JAPAN KOREA MRK YEN FUT (JKY)</b>         |           |             |          |     |                 |                     |             |                 |
| JKY                                              | HRP       | Month 1     | Increase | JPY | 4,092,000       | 3,720,000           | 4,812,500   | 4,375,000       |
| JKY                                              | NON HRP   | Month 1     | Increase | JPY | 3,720,000       | 3,720,000           | 4,375,000   | 4,375,000       |
| JKY                                              | HRP       | Month 2     | Increase | JPY | 4,092,000       | 3,720,000           | 4,812,500   | 4,375,000       |
| JKY                                              | NON HRP   | Month 2     | Increase | JPY | 3,720,000       | 3,720,000           | 4,375,000   | 4,375,000       |
| JKY                                              | HRP       | Month 3     | Increase | JPY | 3,960,000       | 3,600,000           | 4,691,500   | 4,265,000       |
| JKY                                              | NON HRP   | Month 3     | Increase | JPY | 3,600,000       | 3,600,000           | 4,265,000   | 4,265,000       |
| JKY                                              | HRP       | Mnths 4-6   | Increase | JPY | 3,960,000       | 3,600,000           | 4,691,500   | 4,265,000       |
| JKY                                              | NON HRP   | Mnths 4-6   | Increase | JPY | 3,600,000       | 3,600,000           | 4,265,000   | 4,265,000       |
| <b>LNG JAPAN/KOREA MARKER (PLATTS) BAC (JKB)</b> |           |             |          |     |                 |                     |             |                 |
| JKB                                              | HRP       | Month 1     | Increase | USD | 37,400          | 34,000              | 44,000      | 40,000          |
| JKB                                              | NON HRP   | Month 1     | Increase | USD | 34,000          | 34,000              | 40,000      | 40,000          |
| JKB                                              | HRP       | Month 2     | Increase | USD | 37,400          | 34,000              | 44,000      | 40,000          |
| JKB                                              | NON HRP   | Month 2     | Increase | USD | 34,000          | 34,000              | 40,000      | 40,000          |
| JKB                                              | HRP       | Month 3-5   | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKB                                              | NON HRP   | Month 3-5   | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |
| JKB                                              | HRP       | Mnths 6     | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKB                                              | NON HRP   | Mnths 6     | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                               | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Outright Rates</b>                            |           |             |          |     |                 |                     |             |                 |
| <b>LNG JAPAN/KOREA MARKER (PLATTS) FRO (JKF)</b> |           |             |          |     |                 |                     |             |                 |
| JKF                                              | HRP       | Month 1     | Increase | USD | 37,400          | 34,000              | 44,000      | 40,000          |
| JKF                                              | NON HRP   | Month 1     | Increase | USD | 34,000          | 34,000              | 40,000      | 40,000          |
| JKF                                              | HRP       | Month 2     | Increase | USD | 37,400          | 34,000              | 44,000      | 40,000          |
| JKF                                              | NON HRP   | Month 2     | Increase | USD | 34,000          | 34,000              | 40,000      | 40,000          |
| JKF                                              | HRP       | Month 3-5   | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKF                                              | NON HRP   | Month 3-5   | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |
| JKF                                              | HRP       | Mnths 6     | Increase | USD | 36,300          | 33,000              | 42,900      | 39,000          |
| JKF                                              | NON HRP   | Mnths 6     | Increase | USD | 33,000          | 33,000              | 39,000      | 39,000          |
| <b>UK NBP NAT GAS CAL MTH FUT (UKG)</b>          |           |             |          |     |                 |                     |             |                 |
| UKG                                              | HRP       | Mnth 1      | Increase | GBP | 6,050           | 5,500               | 9,075       | 8,250           |
| UKG                                              | NON HRP   | Mnth 1      | Increase | GBP | 5,500           | 5,500               | 8,250       | 8,250           |
| UKG                                              | HRP       | Mnth 2      | Increase | GBP | 5,610           | 5,100               | 8,360       | 7,600           |
| UKG                                              | NON HRP   | Mnth 2      | Increase | GBP | 5,100           | 5,100               | 7,600       | 7,600           |
| UKG                                              | HRP       | Mnth 3      | Increase | GBP | 5,280           | 4,800               | 7,920       | 7,200           |
| UKG                                              | NON HRP   | Mnth 3      | Increase | GBP | 4,800           | 4,800               | 7,200       | 7,200           |
| UKG                                              | HRP       | Mnths 4-9   | Increase | GBP | 4,620           | 4,200               | 6,930       | 6,300           |
| UKG                                              | NON HRP   | Mnths 4-9   | Increase | GBP | 4,200           | 4,200               | 6,300       | 6,300           |
| <b>UK NBP NATURAL GAS FRONT MTH FUT (NBP)</b>    |           |             |          |     |                 |                     |             |                 |
| NBP                                              | HRP       | Mnth 1      | Increase | USD | 27,060          | 24,600              | 39,930      | 36,300          |
| NBP                                              | NON HRP   | Mnth 1      | Increase | USD | 24,600          | 24,600              | 36,300      | 36,300          |
| NBP                                              | HRP       | Mnths 2     | Increase | USD | 25,080          | 22,800              | 36,850      | 33,500          |
| NBP                                              | NON HRP   | Mnths 2     | Increase | USD | 22,800          | 22,800              | 33,500      | 33,500          |
| NBP                                              | HRP       | Mnths 3+    | Increase | USD | 20,680          | 18,800              | 30,580      | 27,800          |
| NBP                                              | NON HRP   | Mnths 3+    | Increase | USD | 18,800          | 18,800              | 27,800      | 27,800          |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                              | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|-------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Outright Rates</b>                           |           |             |          |     |                 |                     |             |                 |
| <b>NGL/PETROCHEMICALS - Outright Rates</b>      |           |             |          |     |                 |                     |             |                 |
| <b>ARGUS PROPAN FAR EST INDEX FUT (7E)</b>      |           |             |          |     |                 |                     |             |                 |
| 7E                                              | HRP       | Mnth 1      | Decrease | USD | 52,800          | 48,000              | 46,200      | 42,000          |
| 7E                                              | NON HRP   | Mnth 1      | Decrease | USD | 48,000          | 48,000              | 42,000      | 42,000          |
| 7E                                              | HRP       | Mnth 2      | Decrease | USD | 50,600          | 46,000              | 44,000      | 40,000          |
| 7E                                              | NON HRP   | Mnth 2      | Decrease | USD | 46,000          | 46,000              | 40,000      | 40,000          |
| 7E                                              | HRP       | Mnths 3-4   | Decrease | USD | 38,500          | 35,000              | 36,300      | 33,000          |
| 7E                                              | NON HRP   | Mnths 3-4   | Decrease | USD | 35,000          | 35,000              | 33,000      | 33,000          |
| <b>ARGUS PROPAN(SAUDI ARAMCO) FUT (9N)</b>      |           |             |          |     |                 |                     |             |                 |
| 9N                                              | HRP       | Mnth 1      | Decrease | USD | 48,400          | 44,000              | 44,000      | 40,000          |
| 9N                                              | NON HRP   | Mnth 1      | Decrease | USD | 44,000          | 44,000              | 40,000      | 40,000          |
| 9N                                              | HRP       | Mnths 2-3   | Decrease | USD | 41,800          | 38,000              | 38,500      | 35,000          |
| 9N                                              | NON HRP   | Mnths 2-3   | Decrease | USD | 38,000          | 38,000              | 35,000      | 35,000          |
| 9N                                              | HRP       | Mnths 4+    | Decrease | USD | 33,000          | 30,000              | 30,800      | 28,000          |
| 9N                                              | NON HRP   | Mnths 4+    | Decrease | USD | 30,000          | 30,000              | 28,000      | 28,000          |
| <b>MIN ARGUS PROPANE SAUDI ARAMCO FUT (MAS)</b> |           |             |          |     |                 |                     |             |                 |
| MAS                                             | HRP       | Mnth 1      | Decrease | USD | 4,840           | 4,400               | 4,400       | 4,000           |
| MAS                                             | NON HRP   | Mnth 1      | Decrease | USD | 4,400           | 4,400               | 4,000       | 4,000           |
| MAS                                             | HRP       | Mnths 2-3   | Decrease | USD | 4,180           | 3,800               | 3,850       | 3,500           |
| MAS                                             | NON HRP   | Mnths 2-3   | Decrease | USD | 3,800           | 3,800               | 3,500       | 3,500           |
| MAS                                             | HRP       | Mnths 4+    | Decrease | USD | 3,300           | 3,000               | 3,080       | 2,800           |
| MAS                                             | NON HRP   | Mnths 4+    | Decrease | USD | 3,000           | 3,000               | 2,800       | 2,800           |
| <b>MINI ARGUS PROPANE FAR EAST IDX (MAE)</b>    |           |             |          |     |                 |                     |             |                 |
| MAE                                             | HRP       | Mnth 1      | Decrease | USD | 5,280           | 4,800               | 4,620       | 4,200           |
| MAE                                             | NON HRP   | Mnth 1      | Decrease | USD | 4,800           | 4,800               | 4,200       | 4,200           |
| MAE                                             | HRP       | Mnth 2      | Decrease | USD | 5,060           | 4,600               | 4,400       | 4,000           |
| MAE                                             | NON HRP   | Mnth 2      | Decrease | USD | 4,600           | 4,600               | 4,000       | 4,000           |
| MAE                                             | HRP       | Mnths 3-4   | Decrease | USD | 3,850           | 3,500               | 3,630       | 3,300           |
| MAE                                             | NON HRP   | Mnths 3-4   | Decrease | USD | 3,500           | 3,500               | 3,300       | 3,300           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                     | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|----------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                   |           |             |          |     |                 |                     |             |                 |
| <b>CRUDE OIL SPREADS - Intra Spreads</b>                                               |           |             |          |     |                 |                     |             |                 |
| <b>Mars (Argus) vs. WTI Spread Calendar Swap - All Months (MARS (ARGUS) V WTI FUT)</b> |           |             |          |     |                 |                     |             |                 |
| YX                                                                                     | HRP       |             | Increase | USD | 660             | 600                 | 792         | 720             |
| YX                                                                                     | NON HRP   |             | Increase | USD | 600             | 600                 | 720         | 720             |
| <b>Mnth 1 vs 3+ (MARS (ARGUS) V WTI TRD MTH FUT)</b>                                   |           |             |          |     |                 |                     |             |                 |
| YV                                                                                     | HRP       |             | Decrease | USD | 550             | 500                 | 385         | 350             |
| YV                                                                                     | NON HRP   |             | Decrease | USD | 500             | 500                 | 350         | 350             |
| <b>Mnth 2 vs 3+ (MARS (ARGUS) V WTI TRD MTH FUT)</b>                                   |           |             |          |     |                 |                     |             |                 |
| YV                                                                                     | HRP       |             | Decrease | USD | 638             | 580                 | 572         | 520             |
| YV                                                                                     | NON HRP   |             | Decrease | USD | 580             | 580                 | 520         | 520             |
| <b>Relperiod 2vs3+ (MARS (ARGUS) V WTI TRD MTH FUT)</b>                                |           |             |          |     |                 |                     |             |                 |
| YV                                                                                     | HRP       |             | Decrease | USD | 440             | 400                 | 330         | 300             |
| YV                                                                                     | NON HRP   |             | Decrease | USD | 400             | 400                 | 300         | 300             |

## 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>German Power Baseload Calendar month futures - Months 1 vs 10+ (GERMAN POWER BASELOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,730           | 4,300               | 6,600       | 6,000           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,300           | 4,300               | 6,000       | 6,000           |
| <b>German Power Baseload Calendar month futures - Months 1 vs 2 (GERMAN POWER BASELOAD CAL MONTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 5,720           | 5,200               | 7,920       | 7,200           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 5,200           | 5,200               | 7,200       | 7,200           |
| <b>German Power Baseload Calendar month futures - Months 1 vs 3 (GERMAN POWER BASELOAD CAL MONTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 5,390           | 4,900               | 7,590       | 6,900           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,900           | 4,900               | 6,900       | 6,900           |
| <b>German Power Baseload Calendar month futures - Months 1 vs 4-9 (GERMAN POWER BASELOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 5,390           | 4,900               | 7,590       | 6,900           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,900           | 4,900               | 6,900       | 6,900           |
| <b>German Power Baseload Calendar month futures - Months 10+ vs 10+ (GERMAN POWER BASELOAD CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Baseload Calendar month futures - Months 2 vs 10+ (GERMAN POWER BASELOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Baseload Calendar month futures - Months 2 vs 3 (GERMAN POWER BASELOAD CAL MONTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Baseload Calendar month futures - Months 2 vs 4-9 (GERMAN POWER BASELOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Baseload Calendar month futures - Months 3 vs 10+ (GERMAN POWER BASELOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Baseload Calendar month futures - Months 3 vs 4-9 (GERMAN POWER BASELOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                            | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                                          |           |             |          |     |                 |                     |             |                 |
| <b>German Power Baseload Calendar month futures - Months 4-9 vs 10+ (GERMAN POWER BASELOAD CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Baseload Calendar month futures - Months 4-9 vs 4-9 (GERMAN POWER BASELOAD CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| DEB                                                                                                           | HRP       |             | Increase | EUR | 4,950           | 4,500               | 6,930       | 6,300           |
| DEB                                                                                                           | NON HRP   |             | Increase | EUR | 4,500           | 4,500               | 6,300       | 6,300           |
| <b>German Power Peakload Calendar month futures – Months 1 vs 10+ (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,640       | 2,400           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,400       | 2,400           |
| <b>German Power Peakload Calendar month futures – Months 1 vs 2 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 2,310           | 2,100               | 3,300       | 3,000           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 2,100           | 2,100               | 3,000       | 3,000           |
| <b>German Power Peakload Calendar month futures – Months 1 vs 3 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,640       | 2,400           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,400       | 2,400           |
| <b>German Power Peakload Calendar month futures – Months 1 vs 4-9 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,640       | 2,400           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,400       | 2,400           |
| <b>German Power Peakload Calendar month futures – Months 10+ vs 10+ (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 880             | 800                 | 1,320       | 1,200           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 800             | 800                 | 1,200       | 1,200           |
| <b>German Power Peakload Calendar month futures – Months 2 vs 10+ (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,980           | 1,800               | 2,860       | 2,600           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,800           | 1,800               | 2,600       | 2,600           |
| <b>German Power Peakload Calendar month futures – Months 2 vs 3 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,540           | 1,400               | 2,200       | 2,000           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,400           | 1,400               | 2,000       | 2,000           |
| <b>German Power Peakload Calendar month futures – Months 2 vs 4-9 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,705           | 1,550               | 2,420       | 2,200           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,550           | 1,550               | 2,200       | 2,200           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                            | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                                          |           |             |          |     |                 |                     |             |                 |
| <b>German Power Peakload Calendar month futures – Months 3 vs 10+ (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,640       | 2,400           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,400       | 2,400           |
| <b>German Power Peakload Calendar month futures – Months 3 vs 4-9 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,705           | 1,550               | 2,420       | 2,200           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,550           | 1,550               | 2,200       | 2,200           |
| <b>German Power Peakload Calendar month futures – Months 4-9 vs 10+ (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,375           | 1,250               | 1,980       | 1,800           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,250           | 1,250               | 1,800       | 1,800           |
| <b>German Power Peakload Calendar month futures – Months 4-9 vs 4-9 (GERMAN POWER PEAKLOAD CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| DEP                                                                                                           | HRP       |             | Increase | EUR | 1,540           | 1,400               | 2,200       | 2,000           |
| DEP                                                                                                           | NON HRP   |             | Increase | EUR | 1,400           | 1,400               | 2,000       | 2,000           |
| <b>Italian Power Baseload Calendar month futures – Months 1 vs 10+ (ITALIAN POWER BASELOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 3,960           | 3,600               | 5,610       | 5,100           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 3,600           | 3,600               | 5,100       | 5,100           |
| <b>Italian Power Baseload Calendar month futures – Months 1 vs 2 (ITALIAN POWER BASELOAD GME CAL FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 4,400           | 4,000               | 6,160       | 5,600           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 4,000           | 4,000               | 5,600       | 5,600           |
| <b>Italian Power Baseload Calendar month futures – Months 1 vs 3 (ITALIAN POWER BASELOAD GME CAL FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 4,290           | 3,900               | 6,050       | 5,500           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 3,900           | 3,900               | 5,500       | 5,500           |
| <b>Italian Power Baseload Calendar month futures – Months 1 vs 4-9 (ITALIAN POWER BASELOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 3,520           | 3,200               | 4,950       | 4,500           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 3,200           | 3,200               | 4,500       | 4,500           |
| <b>Italian Power Baseload Calendar month futures – Months 10+ vs 10+ (ITALIAN POWER BASELOAD GME CAL FUT)</b> |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 1,980           | 1,800               | 2,860       | 2,600           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 1,800           | 1,800               | 2,600       | 2,600           |
| <b>Italian Power Baseload Calendar month futures – Months 2 vs 10+ (ITALIAN POWER BASELOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 4,180           | 3,800               | 5,940       | 5,400           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 3,800           | 3,800               | 5,400       | 5,400           |
| <b>Italian Power Baseload Calendar month futures – Months 2 vs 3 (ITALIAN POWER BASELOAD GME CAL FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 3,300           | 3,000               | 4,620       | 4,200           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 3,000           | 3,000               | 4,200       | 4,200           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                            | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                                          |           |             |          |     |                 |                     |             |                 |
| <b>Italian Power Baseload Calendar month futures – Months 2 vs 4-9 (ITALIAN POWER BASELOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 4,180           | 3,800               | 5,940       | 5,400           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 3,800           | 3,800               | 5,400       | 5,400           |
| <b>Italian Power Baseload Calendar month futures – Months 3 vs 10+ (ITALIAN POWER BASELOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 3,190           | 2,900               | 4,510       | 4,100           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 2,900           | 2,900               | 4,100       | 4,100           |
| <b>Italian Power Baseload Calendar month futures – Months 3 vs 4-9 (ITALIAN POWER BASELOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 3,190           | 2,900               | 4,510       | 4,100           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 2,900           | 2,900               | 4,100       | 4,100           |
| <b>Italian Power Baseload Calendar month futures – Months 4-9 vs 10+ (ITALIAN POWER BASELOAD GME CAL FUT)</b> |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 2,530           | 2,300               | 3,630       | 3,300           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 2,300           | 2,300               | 3,300       | 3,300           |
| <b>Italian Power Baseload Calendar month futures – Months 4-9 vs 4-9 (ITALIAN POWER BASELOAD GME CAL FUT)</b> |           |             |          |     |                 |                     |             |                 |
| ITB                                                                                                           | HRP       |             | Increase | EUR | 2,750           | 2,500               | 3,850       | 3,500           |
| ITB                                                                                                           | NON HRP   |             | Increase | EUR | 2,500           | 2,500               | 3,500       | 3,500           |
| <b>Italian Power Peakload Calendar month futures – Months 1 vs 10+ (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,750       | 2,500           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,500       | 2,500           |
| <b>Italian Power Peakload Calendar month futures – Months 1 vs 2 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 2,200           | 2,000               | 3,080       | 2,800           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 2,000           | 2,000               | 2,800       | 2,800           |
| <b>Italian Power Peakload Calendar month futures – Months 1 vs 3 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,640       | 2,400           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,400       | 2,400           |
| <b>Italian Power Peakload Calendar month futures – Months 1 vs 4-9 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,870           | 1,700               | 2,640       | 2,400           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,700           | 1,700               | 2,400       | 2,400           |
| <b>Italian Power Peakload Calendar month futures – Months 10+ vs 10+ (ITALIAN POWER PEAKLOAD GME CAL FUT)</b> |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 770             | 700                 | 1,100       | 1,000           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 700             | 700                 | 1,000       | 1,000           |
| <b>Italian Power Peakload Calendar month futures – Months 2 vs 10+ (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,925           | 1,750               | 2,750       | 2,500           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,750           | 1,750               | 2,500       | 2,500           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                            | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                                          |           |             |          |     |                 |                     |             |                 |
| <b>Italian Power Peakload Calendar month futures – Months 2 vs 3 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,760           | 1,600               | 2,530       | 2,300           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,600           | 1,600               | 2,300       | 2,300           |
| <b>Italian Power Peakload Calendar month futures – Months 2 vs 4-9 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,760           | 1,600               | 2,530       | 2,300           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,600           | 1,600               | 2,300       | 2,300           |
| <b>Italian Power Peakload Calendar month futures – Months 3 vs 10+ (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,320           | 1,200               | 1,870       | 1,700           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,200           | 1,200               | 1,700       | 1,700           |
| <b>Italian Power Peakload Calendar month futures – Months 3 vs 4-9 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,210           | 1,100               | 1,760       | 1,600           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,100           | 1,100               | 1,600       | 1,600           |
| <b>Italian Power Peakload Calendar month futures – Months 4-9 vs 10+ (ITALIAN POWER PEAKLOAD GME CAL FUT)</b> |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,540           | 1,400               | 2,200       | 2,000           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,400           | 1,400               | 2,000       | 2,000           |
| <b>Italian Power Peakload Calendar month futures – Months 4-9 vs 4-9 (ITALIAN POWER PEAKLOAD GME CAL FUT)</b> |           |             |          |     |                 |                     |             |                 |
| ITP                                                                                                           | HRP       |             | Increase | EUR | 1,540           | 1,400               | 2,200       | 2,000           |
| ITP                                                                                                           | NON HRP   |             | Increase | EUR | 1,400           | 1,400               | 2,000       | 2,000           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                            | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                                          |           |             |          |     |                 |                     |             |                 |
| <b>NATURAL GAS - Intra Spreads</b>                                                                            |           |             |          |     |                 |                     |             |                 |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 1 vs 10+ (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>    |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,265           | 1,150               | 1,870       | 1,700           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,150           | 1,150               | 1,700       | 1,700           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 1 vs 2 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>      |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,320           | 1,200               | 1,870       | 1,700           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,200           | 1,200               | 1,700       | 1,700           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 1 vs 3 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>      |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,100           | 1,000               | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 1 vs 4-9 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>    |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,045           | 950                 | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 950             | 950                 | 1,400       | 1,400           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 2 vs 10+ (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>    |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,210           | 1,100               | 1,760       | 1,600           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,100           | 1,100               | 1,600       | 1,600           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 2 vs 3 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>      |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 880             | 800                 | 1,320       | 1,200           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 800             | 800                 | 1,200       | 1,200           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 2 vs 4-9 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>    |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,265           | 1,150               | 1,870       | 1,700           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,150           | 1,150               | 1,700       | 1,700           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 3 vs 10+ (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>    |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,100           | 1,000               | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Month 3 vs 4-9 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b>    |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,100           | 1,000               | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Months 10+ vs 10+ (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,045           | 950                 | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 950             | 950                 | 1,400       | 1,400           |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Months 4-9 vs 10+ (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,100           | 1,000               | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,000           | 1,000               | 1,400       | 1,400           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                            | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                                          |           |             |          |     |                 |                     |             |                 |
| <b>Dutch TTF Natural Gas Calendar Month Futures - Months 4-9 vs 4-9 (DUTCH TTF NATURAL GAS CAL MONTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| TTF                                                                                                           | HRP       |             | Increase | EUR | 1,100           | 1,000               | 1,540       | 1,400           |
| TTF                                                                                                           | NON HRP   |             | Increase | EUR | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>JKM - Consec Month 2-12 vs 13+ (LNG JAPAN KOREA MARKER PLATTS FUT)</b>                                     |           |             |          |     |                 |                     |             |                 |
| JKM                                                                                                           | HRP       |             | Increase | USD | 8,800           | 8,000               | 12,320      | 11,200          |
| JKM                                                                                                           | NON HRP   |             | Increase | USD | 8,000           | 8,000               | 11,200      | 11,200          |
| <b>JKM - Mnth 1 vs 13+ (LNG JAPAN KOREA MARKER PLATTS FUT)</b>                                                |           |             |          |     |                 |                     |             |                 |
| JKM                                                                                                           | HRP       |             | Increase | USD | 14,520          | 13,200              | 20,350      | 18,500          |
| JKM                                                                                                           | NON HRP   |             | Increase | USD | 13,200          | 13,200              | 18,500      | 18,500          |
| <b>JKM - Mnths 13+ vs 13+ (LNG JAPAN KOREA MARKER PLATTS FUT)</b>                                             |           |             |          |     |                 |                     |             |                 |
| JKM                                                                                                           | HRP       |             | Increase | USD | 11,000          | 10,000              | 15,400      | 14,000          |
| JKM                                                                                                           | NON HRP   |             | Increase | USD | 10,000          | 10,000              | 14,000      | 14,000          |
| <b>JKM - Mnths 2-12 vs 13+ (LNG JAPAN KOREA MARKER PLATTS FUT)</b>                                            |           |             |          |     |                 |                     |             |                 |
| JKM                                                                                                           | HRP       |             | Increase | USD | 13,200          | 12,000              | 18,480      | 16,800          |
| JKM                                                                                                           | NON HRP   |             | Increase | USD | 12,000          | 12,000              | 16,800      | 16,800          |
| <b>JKM - Mnths 2-12 vs 2-12 (LNG JAPAN KOREA MARKER PLATTS FUT)</b>                                           |           |             |          |     |                 |                     |             |                 |
| JKM                                                                                                           | HRP       |             | Increase | USD | 13,200          | 12,000              | 18,480      | 16,800          |
| JKM                                                                                                           | NON HRP   |             | Increase | USD | 12,000          | 12,000              | 16,800      | 16,800          |
| <b>LNG Japan/Korea Marker (Platts) Swap Futures - Mnth 1 vs 2-12 (LNG JAPAN KOREA MARKER PLATTS FUT)</b>      |           |             |          |     |                 |                     |             |                 |
| JKM                                                                                                           | HRP       |             | Increase | USD | 15,950          | 14,500              | 22,330      | 20,300          |
| JKM                                                                                                           | NON HRP   |             | Increase | USD | 14,500          | 14,500              | 20,300      | 20,300          |
| <b>Mnths 1 vs 13+ (LNG JAPAN KOREA MRK YEN FUT)</b>                                                           |           |             |          |     |                 |                     |             |                 |
| JKY                                                                                                           | HRP       |             | Increase | JPY | 143,000         | 130,000             | 220,000     | 200,000         |
| JKY                                                                                                           | NON HRP   |             | Increase | JPY | 130,000         | 130,000             | 200,000     | 200,000         |
| <b>Mnths 1 vs 2-12 (LNG JAPAN KOREA MRK YEN FUT)</b>                                                          |           |             |          |     |                 |                     |             |                 |
| JKY                                                                                                           | HRP       |             | Increase | JPY | 1,650,000       | 1,500,000           | 2,475,000   | 2,250,000       |
| JKY                                                                                                           | NON HRP   |             | Increase | JPY | 1,500,000       | 1,500,000           | 2,250,000   | 2,250,000       |
| <b>Mnths 13+ vs 13+ (LNG JAPAN KOREA MRK YEN FUT)</b>                                                         |           |             |          |     |                 |                     |             |                 |
| JKY                                                                                                           | HRP       |             | Increase | JPY | 770,000         | 700,000             | 1,100,000   | 1,000,000       |
| JKY                                                                                                           | NON HRP   |             | Increase | JPY | 700,000         | 700,000             | 1,000,000   | 1,000,000       |
| <b>Mnths 2-12 vs 13+ (LNG JAPAN KOREA MRK YEN FUT)</b>                                                        |           |             |          |     |                 |                     |             |                 |
| JKY                                                                                                           | HRP       |             | Increase | JPY | 1,210,000       | 1,100,000           | 1,815,000   | 1,650,000       |
| JKY                                                                                                           | NON HRP   |             | Increase | JPY | 1,100,000       | 1,100,000           | 1,650,000   | 1,650,000       |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                              |           |             |          |     |                 |                     |             |                 |
| <b>Mnths 2-12 vs 2-12 (LNG JAPAN KOREA MRK YEN FUT)</b>                                           |           |             |          |     |                 |                     |             |                 |
| JKY                                                                                               | HRP       |             | Increase | JPY | 1,210,000       | 1,100,000           | 1,815,000   | 1,650,000       |
| JKY                                                                                               | NON HRP   |             | Increase | JPY | 1,100,000       | 1,100,000           | 1,650,000   | 1,650,000       |
| <b>NBP Intras 1 vs 2+ (UK NBP NATURAL GAS FRONT MTH FUT)</b>                                      |           |             |          |     |                 |                     |             |                 |
| NBP                                                                                               | HRP       |             | Increase | USD | 3,960           | 3,600               | 5,500       | 5,000           |
| NBP                                                                                               | NON HRP   |             | Increase | USD | 3,600           | 3,600               | 5,000       | 5,000           |
| <b>NBP Intras 2+ vs 2+ (UK NBP NATURAL GAS FRONT MTH FUT)</b>                                     |           |             |          |     |                 |                     |             |                 |
| NBP                                                                                               | HRP       |             | Increase | USD | 4,400           | 4,000               | 6,160       | 5,600           |
| NBP                                                                                               | NON HRP   |             | Increase | USD | 4,000           | 4,000               | 5,600       | 5,600           |
| <b>RealPeriod 2 vs 2 (LNG JAPAN KOREA MRK YEN FUT)</b>                                            |           |             |          |     |                 |                     |             |                 |
| JKY                                                                                               | HRP       |             | Increase | JPY | 770,000         | 700,000             | 1,100,000   | 1,000,000       |
| JKY                                                                                               | NON HRP   |             | Increase | JPY | 700,000         | 700,000             | 1,000,000   | 1,000,000       |
| <b>TTE Intras 1vs 2+ (DUTCH TTF NATURAL GAS FRONT MTH FUT)</b>                                    |           |             |          |     |                 |                     |             |                 |
| TTE                                                                                               | HRP       |             | Increase | USD | 2,640           | 2,400               | 3,960       | 3,600           |
| TTE                                                                                               | NON HRP   |             | Increase | USD | 2,400           | 2,400               | 3,600       | 3,600           |
| <b>TTE Intras 2+ vs 2+ (DUTCH TTF NATURAL GAS FRONT MTH FUT)</b>                                  |           |             |          |     |                 |                     |             |                 |
| TTE                                                                                               | HRP       |             | Increase | USD | 2,860           | 2,600               | 4,400       | 4,000           |
| TTE                                                                                               | NON HRP   |             | Increase | USD | 2,600           | 2,600               | 4,000       | 4,000           |
| <b>UK NBP Natural Gas Calendar month futures - Months 1 vs 10+ (UK NBP NAT GAS CAL MTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>UK NBP Natural Gas Calendar month futures - Months 1 vs 2 (UK NBP NAT GAS CAL MTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 990             | 900                 | 1,430       | 1,300           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 900             | 900                 | 1,300       | 1,300           |
| <b>UK NBP Natural Gas Calendar month futures - Months 1 vs 3 (UK NBP NAT GAS CAL MTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>UK NBP Natural Gas Calendar month futures - Months 1 vs 4-9 (UK NBP NAT GAS CAL MTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>UK NBP Natural Gas Calendar month futures - Months 10+ vs 10+ (UK NBP NAT GAS CAL MTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 990             | 900                 | 1,430       | 1,300           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 900             | 900                 | 1,300       | 1,300           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| CC                                                                                                | Rate Type | Description | Change   | ISO | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------|-----------|-------------|----------|-----|-----------------|---------------------|-------------|-----------------|
| <b>Intra Spreads</b>                                                                              |           |             |          |     |                 |                     |             |                 |
| <b>UK NBP Natural Gas Calendar month futures - Months 2 vs 10+ (UK NBP NAT GAS CAL MTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>UK NBP Natural Gas Calendar month futures - Months 2 vs 3 (UK NBP NAT GAS CAL MTH FUT)</b>     |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 990             | 900                 | 1,430       | 1,300           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 900             | 900                 | 1,300       | 1,300           |
| <b>UK NBP Natural Gas Calendar month futures - Months 2 vs 4-9 (UK NBP NAT GAS CAL MTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>UK NBP Natural Gas Calendar month futures - Months 3 vs 10+ (UK NBP NAT GAS CAL MTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 990             | 900                 | 1,430       | 1,300           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 900             | 900                 | 1,300       | 1,300           |
| <b>UK NBP Natural Gas Calendar month futures - Months 3 vs 4-9 (UK NBP NAT GAS CAL MTH FUT)</b>   |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 990             | 900                 | 1,430       | 1,300           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 900             | 900                 | 1,300       | 1,300           |
| <b>UK NBP Natural Gas Calendar month futures - Months 4-9 vs 10+ (UK NBP NAT GAS CAL MTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |
| <b>UK NBP Natural Gas Calendar month futures - Months 4-9 vs 4-9 (UK NBP NAT GAS CAL MTH FUT)</b> |           |             |          |     |                 |                     |             |                 |
| UKG                                                                                               | HRP       |             | Increase | GBP | 1,100           | 1,000               | 1,540       | 1,400           |
| UKG                                                                                               | NON HRP   |             | Increase | GBP | 1,000           | 1,000               | 1,400       | 1,400           |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| Rate Type                           | Change | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|-------------------------------------|--------|-------|-----------------|---------------------|-------------|-----------------|
| <b>Inter-commodity Spread Rates</b> |        |       |                 |                     |             |                 |

### CRUDE OIL SPREADS - Inter-commodity Spread Rates

#### ARGUS LLS VS. WTI (ARGUS) TRADE MONTH SWAP FUTURES (NY-E5 - CME) vs MARS (ARGUS) VS. WTI SPREAD CALENDAR SWAP FUTURES (NY-YX - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 51%             | 51%                 | 40%         | 40%             |

#### ARGUS LLS VS. WTI (ARGUS) TRADE MONTH SWAP FUTURES (NY-E5 - CME) vs MARS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-YV - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 58%             | 58%                 | 48%         | 48%             |

#### WTI HOUSTON (ARGUS) VS. WTI TRADE MONTH FUTURES (NY-HTT - CME) vs MARS (ARGUS) VS. WTI SPREAD CALENDAR SWAP FUTURES (NY-YX - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 45%             | 45%                 | 35%         | 35%             |

#### WTI HOUSTON (ARGUS) VS. WTI TRADE MONTH FUTURES (NY-HTT - CME) vs MARS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-YV - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 58%             | 58%                 | 48%         | 48%             |

#### WTI MIDLAND (ARGUS) VS. WTI FINANCIAL FUTURES (NY-FF - CME) vs MARS (ARGUS) VS. WTI SPREAD CALENDAR SWAP FUTURES (NY-YX - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 45%             | 45%                 | 35%         | 35%             |

#### WTI MIDLAND (ARGUS) VS. WTI FINANCIAL FUTURES (NY-FF - CME) vs MARS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-YV - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 46%             | 46%                 | 35%         | 35%             |

#### WTI MIDLAND (ARGUS) VS. WTI TRADE MONTH FUTURES (NY-WTT - CME) vs MARS (ARGUS) VS. WTI SPREAD CALENDAR SWAP FUTURES (NY-YX - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 56%             | 56%                 | 45%         | 45%             |

#### WTI MIDLAND (ARGUS) VS. WTI TRADE MONTH FUTURES (NY-WTT - CME) vs MARS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-YV - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 48%             | 48%                 | 44%         | 44%             |

#### WTS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-FH - CME) vs MARS (ARGUS) VS. WTI SPREAD CALENDAR SWAP FUTURES (NY-YX - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 45%             | 45%                 | 38%         | 38%             |

#### WTS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-FH - CME) vs MARS (ARGUS) VS. WTI SPREAD TRADE MONTH SWAP FUTURES (NY-YV - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Decrease | +1:-1 | 50%             | 50%                 | 40%         | 40%             |

### ELECTRICITY - Inter-commodity Spread Rates

#### DUTCH TTF NATURAL GAS CALENDAR MONTH FUTURES (NY-TTF - CME) vs GERMAN POWER BASELOAD CALENDAR MONTH FUTURES (NY-DEB - CME)

| Spread Credit Rate | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|--------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
|                    | Increase | +1:-1 | 40%             | 40%                 | 55%         | 55%             |

## 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>(NY-JKY - CME) vs (NY-NBP - CME)</b>                                                                                                              |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-1  | 40%             | 40%                 | 55%         | 55%             |
| <b>(NY-NBP - CME) vs (NY-TTE - CME)</b>                                                                                                              |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-1  | 30%             | 30%                 | 80%         | 80%             |
| <b>(NY-TTE - CME) vs (NY-JKM - CME)</b>                                                                                                              |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-1  | 55%             | 55%                 | 70%         | 70%             |
| <b>(NY-TTE - CME) vs (NY-NBP - CME)</b>                                                                                                              |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-1  | 20%             | 20%                 | 80%         | 80%             |
| <b>(NY-TTF - CME) vs (NY-JKY - CME)</b>                                                                                                              |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +4:-1  | 55%             | 55%                 | 70%         | 70%             |
| <b>DUTCH TTF NATURAL GAS CALENDAR MONTH FUTURES (NY-TTF - CME) vs GERMAN POWER BASELOAD CALENDAR MONTH FUTURES (NY-DEB - CME)</b>                    |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-1  | 40%             | 40%                 | 55%         | 55%             |
| <b>DUTCH TTF NATURAL GAS CALENDAR MONTH FUTURES (NY-TTF - CME) vs LNG JAPAN/KOREA MARKER (PLATTS) SWAP FUTURES (NY-JKM - CME)</b>                    |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +4:-1  | 55%             | 55%                 | 70%         | 70%             |
| <b>DUTCH TTF NATURAL GAS CALENDAR MONTH FUTURES (NY-TTF - CME) vs UK NBP NATURAL GAS CALENDAR MONTH FUTURES (NY-UKG - CME)</b>                       |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +5:-4  | 70%             | 70%                 | 80%         | 80%             |
| <b>UK NBP NATURAL GAS (USD/MMBTU) (ICIS HEREN) FRONT MONTH FUTURES (NY-NBP - CME) vs DUTCH TTF NATURAL GAS CALENDAR MONTH FUTURES (NY-TTF - CME)</b> |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-4  | 20%             | 20%                 | 80%         | 80%             |
| <b>UK NBP NATURAL GAS (USD/MMBTU) (ICIS HEREN) FRONT MONTH FUTURES (NY-NBP - CME) vs LNG JAPAN/KOREA MARKER (PLATTS) SWAP FUTURES (NY-JKM - CME)</b> |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +1:-1  | 40%             | 40%                 | 70%         | 70%             |
| <b>UK NBP NATURAL GAS CALENDAR MONTH FUTURES (NY-UKG - CME) vs LNG JAPAN/KOREA MARKER (PLATTS) SWAP FUTURES (NY-JKM - CME)</b>                       |          |        |                 |                     |             |                 |
| Spread Credit Rate                                                                                                                                   | Increase | +10:-3 | 55%             | 55%                 | 70%         | 70%             |

## SPAN MINIMUM PERFORMANCE BOND REQUIREMENTS

| Rate Type                                                                                                                       | Change   | Ratio | Current Initial | Current Maintenance | New Initial | New Maintenance |
|---------------------------------------------------------------------------------------------------------------------------------|----------|-------|-----------------|---------------------|-------------|-----------------|
| <b>Inter-commodity Spread Rates</b>                                                                                             |          |       |                 |                     |             |                 |
| <b>NGL/PETROCHEMICALS - Inter-commodity Spread Rates</b>                                                                        |          |       |                 |                     |             |                 |
| <b>ARGUS PROPANE (SAUDI ARAMCO) SWAP FUTURES (NY-9N - CME) vs ARGUS PROPANE FAR EAST INDEX SWAP FUTURES (NY-7E - CME)</b>       |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 60%             | 60%                 | 75%         | 75%             |
| <b>ARGUS PROPANE (SAUDI ARAMCO) SWAP FUTURES (NY-9N - CME) vs JAPAN C&amp;F NAPHTHA (PLATTS) SWAP FUTURES (NY-JA - CME)</b>     |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 45%             | 45%                 | 60%         | 60%             |
| <b>ARGUS PROPANE FAR EAST INDEX SWAP FUTURES (NY-7E - CME) vs ARGUS PROPANE (SAUDI ARAMCO) SWAP FUTURES (NY-9N - CME)</b>       |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 60%             | 60%                 | 75%         | 75%             |
| <b>ARGUS PROPANE FAR EAST INDEX SWAP FUTURES (NY-7E - CME) vs JAPAN C&amp;F NAPHTHA (PLATTS) SWAP FUTURES (NY-JA - CME)</b>     |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 40%             | 40%                 | 65%         | 65%             |
| <b>EUROPEAN PROPANE CIF ARA (ARGUS) SWAP FUTURES (NY-PS - CME) vs JAPAN C&amp;F NAPHTHA (PLATTS) SWAP FUTURES (NY-JA - CME)</b> |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 55%             | 55%                 | 70%         | 70%             |
| <b>REFINED PRODUCTS - Inter-commodity Spread Rates</b>                                                                          |          |       |                 |                     |             |                 |
| <b>ARGUS PROPANE (SAUDI ARAMCO) SWAP FUTURES (NY-9N - CME) vs JAPAN C&amp;F NAPHTHA (PLATTS) SWAP FUTURES (NY-JA - CME)</b>     |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 45%             | 45%                 | 60%         | 60%             |
| <b>ARGUS PROPANE FAR EAST INDEX SWAP FUTURES (NY-7E - CME) vs JAPAN C&amp;F NAPHTHA (PLATTS) SWAP FUTURES (NY-JA - CME)</b>     |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 40%             | 40%                 | 65%         | 65%             |
| <b>EUROPEAN PROPANE CIF ARA (ARGUS) SWAP FUTURES (NY-PS - CME) vs JAPAN C&amp;F NAPHTHA (PLATTS) SWAP FUTURES (NY-JA - CME)</b> |          |       |                 |                     |             |                 |
| Spread Credit Rate                                                                                                              | Increase | +1:-1 | 55%             | 55%                 | 70%         | 70%             |