

# INTERVAL PRICE LIMIT FUNCTIONALITY

#### With IPL levels as of May 2025

IPL functionality acts as a temporary circuit breaker feature on the electronic platform, to diminish the likelihood and extent of short-term price spikes or aberrant market moves. While it is designed to be in force throughout each trading day, it is expected that the protections will be actively triggered only in the case of extreme price moves over very short periods of time. The IPL regime uses three customizable parameters for each futures product:

- IPL Recalculation Time: A pre-set length of time during which the price of a contract
  month may not move up or down more than the IPL Amount (defined below) from the
  contract price at the start of the period. This starting price is referred to as the "anchor
  price". The IPL Recalculation Time continuously resets for the length of time applicable to
  the particular futures contract.
- 2. **IPL Amount:** The maximum number of points that a contract month is permitted to move up or down during each IPL Recalculation Time for the contract. The anchor price plus/minus the IPL amount effectively creates an IPL range for the contract for the IPL Recalculation Time.
- 3. **IPL Hold Period:** When the platform determines that the next trade in the contract month will be at a price that is outside the active IPL range, the platform triggers a Hold Period, during which the price of the contract is not permitted to trade outside the IPL range that was in place at the start of the IPL Hold Period. The length of the Hold Period is pre-set. When a Hold Period is triggered, the platform will issue an alert notifying users that a Hold Period has begun and specifying the time the Hold Period will end.

IPL parameters can be changed without prior notice, at the sole discretion of the Exchange, based on prevailing market conditions.

Current IPL Recalculation Times, Amounts and Hold Period for all IFUS products are shown below:

#### **Agricultural and Metal contracts:**

FUTURES CONTRACT	IPL Amount (in points)	Recalc Time (in secs)	Hold Period (in secs)
Sugar No. 11 (SB)	60	3	5
Cotton No. 2 (CT) and Coffee "C" (KC)	400	3	5
Cocoa (CC)	100	3	5
FCOJ (OJ)	750	3	5
Sugar No. 16 (SF)	750	3	5
Canola (RS)	2400	3	5
Daily Gold (AUD)	1000	3	5
Daily Silver (HIO)	400	3	5

#### Mortgage and SOFR Index Contracts - all contracts below will be subject to a 3 second Recalculation Time and a 5 second Hold Period:

FUTURES CONTRACT	IPL Amount (in Index Points)
ICE U.S. Conforming 30-year Fixed Mortgage Rate Lock Weighted APR Index (30C)	0.250
ICE U.S. Jumbo 30-year Fixed Mortgage Rate Lock Weighted APR Index (30J)	0.375
ICE One-Month SOFR Index Future (SR1)	0.25000
ICE Three-Month SOFR Index Future (SR3)	0.25000

#### **MSCI Bond Index Contracts**

	IPL Amount (in
FUTURES CONTRACTS	Index Points)
MSCI MarketAxess USD IG Tradable Corp. Bond Index (MIH) and USD HY	
Tradable Corp. Bond Index (MHY)	20.000
MSCI MarketAxess EUR IG Tradable Corp. Bond Index (EIG) and EUR HY	
Tradable Corp. Bond Index (EHY)	12.000

## **Stock Index Contracts** - all contracts below will be subject to a 5 second Recalculation Time and a 5 second Hold Period:

FUTURES CONTRACTS	IPL Amount (in Index Points)
MSCI World Selection Index (LFW), MSCI Germany NTR Index (GEA),	
MSCI Europe (Euro) NTR Index (MVV), MSCI Malaysia NTR Index (MYY), MSCI	
EAFE Selection Index (LFG), MSCI Europe Selection Index (LFU), MSCI Europe	
Index (MCE), MSCI Europe Growth Index (MGE) and	
MSCI Europe Value Index (MPU)	4.000
ACWI Ex-US NTR Index (AWN), MSCI EM NTR Index (MMR), MSCI ACWI NTR	
Index (MMW), EMEA NTR Index (MMM), MSCI World NTR (EUR) Index (ESI), MSCI	
ACWI ex Australia Index NTR (MSU), MSCI EMU NTR Index (MXE), and MSCI ACWI	
NTR Index (MTJ)	6.000
MSCI Emerging Markets NTR Index (MMN), MSCI China NTR Index (CHH), MSCI	
Emerging Markets LatAm NTR Index (MML), MSCI USA Selection Index (LFA), MSCI	
ex-Japan NTR Index (ASI), EM Asia NTR Index (ASN), MSCI World Small Cap NTR	
Index (MUO), and MSCI EM ex China ex Taiwan Price Index (MTQ)	12.000
MSCI Emerging Markets Index (MME) MSCI India NTR Index (MIN) and MSCI EM ex	
China ex Taiwan NTR Index (MTP)	20.000
MSCI Pan-Euro Index (MPP), MSCI Europe Index (MEU),	20.000
MSCI USA Small Cap Index (MUS) and USA Small Cap GTR Index (USC),	
MSCI Thailand NTR Index (THG), MSCI EAFE Climate Paris Aligned NTR Index	
` ,	25.000
(ESH) and MSCI EM Low Carbon Target Core Index (MTL)	25.000
MSCI Europe Climate Change Index (EU1), MSCI EM Asia Selection Index (ESG),	
MSCI EM Climate Paris Aligned NTR Index (MVU), MSCI World ex USA Low Carbon	
Target Core Index (MTM), MSCI EAFE Climate Change NTR Index (MIE), MSCI	
Japan Climate Paris Aligned NTR Index (MXJ) and MSCI EAFE Low Carbon Target	00.000
Core NTR Index (MTN)	30.000
MSCI EAFE Index (MFS) and MSCI Emerging Markets Selection Index (LFM)	40.000
MSCI Canada Index (MCL), MSCI EM Latin America Index (MLE), MSCI World	
Climate Paris Aligned NTR Index (MVR), MSCI Europe Climate Paris Aligned NTR	
Index (MVT), MSCI World Index (MWL), MSCI World Climate Change (WOW), MSCI	
ACWI Low Carbon Target Core NTR Index (MTO), MSCI Emerging Markets Minimum	
Volatility NTR Index (MVM) and MSCI USA Value (MCU)	48.000
MSCI USA Index (MUN), MSCI USA Climate Change NTR Index (MUC),	
MSCI USA Climate Paris Aligned GTR Index (MVS) and	
MSCI USA Low Carbon Target Core index (MTK)	50.000
MSCI Australia NTR Index (AS7), MSCI Kokusai GTR (KKS), MSCI USA Large Cap	
GTR Index (MUJ), MSCI USA Mid Cap GTR Index (MUK), MSCI Europe Equal	
Weighted NTR Index (EWE), MSCI Europe Minimum Volatility NTR Index (EMV) and	
MSCI USA Minimum Volatility GTR Index (MUV)	100.000
MSCI Pacific ex-Japan Index (PAC), MSCI EAFE NTR Index (MFU), MSCI Pacific	100.000
NTR Index (MPA), MSCI Europe NTR Index (EU9), MSCI Japan NTR Index (JPP),	
MSCI Emerging Market ex-China NTR Index (MMC), MSCI World ex USA NTR index	
(MUL), MSCI EM Asia ex China NTR index (MUP), MSCI USA Equal Weighted NTR	
Index (MIU), MSCI Emerging Markets Equal Weighted NTR Index (EWM), MSCI	
World Equal Weighted NTR Index (EWW), MSCI World Minimum Volatility NTR Index	120 000
(MVW)_ and MSCI World NTR Index (MWS)	120.000

MSCI North America NTR Index (NAA), MSCI USA Growth Index (MRG), MSCI	
Canada GTR Index (CAD), MSCI World ex Australia NTR Index (MXA) and MSCI	
USA GTR Index (USS)	300.000
MICRO NYSE FANG+TM Index (FNG)	150.00
NYSE Biotechnology GTR Index (IUT)	6.500
NYSE Semiconductor GTR Index (IUS)	25.000

#### MSCI DAILY CONTRACTS - all contracts below will be subject to a 5 second Recalculation Time and a 5 second Hold Period:

Futures Contract	IPL Amount (in Index Points)
MSCI Emerging Markets Index (DMU)	20.000
MSCI EAFE Index (DMQ)	40.000
MSCI World NTR USD Index (DMJ)	120.000
MSCI EM Asia NTR USD Index (DMX)	12.000
MSCI Emerging Markets NTR USD Index (DMY)	12.000
MSCI Emerging Markets Latin America NTR Index (DMW)	12.000
MSCI Emerging Markets EMEA NTR Index (DM6)	6.000
MSCI USA GTR Index (DMO)	300.000
MSCI Pacific NTR Index (DMV)	120.000
MSCI Europe NTR USD Index (DMR)	120.000
MSCI ACWI NTR USD Index (DML)	6.000
MSCI Japan NTR USD Index (DMS)	120.000
MSCI Emerging Markets Selection Index (DMI)	40.000
MSCI EAFE Selection Index (DM2)	4.000
MSCI Europe Selection Index (DM3)	4.000
MSCI USA Selection Index (DM4)	12.000
MSCI World Selection Index (DM5)	4.000

#### MSCI Total Return Futures Contracts - all contracts below will be subject to a 5 second Recalculation Time and a 5 second Hold Period:

	IPL Amount (in TRF Spread
Futures Contract	points
MSCI Emerging Markets Total Return (MVE), MSCI EAFE Total	12.000
Return (MVH), MSCI World Total Return (MWA), MSCI USA Total	
Return (MVA), and MSCI All Country World Total Return (MMA)	

### **USDX®** and Currency Pair contracts:

FUTURES CONTRACT	IPL Amount (in points)	Recalc Time (in secs)	Hold Period (in secs)
USDX (DX)	500	5	2
Sterling-US dollar (MP)	750	5	5
Yen-US dollar (KSN)	3000	5	5
Zloty-US dollar (PLN), Zloty-euro (PLE), Turkish lira-US dollar (TRM) and Turkish lira-euro (ETR)	1500	5	5
Sterling-Norway (PK), Sterling-SA Rand (PZ), Sterling-Sweden (PS), Euro-Sweden (KRK), Euro-Norway KOL), Euro-SA Rand (YZ), US dollar-SA Rand (ZR), Norway-Yen (KY), Sweden-Yen (KJ) and Mex. peso-	0.7500	_	_
US Dollar (KMP)	37500	5	5
All Other Currency Pairs	7500	5	5

#### Power and Emissions contracts - all contracts below will be subject to a 3 second Recalculation Time and a 5 second Hold Period:

FUTURES CONTRACT	IDI Amount (in ¢)	IPL Exceptions	
FUTURES CONTRACT	IPL Amount (in \$)	(in \$ terms)	
Financial Power	\$30.00	N/A	
Capacity Responsive Reserve	\$30.00	N/A	
In-City or Rest of State Cap.	\$30.00	N/A	
Non-Spinning Reserve	\$30.00	N/A	
Regulation	\$30.00	N/A	
All Daily Power Contracts	\$120.00	N/A	
All Daily Load Forecast	50,000 MW	N/A	
All ERCOT Contracts	\$100.00	All ERCOT Daily contracts - \$120.00 ERCOT North 345KV Real-Time Peak Daily Fixed Price (END) and ERCOT North 345KV Real-Time Peak Daily Mini Fixed Price (ERA) - \$500.00	
RGGI	\$1.00	N/A	
CCA, CCO RECs - NJ Class I & II, TX / M-RETS / NAR Wind, MD Tier I, PA Tier I & II, PJM -TRI SRECs - TX Washington CA	\$2.50	N/A	
CCA Trade at Auction Settlement Contracts Washington (WCP, WAA)	\$0.75	N/A	
REC - CT & MA Class I, NEPOOL SREC - MD, PA	\$10.00	N/A	
SREC - MA I & II, NJ	\$30.00	N/A	

#### Nat Gas contracts - all contracts below will be subject to a 3 second **Recalculation Time and a 5 second Hold Period:**

FUTURES CONTRACT	IPL Amount (in \$ terms)	IPL Exceptions (in \$ terms)
Henry Hub	\$0.20	N/A
UK Natural Gas	\$0.12	N/A
EIA Financial Weekly Index	75 BCF	N/A
EIA End of Draw/Storage Index	2,500 BCF	N/A
Financial LNG	\$0.60	N/A
Fixed Price (excluding Henry)	\$4.00	IPL Amount: \$10.00 Dominion South Swing (DSS) Lebanon Swing (LBN) IPL Amount: \$12.00 Algonquin Citygates Swing (ALS) Chicago Swing (CSS) NNG Demarc Swing (DES) Iroquois (Into) Swing (Platts) (IRS) Iroquois-Z2 Swing (Platts) (IZS) NNG Ventura Swing (NNS) NWP Sumas Swing (NSS) PG&E Citygate Swing (PIG) Transco Zone 6 (non-NY) Swing (TPS) TETCO M3 Swing (TSS) Transco Zone 6 (NY) Swing (ZSS)
Basis	\$4.00	IPL Amount: \$10.00 Dominion South Basis (DOM) IPL Amount: \$12.00 Algonquin Citygates Basis (ALQ) NNG Demarc Basis (DEM) Chicago Basis (DGD) Union Dawn Basis (DWN) Iroquois (Into) Basis (Platts) (IRB) Iroquois-Z2 Basis (Platts) (IZB) PG&E Citygate Basis (PGE) TETCO M3 Basis (TMT) Transco Zone 6 (NY) Basis (TZS)

	1	IDI A
		IPL Amount: \$2.00 AB NIT Index (AIS)
		Algonquin Citygates Index (ALI)
		ANR SW (Oklahoma) Index (AOI)
		ANR SE (Louisiana) Index (API)
		CG-Mainline Index (CGI)
		Chicago Index (CIS)
		CIG Rockies Index (CRC)
		Enable Gas Index (CTI)
		NNG Demarc Index (DEI)
		Dominion South Index (DIS)
		PG&E Citygate Index (EIS)
		Florida Gas Zone 3 Index (FTI)
		` ,
		Henry Index (HIS)
		Iroquois (Into) Index (Platts)(IRI)
		Iroquois-Z2 Index (Platts) (IZI)
		NGPL Midcont Index (MCI)
		Malin Index (MIS)
		TETCO M3 Index (MTI)
		NWP Sumas Index (NIS)
		Michcon Index (NMI)
		NNG Ventura Index (NNI)
To Lore	<b>#0.00</b>	Transco Zone 6 (NY) Index (NSI)
Index	\$0.20	NGPL TXOK Index (NTI)
		NGPL STX Index (NXI)
		ONEOK Gas Transportation Index (ONI)
		Southern Star TX OK KS Index (OUI)
		EP Permian Index (PEI)
		Panhandle Index (PIS)
		NWP Rockies Index (RSI)
		Socal Citygate Index (SCI)
		HSC Index (SHS)
		Transco Station 65 (Zone 3) Index (SIA)
		Socal Border Index (SIS)
		EP San Juan Index (SNI)
		Sonat Index (SOI)
		TETCO STX Index (SXI)
		TETCO ELA Index (TEI)
		Tennessee 500L Index (TFI)
		TGT Zone 1 Index (TGI)
		TCO Index (TIS)
		Transco Zone 5 South Index (T5I)
		Transco Zone 6 (non-NY) Index (TPI)
		Transco Station 85 (Zone 4) Index (TRI)
		TETCO WLA Index (TWI)
		Tennessee Zone 0 Index (TZI)
		Waha Index (WAI)

#### Oil and NGL contracts - all contracts below will be subject to a 3 second Recalculation Time and a 5 second Hold Period:

Crude Diff — Argus LLS vs WTI 1st Line Future         ARK         bbl         \$6.00           Argus Mars vs WTI Trade Month Future         ARW         bbl         \$6.00           Crude Diff — Argus WTS vs WTI Trade Month Future         AVT         bbl         \$6.00           Crude Diff — Argus WTS vs WTI Trade Month Future         BTD         bbl         \$6.00           Crude Diff — WTI 1st Line vs Brent 1st Line Future         BTD         bbl         \$6.00           Fuel Oil Outright — New York 1% Fuel Oil Future         FOD         bbl         \$4.00           Fuel Oil Outright — New York 1% Fuel Oil Future         FOW         bbl         \$4.00           Fuel Oil Outright — New York 1% Fuel Oil Future         FOW         bbl         \$4.00           Fuel Oil Outright — New York 1% Fuel Oil Future         FOW         bbl         \$4.00           Fuel Oil Outright — New York 1% Fuel Oil Future         GCS         bbl         \$1.50           Gasoline Diff — Gulf Coast CBG 87FO (Platts) vs Brent 1st Line Future         GCS         bbl         \$0.10           Gasoline Diff — RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB         GDO         MT         \$10.00           Rotterdam Barges Mini Future         GD         MT         \$10.00           Fuel Oil Diff — SUBC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam	Specific Oil and NGL Products	Commodity Code	Unit	IPL Amount (in \$ Terms)
Crude Diff – Argus WTS vs WTI Trade Month Future BTD bbl \$6.00  Crude Diff – WTI 1st Line vs Brent 1st Line Future BTD bbl \$6.00  Fuel Oil Diff – New York 1% Fuel Oil (Platts) vs USGC HSFO (Platts) FOD bbl \$4.00  Fuel Oil Outright – New York 1% Fuel Oil Future FOW bbl \$4.00  Fuel Oil Crack – USGC HSFO (Platts) vs Brent 1st Line Future GCS bbl \$1.50  Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline gasoline Diff – Group 3 Sub-octane Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future  Gasoline Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam GOE bbl \$1.00  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future GOH gal \$0.04  Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future (In Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future RBDB St. Soult Fuel vs Heating Oil 1st Line Future RBDB St. Soult Fuel Vs Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future RBDB St. Soulting to St. Soulting St. Soul	Crude Diff – Argus LLS vs WTI 1st Line Future	ARK	bbl	\$6.00
Crude Diff – WTI 1st Line vs Brent 1st Line Future       BTD       bbl       \$6.00         Fuel Oil Diff – New York 1% Fuel Oil (Platts) vs USGC HSFO (Platts)       FOD       bbl       \$4.00         Fuel Oil Outright – New York 1% Fuel Oil Future       FOW       bbl       \$4.00         Fuel Oil Orack – USGC HSFO (Platts) vs Brent 1st Line Future       GCS       bbl       \$1.50         Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline       GDL       gal       \$0.10         Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future       GDM       gal       \$0.10         Gasoline Diff – BBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future       GDO       MT       \$10.00         Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future       GDQ       MT       \$10.00         Fuel Oil Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam Barges (Platts) Future (in Bbls)       GOE       bbl       \$1.00         Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future       GOH       gal       \$0.04         Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future (in Bbls)       hbl       \$1.50         Det Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future       R       bbl       \$1.50         Fuel Oil Outright – WTl 1st Line Future	Argus Mars vs WTI Trade Month Future	ARW	bbl	\$6.00
Fuel Oil Diff – New York 1% Fuel Oil (Platts) vs USGC HSFO (Platts) Future Fuel Oil Outright – New York 1% Fuel Oil Future FOW bbl \$4.00 Fuel Oil Crack – USGC HSFO (Platts) vs Brent 1st Line Future Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline 1st Line Future Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline 1st Line Future Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline Diff – Bulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future Gasoline Diff – BOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future Gasoline Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam Barges (Platts) Future (in Bbls) Diesel Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam Barges (Platts) Future (in Bbls) Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future GOH GUF Bulf Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future (in Bbls) Jet Fuel Oil Grack – Heating Oil 1st Line vs Brent 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULSD vs Heating Oil 1st Line Future R Bulf Coast ULS	Crude Diff – Argus WTS vs WTI Trade Month Future	AVT	bbl	\$6.00
Future Future FUD   DB   \$4.00 Fuel Oil Outright – New York 1% Fuel Oil Future   FOW   DB   \$4.00 Fuel Oil Crack – USGC HSFO (Platts) vs Brent 1st Line Future   GCS   DB   \$1.50 Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline   GDL   gal   \$0.10 Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline   St Line Future   GDM   gal   \$0.10 Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB   GDO   MT   \$10.00 Rotterdam Barge Future   GDO   MT   \$10.00 Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB   GDQ   MT   \$10.00 Rotterdam Barges Mini Future   GDQ   MT   \$10.00 Gasoline Diff – Subscience   St Line vs Argus Eurobob Oxy FOB   GDQ   MT   \$10.00 Gasoline Diff – Subscience   St Line vs Argus Eurobob Oxy FOB   GDQ   MT   \$10.00 Gasoline Diff – Subscience   St Line vs Argus Eurobob Oxy FOB   GDQ   MT   \$10.00 Gasoline Diff – Subscience   St Line vs Argus Eurobob Oxy FOB   GDQ   MT   \$10.00 Gasoline Diff – Subscience   St Line vs Argus Eurobob Oxy FOB   GDQ   MT   \$10.00 Gasoline Diff – Gulf Coast ULSD vs Fuel Oil 3.5% FOB Rotterdam   GOE   Bbl   \$1.00 Gasoline Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future   GOH   GOE   Bbl   \$1.50 Heating Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future (In Bbls)   S1.50 Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future   R   Bbl   \$1.50 Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future   RBO   Bbl   \$1.50 Fuel Oil Outright – USGC HSFO (Platts) Future   RBO   Bbl   \$1.50 Heating Oil Arb – Heating Oil 1st Line vs Brent 1st Line Future (In Bbls)   \$1.50 Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoli 1st Line   ULM   Bbl   \$0.04 Fuel Oil Gasoline 1st Line Future   ULM   Bbl   \$0.04 Fuel Oil Gasoline 1st Line Future   In Bbls   S0.04 Fuel Oil Gasoline 1st Line Future   In Bbls   S0.04 Fuel Oil Gasoline 1st Line Future   In Bbls   S0.04 Fuel Oil Gasoline 1st Line Future   In Bbls   S0.04 Fuel Oil Gasoline 1st Line Future   In Bbls   S0.04 Fuel Oil	Crude Diff – WTI 1st Line vs Brent 1st Line Future	BTD	bbl	\$6.00
Fuel Oil Crack – USGC HSFO (Platts) vs Brent 1st Line Future  GCS bbl \$1.50  Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline GDL gal \$0.10  Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future Gasoline 1st Line Future Sargus Eurobob Oxy FOB Rotterdam Barge Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Fuel Oil Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam  Barges (Platts) Future (in Bbls)  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future  GOH gal \$0.04  Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future GUF bbl \$1.50  Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future JHO gal \$0.04  Crude Outright – WTI 1st Line Future  R bbl \$1.50  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  RBR bbl \$1.50  Sasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW bbl \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)		FOD	bbl	\$4.00
Gasoline Diff – Group 3 Sub-octane Gasoline (Platts) vs RBOB Gasoline 1st Line Future Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future Gasoline Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam GOE Barges (Platts) Future (in Bbls)  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future GUF Bbls \$1.50 Heating Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future (in Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future JHO gal \$0.04 Crude Outright – WTI 1st Line Future RBO Bbl \$1.50  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls) Heating Oil Arb – Heating Oil 1st Line vs Brent 1st Line Future RBO Bbl \$1.50  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Gasoline Oil F – Gulf Coast Uls F Oil 1st Line vs Brent 1st Line Future (in Bbls)  Gasoline Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Uls RF Gasoline Prompt Pipeline (Platts) vs RBO Gasoline 1st Line Future (in Bbls)  RBR Bbl \$0.04  Solution Bbl Solution Solution RF Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future (in Bbls)  Ratural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future NGW bbl \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)	Fuel Oil Outright – New York 1% Fuel Oil Future	FOW	bbl	\$4.00
Ast Line Future  Gasoline Diff – Gulf Coast CBOB 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Fuel Oil Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam GOE bbl \$1.00  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future GOH gal \$0.04  Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future GUF bbl \$1.50  Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future RR bbl \$1.50  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future RBO bbl \$1.50  Fuel Oil Outright – WTI 1st Line Future  RR bbl \$1.50  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW bbl \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)	Fuel Oil Crack – USGC HSFO (Platts) vs Brent 1st Line Future	GCS	bbl	\$1.50
RBOB Gasoline 1st Line Future  Gasoline Diff - RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barge Future  Gasoline Diff - RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Gasoline Diff - RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Fuel Oil Diff - USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam GOE  Barges (Platts) Future (in Bbls)  Diesel Diff - Gulf Coast ULSD vs Heating Oil 1st Line Future  GOH  Fuel Oil Crack - USGC HSFO (Platts) vs WTI 1st Line Future  GUF  Heating Oil Crack - Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Jet Fuel Diff - Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Bbl  \$1.50  Fuel Oil Outright - WTI 1st Line Future  R  Bbl  \$1.50  Gasoline Crack - RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb - Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Gasoline Diff - Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs  RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  BDD  MT  \$10.00  And  \$10.00  ### \$10.00  ### \$1.00  ### \$1.00  ### \$1.00  ### \$1.00  ### \$1.50  ### \$1.		GDL	gal	\$0.10
Rotterdam Barge Future  Gasoline Diff – RBOB Gasoline 1st Line vs Argus Eurobob Oxy FOB Rotterdam Barges Mini Future  Fuel Oil Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam Barges (Platts) Future (in Bbls)  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future  Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future  Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future  GUF  Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Bbl \$1.50  Fuel Oil Outright – WTI 1st Line Future  R  Bbl \$1.50  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future NGW  BDD  Natural Casol CIF ARA vs Brent 1st Line Future (in bbls)  PRQ  bbl \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  PRQ  bbl \$6.25	RBOB Gasoline 1st Line Future	GDM	gal	\$0.10
Rotterdam Barges Mini Future  Fuel Oil Diff – USGC HSFO (Platts) vs Fuel Oil 3.5% FOB Rotterdam Barges (Platts) Future (in Bbls)  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future  Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future  GOH  Fuel Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  BOI  Fuel Oil Outright – WTI 1st Line Future  R  BOI  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line  Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs  RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  Boll  S1.00  S1.00  WI  S0.04  WI  S0.04  WI  S0.01  S0.0	Rotterdam Barge Future	GDO	MT	\$10.00
Barges (Platts) Future (in Bbls)  Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future  Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future  Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  R  Diesel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  R  R  Diesel Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs R  R  Diesel Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs R  R  Diesel Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs R  N  R  Dum  Diesel Diesel Diesel Diesel St. Since St. Sin	, ,	GDQ	MT	\$10.00
Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future  Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  Crude Outright – WTI 1st Line Future  R  Bbl  S1.50  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future (in bbls)  PRQ  bbl  \$1.50  \$0.04  \$0.04  \$0.04  \$0.10  \$0.10  \$0.10  \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  PRQ  bbl  \$4.00	,	GOE	bbl	\$1.00
Heating Oil Crack – Heating Oil 1st Line vs Brent 1st Line Future (in Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  Crude Outright – WTI 1st Line Future  Fuel Oil Outright – USGC HSFO (Platts) Future  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future (in bbls)  PRQ  bbl \$1.50  \$0.04  \$0.04  \$0.10  \$4.00  \$4.00  \$0.10	Diesel Diff – Gulf Coast ULSD vs Heating Oil 1st Line Future	GOH	gal	\$0.04
Bbls)  Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future  Crude Outright – WTI 1st Line Future  R  bbl \$1.50  Fuel Oil Outright – USGC HSFO (Platts) Future  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  Sundamental	Fuel Oil Crack – USGC HSFO (Platts) vs WTI 1st Line Future	GUF	bbl	\$1.50
Crude Outright – WTI 1st Line Future  R  Bbl \$1.50  Fuel Oil Outright – USGC HSFO (Platts) Future  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  Bbl \$1.50  W1.50  W1	· · · · · · · · · · · · · · · · · · ·	HBT	bbl	\$1.50
Fuel Oil Outright – USGC HSFO (Platts) Future  Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  RBO  \$4.00  \$0.04	Jet Fuel Diff – Gulf Coast Jet Fuel vs Heating Oil 1st Line Future	JHO	gal	\$0.04
Gasoline Crack – RBOB Gasoline 1st Line vs Brent 1st Line Future (in Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  bbl \$1.50  \$0.04  \$0.10  \$0.10  \$0.10  \$0.10  \$0.10  \$0.10  \$0.10  \$0.10  \$0.25	Crude Outright – WTI 1st Line Future	R	bbl	\$1.50
Bbls)  Heating Oil Arb – Heating Oil 1st Line vs Low Sulphur Gasoil 1st Line Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  bbl \$1.50  \$0.04  \$0.10  \$0.10  \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  PRQ  bbl \$6.25	Fuel Oil Outright – USGC HSFO (Platts) Future	RBO	bbl	\$4.00
Future (in Bbls)  Gasoline Diff – Gulf Coast Unl 87 Gasoline Prompt Pipeline (Platts) vs RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  bbl \$4.00  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  PRQ  bbl \$6.25	`	RBR	bbl	\$1.50
RBOB Gasoline 1st Line Future  Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future  NGW  Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)  PRQ  bbl \$6.25		ULM	bbl	\$0.04
Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls) PRQ bbl \$6.25		UM1	bbl	\$0.10
	Natural Gasoline, OPIS Mt. Belvieu Non-TET vs WTI 1st Line Future	NGW	bbl	\$4.00
, ,	Propane, Argus CIF ARA vs Brent 1st Line Future (in bbls)	PRQ	bbl	\$6.25
	Propane, Argus CIF ARA vs Brent 1st Line Future (in MTs)	PRR	MT	\$6.25

Oil Products	IPL Amount (in \$ Terms)
All Oil (Barrels or lbs) Contracts	\$6.25
All Oil (MT) Contracts	\$18.75
All Oil (LCFS_MT) Contracts	\$30.00
All Oil (Gallons) Contracts	\$0.25
All Oil (RINs) Contracts	\$0.20
NGL (North American) (Gallons)	\$0.125
Olefins	\$0.125
Ammonia (MT) Contracts	\$75.00
Aromactics (MT) / Olefins (MT)	\$125.00
Aromatics	\$0.250
LPG (International) (MT)	\$125.00