ICE SWAP TRADE

55 East 52nd Street
39th Floor
New York, New York 10055

BY ELECTRONIC TRANSMISSION

Submission No. **14-13**
April 28, 2014

Ms. Melissa Jurgens
Secretary of the Commission
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW Washington, DC 20581

Re: Listing of Commodity Swaps and Related Rule Amendments- Submission Pursuant to Section 5c(c)(1) of the Act and Regulations 40.2 and 40.6

Dear Ms. Jurgens:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended (the "CEA") and the Commodity Futures Trading Commission (the "Commission") Regulations 40.2 and 40.6(a), ICE Swap Trade, LLC ("IST" or "SEF") submits by written certification the terms and conditions for five (5) new cash-settled Oil and Power contracts (collectively, the "Energy Contracts"). The Energy Contracts will be listed as permitted contracts for trading on April 30, 2014. All of the Energy Contracts are bilateral uncleared swaps.

The contract terms and conditions are set forth in Chapter 13 of the ICE Swap Trade Rulebook ("Rules") and in related amendments to existing Exchange Rules, as specified in **Exhibit A**. The underlying cash market analysis is contained in **Exhibit B**. The SEF is listing two (2) Crude Oil swaps, one (1) Gasoline swap, one (1) Gasoil swap, and one (1) Power swap as noted in the table below:

Rule	Contract Name
Rule 13145	Singapore Mogas 92 Unleaded Balmo Swap
Rule 13146	Jet FOB Rotterdam Barges vs Jet CIF NWE Cargoes Balmo Swap
Rule 13147	Singapore Jet Kero vs Singapore Gasoil Balmo Swap
Rule 13148	Weekly Brent CDF vs Third Month Swap
Rule 13149	CAISO MEAD Day-Ahead Peak Daily Swap

Certifications

IST certifies that the rules and amendments related to the listing of the contracts comply with the requirements of the CEA and the rules and regulations promulgated by the Commission thereunder. IST has reviewed the designated contract market Core Principles and has determined that the listing of the contracts impacts the following relevant Core Principles:

COMPLIANCE WITH RULES (Principle 2): The terms and conditions of the new contracts are set forth in Chapter 13 of the Rules, which will be enforced by IST. Trading of the contracts is subject to all relevant IST rules which are enforced by the Market Regulation Department. Pursuant to Chapters 8 of the Rules, the Market Regulation Department and the Business Conduct Committee have the authority to sanction, suspend or expel members and market participants that violate IST Rules.

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SWAPS NOT READILY SUSCEPTIBLE TO MANIPULATION (Principle 3): The contracts should not be readily subject to manipulation as they are based on deep and liquid cash markets as demonstrated in the analysis included in Exhibit B. In addition, the contracts will be subject to market surveillance by IST Market Regulation staff to detect attempted manipulation.

MONITOR OF TRADING AND TRADE PROCESSING (Principle 4): All contracts listed for trading by IST are subject to prohibitions against abusive trading practices as set forth in Chapter 5 of the Rules. The Market Regulation staff actively monitors all IST markets to detect abusive practices.

ABILITY TO OBTAIN INFORMATION (Principle 5): IST has rules and procedures in place that allow for the collection of non-routine data from Participants. In addition, IST has agreements in place with other regulatory, data repository and reporting services.

TIMELY PUBLICATION OF TRADING INFORMATION (Principle 9): IST will publish on its website and distribute through quote vendors contract trading volume, open interest levels, and daily price information. IST will also adhere to the reporting requirements as detailed in Part 43 and 45[1]. Prior to the commencement of trading, the terms and conditions for the contracts will be available on IST's website. In addition, IST will publish on a daily basis the settlement prices, volume, open interest and the opening and closing ranges for actively traded contracts.

RECORDKEEPING AND REPORTING (Principle 10): IST has rules and procedures in place to require market participants to keep records of their trading and provide for the recording and storage of the requisite trade information sufficient for the Market Regulation Department to detect and prosecute customer and market abuses.

IST not aware of any substantive opposing views expressed with respect to the rules and the amendments. IST further certifies that concurrent with this filing, a copy of this submission was posted on its website, which may be accessed at: (https://www.theice.com/notices/Notices.shtml?regulatoryFilings).

If you have any questions or need further information, please contact the undersigned at (212) 323-8512 or (Cathy.OConnor@theice.com).

Sincerely,

Cathy O'Connor
Chief Compliance Officer

cc: Division of Market Oversight

[1] 17 CFR Part 43 Real-Time Public Reporting of Swap Transaction Data and 17 CFR Part 45 Swap Data Recordkeeping and Reporting Requirements.

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EXHIBIT A

CHAPTER 13: CONTRACT TERMS AND CONDITIONS

Rule 13.00 Scope.

(a) The rules in this Chapter govern the trading of Commodity Contracts. Any matters not specifically covered herein related to trading, settlement or otherwise related to Transactions involving Commodity Contracts shall be governed by the Rules of the SEF. In the event of any inconsistency between the Rules in this Chapter and any other SEF Rule, the Rules in this Chapter shall govern.

(b) The SEF shall list for trading hereunder Commodity Contracts as may be designated by the SEF from time to time.

Rule 13.01 Definitions.

As used in this Chapter, the following terms shall have the following meanings:

Commodity Contract
The term "Commodity Contract" shall include Commodity Swaps, Option on Commodity Swaps, and any other interests or instruments traded on or subject to the Rules.

Contract Period
The Term "Contract Period" shall mean the expiration month or date of the Contract.

Last Trading Day
The term "Last Trading Day" shall mean the last day on which trading is permitted for swap in accordance with the Rules.

Platts Asia-Pacific/Arab Gulf Market Scan
The Term “Platts Asia-Pacific/Arab Gulf Marketscan” shall mean Platts Asia-Pacific/Arab Gulf Marketscan, or any successor publication, published by the McGraw-Hill Companines Inc. or its successor.

“Platts®” is a trademark of The McGraw-Hill Companies, Inc. and has been licensed for use by IntercontinentalExchange, Inc. Platts does not sponsor, endorse, sell or promote the Contracts specified in this chapter and Platts makes no recommendations concerning the advisability of investing in any Contracts.

Platts Crude Oil Marketwire
The Term “Platts Crude Oil Marketwire” shall mean Platts Crude Oil Marketwire, or any successor publication, published by the McGraw-Hill Companines Inc. or its successor.

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Platts European Marketscan
The Term "Platts European Marketscan" shall mean Platts European Marketscan, or any successor publication, published by The McGraw-Hill Companies Inc. or its successor.

Pricing Calendar
The Term "Pricing Calendar" shall mean the holiday calendar relevant for determining the publication dates of a Reference Price.

Pricing Date
The Term "Pricing Date" shall mean the day on which the applicable prices are announced or published by the Price Source.

Price Source
The Term "Price Source" shall mean the publication (or such other origin of reference) containing (or reporting) the Specified Price (or prices from which the Specified Price is calculated).

Reference Price
The Term "Reference Price" shall mean any of the commodity reference prices specified in the 2005 ISDA Commodity Definitions, or any successor publications, or a commodity reference price specified using the commodity reference price framework described in the 2005 ISDA Commodity Definitions, or its successor.

Specified Price
The Term "Specified Price" shall mean the explicit price reported in or by the Price Source, or capable of being determined from information reported in or by, the relevant Price Source.

Rule 13145. **Singapore Mogas 92 Unleaded Balmo Swap**

Contract Description: A balance of the month cash settled swap based on the Platts daily assessment price for Singapore Mogas Gasoline 92 unleaded.

Contract Symbol: ZKU-ZKZ; ZLA-ZLY

Contract Size: 1,000 barrels

Unit of Trading: Any multiple of 1,000 barrels

Currency: US Dollars and cents

Trading Price Quotation: One cent ($0.01) per barrel

Last Trading Day: Last Trading Day of the contract month

Final Settlement Price: In respect of final settlement, the Floating Price will be a price in USD and cents per barrel based on the average of the mean of the high and low quotations appearing in the "Platts Asia-Pacific/Arab Gulf Marketscan" under the heading "Asia Products" subheading "Singapore" and "FOB Singapore" for "Gasoline 92 unleaded" for each business day (as specified below) in the determination period.

Roll Adjust Provision: N/A

Contract Series: Up to 2 consecutive months, or as otherwise determined by the SEF

Final Payment Dates: Fourteen (14) Calendar Days after each settlement date via wire transfer or Federal funds

Business Days: Publication days for Platts Asia-Pacific/Arab Gulf Marketscan

Other Terms: To be confirmed directly between the parties in their full form of contract. The terms reflected in such contracts shall be controlling.

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Rule 13146. **Jet FOB Rotterdam Barges vs Jet CIF NWE Cargoes Balmo Swap**

Contract Description: A balance of the month cash settled swap based on the difference of the Platts daily assessment price for Jet FOB Rotterdam Barges and the Platts daily assessment price for Jet CIF NWE Cargoes Swap

Contract Symbol: N/A

Contract Size: 1,000 metric tonnes

Unit of Trading: Any multiple of 1,000 metric tonnes

Currency: US Dollars and cents

Trading Price Quotation: One cent ($0.01) per metric tonne

Last Trading Day: Last Trading Day of the contract month

Final Settlement Price: In respect of final settlement, the Floating Price will be a price in USD and cents per metric tonne based on the difference between the average of the mean of the high and low quotations appearing in the "Platts European Marketscan" under the heading "Northwest Europe barges" subheading "FOB Rotterdam" for "Jet" and the average of the mean of the high and low quotations appearing in the "Platts European Marketscan" under the heading "Northwest Europe cargoes" subheading "CIF NWE/Basis ARA" for "Jet" for each business day (as specified below) in the determination period.

Roll Adjust Provision: N/A

Contract Series: Up to 2 consecutive months, or as otherwise determined by the SEF

Final Payment Dates: Five (5) New York Business Days after each settlement date via wire transfer of Federal funds

Business Days: Publication days for Platts European Marketscan

Other Terms: To be confirmed directly between the parties in their full form of contract. The terms reflected in such contracts shall be controlling.

Rule 13147. **Singapore Jet Kero vs Singapore Gasoil Balmo Swap**

Contract Description: A balance of the month cash settled swap based on the difference between the Platts daily assessment price for Singapore Jet Kerosene and Platts daily assessment price for Singapore Gasoil.

Contract Symbol: GPV-GQZ

Contract Size: 1,000 barrels

Unit of Trading: Any multiple of 1,000 barrels

Currency: US Dollars and cents

Trading Price Quotation: One cent ($0.01) per barrel

Last Trading Day: Last Trading Day of the contract month

Final Settlement Price: In respect of final settlement, the Floating Price will be a price in USD and cents per barrel based on difference between the average of the mean of the high and low quotations appearing in “Platts Asia-Pacific/Arab Gulf Marketscan” under the heading “Asia Products” subheading “Singapore” and “FOB Singapore” for “Kerosene” and the average of the mean of the high and low quotations appearing in the “Platts Asia-Pacific/Arab Gulf Marketscan” under the heading “Asia Products” subheading “Singapore” and “FOB Singapore” for “Gasoil" for each business day (as specified below) in the determination period.

Roll Adjust Provision: N/A

Contract Series: Up to 2 consecutive months, or as otherwise determined by the SEF

Final Payment Dates: Fourteen (14) Calendar Days after each settlement date via wire transfer or Federal funds

Business Days: Publication days for Platts Asia-Pacific/Arab Gulf Marketscan

Other Terms: To be confirmed directly between the parties in their full form of contract. The terms reflected in such contracts shall be controlling.

Rule 13148. **Weekly Brent CDF vs Third Month Swap**

Contract Description: A cash settled swap based on the difference between the Platts daily assessment price for Dated Brent and the third listed Platts BFOE month

Contract Symbol: CFT

Contract Size: 200 barrels

Unit of Trading: Any multiple of 200 barrels

Currency: US Dollars and cents

Trading Price Quotation: One cent ($0.01) per barrel

Last Trading Day: Eight calendar days following the nominal contract day

Final Settlement Price: In respect of final settlement, the Floating Price will be a price in USD and cents per barrel based on the average of the mean of the high and low quotations appearing in "Platts Crude Oil Marketwire" under the heading "Key benchmarks ($/bbl)" for "Brent (Dated)" published for each contract day during the determination period minus the average of the mean of the high and low quotations for the "Spot Crude Assessment" for "Brent" for the third quoted month for each Business Day that both are determined during the contract period.

Roll Adjust Provision: N/A

Contract Series: 130 consecutive days

Final Payment Dates: One Busienss Day following the Last Trading Day

Business Days: UK Business Days

Other Terms: To be confirmed directly between the parties in their full form of contract. The terms reflected in such contracts shall be controlling.

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Rule 13149. **CAISO MEAD Day-Ahead Peak Daily Swap**

Contract Description: A daily cash settled swap based upon the mathematical average of daily prices calculated by averaging the peak hourly electricity prices published by CAISO for the location specified in Reference Price A.

Contract Symbol: N/A

Contract Size: 800 MWh

Currency: US Dollars and cents

Trading Price Quotation: 0.05

Listing Cycle: Up to 365 consecutive daily Contract Periods, or as otherwise determined by the SEF

Last Trading Day: For Monday through Friday Contract Periods, excluding NERC holidays, if the following calendar day is a Business Day, the Business Day following the Contract Period with a closing time of 11:00pm EPT the night before; If the following calendar day is not a Business Day, the Business Day equal to the Contract Period with a closing time equal to the end of the Trading Session. For each Saturday, Sunday, and NERC holiday Contract Period, the last Business Day prior to the Contract Period with a closing time equal to the end of the Trading Session.

Final Settlement Price: Average of Reference Price A Prices

Reference Price A: ELECTRICITY CAISO-MEAD-DAY AHEAD

(a) **Description:** "ELECTRICITY CAISO-MEAD-DAY AHEAD" means that the price for a Pricing Date will be that day's Specified Price per MWh of electricity for delivery on the Delivery Date, stated in U.S. Dollars, published by the California ISO at http://oasis.caiso.com/, under the headings "Prices: Report: Locational Marginal Prices (LMP): P/APNode ID: MEADS_2_N101: Market: DAM"" or any successor headings, that reports prices effective on that Pricing Date.

(b) **Pricing Date:** Each Monday through Saturday, excluding NERC holidays, that prices are reported for the Delivery Date

(c) **Specified Price:** Average of LMPs for all hours ending 0700-2200 CPT

(d) **Pricing Calendar:** CAISO

(e) **Delivery Date:** Contract Period

Final Payment Dates: Ten (10) New York Business Days of the month following the Contract Period via wire transfer of Federal Funds.

Other Terms: To be confirmed directly between the parties in their full form of contract. The terms reflected in such contracts shall be controlling.

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Exhibit B

Cash Market Overview

I. Crude Oil

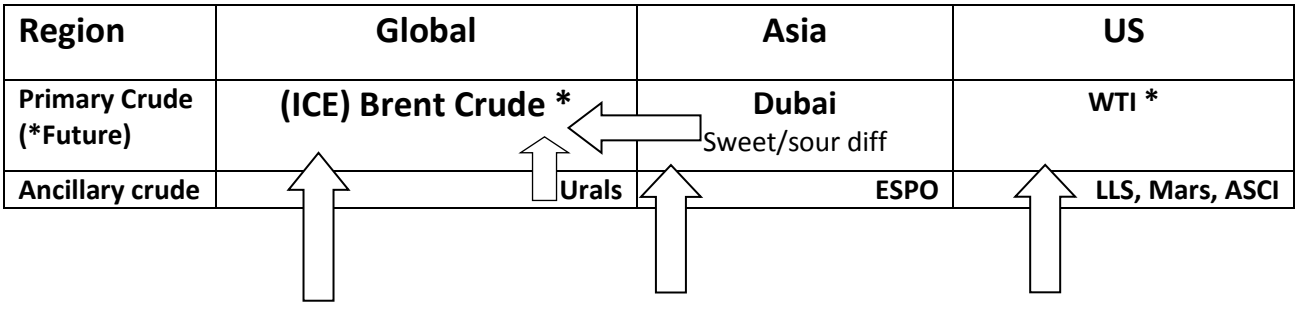
There is in effect across the entire matrix of related oil market instruments including physical and the related Swaps a complex of co-dependent price relationships via geographical, time and quality arbitrage which underpins the validity and safety of prices in all grades and regions. Thus liquidity is effectively co-opted by reference and spread pricing from the most liquid and standardized globally-aggregated markets to those of a traditionally more bilateral and specialized type.

To give a simple example, a refined product 'crack'(differential) to Brent (such as Naphtha CIF NWE Cargoes vs. Brent 1st Line Swap) by definition allows the hugely liquid market in Brent instruments to provide as much as 95-99% or more of the outright price of Naphtha cargoes, an otherwise less liquid outright price market, but which can then rely to a large degree on the Brent crude instrument complex, where participants across multiple fields will provide very liquid markets and tight bid/offer spreads for that proportion of the Naphtha flat or outright price. This leaves sometimes just a matter of cents per barrel to be negotiated in terms of the Naphtha crack over or below the Brent price. This gives market participants a highly varied instrument set and a series of choices between the precise degree of match for any exact physical basis and the liquidity available at that individual basis.

The value of this approach, which grew naturally from the requirements of market participants, in improving effective liquidity applies equally in spot physical and related derivative markets, either future, Swap Future or Option variety. Logically, and by definition, the most common aggregator instruments have the highest liquidity, therefore do much of the heavy lifting in price discovery and exposure cover, but it is in the nature of oil, with more than 500 crude grades alone and tens of thousands of product permutations that there is a degree of trade off between liquidity and basis risk in instrument choice between an exact hedge or the choice of a more liquid close proxy instead.

The global hierarchy of price and liquidity can generally be characterized and exemplified by the relationships in the table below, although this is a variable and fluid series of relationship. Its flexibility and adaptability to changing global economic and refining conditions is a boon for efficient markets rather than a constraint. Liquidity is generally higher towards the top of the figure, although Gasoil tend to trump non-exchange benchmarks, even crude ones, although spread pricing relationships apply upwards, downwards and across these categories in almost all directions as markets test price constantly across both physical and derivative markets:

Figure 1: Global oil and refined product inter-relationships in liquidity and price:



Price/liquidity Link	Cracks to..							
Primary product (*Future)	ICE Gasoil* (EU)	Euro-Bob Gasoline Barges	Fuel Oil 3.5% Rdam Barge	Singapore 0.5% Gasoil	Singapore 180CST FO	NYH RBOB*	NYH Heat*	USGC 3% FO
Price/liquidity Linkage	Spreads/diffs (including some cracks) to…							
Secondary product examples **Price/liquidity Linkage up/down and across chains/regions and via cracks to crudes**	10ppm Diesel barges Rdam ---------- 0.1% NWE Cargoes Jet CIF NWE ---------- Jet Cargo CIF NWE	Naphtha CIF NWE ---------- Gasoline FOB NWE Cargoes	FO 1% Cargoes NWE ---------- FO 1% CIF MED Cargoes	Jet (Regrade) FOB Sing ---------- Singapore 0.05% Gasoil	Singapore 380CST Fuel Oil	RBOB to Euro Oxy Gasoline	USGC Jet -------- NYH Heat Barge	USGC 1% FO

The international crude oil market is the lifeblood of the oil market, the primary feedstock for creating all the petroleum products made in oil refineries with global production and consumption in the region of 85 million barrels a day. Crude oil markets display very efficient and strong logistical, pricing and price discovery linkages between qualities and across geographies creating a strong price reliability and efficient pricing matrix. The global crude oil market and industry has focused liquidity into three core regional marker prices, thus each major global region tends to align around a particular regional marker: Brent ('BFOE' or Brent-Forties-Oseberg-Ekofisk) crude oil from the North Sea in Europe, which is directly linked to the pricing of over 60% of the world's physical crude oil pricing; WTI (West Texas Intermediate) crude oil which is the domestic USA marker; and Dubai crude oil price in the Arabian Gulf.

These core crude oil markers reference one another in terms of international physical crude arbitrage whilst other crude oil 'marker' or secondary benchmark prices in Europe, Asia and the US representing smaller physical volume grades of crude oil all trade via differentials to Brent and WTI. In practice, Brent serves as both the European core marker, as well as the global default price for around two-thirds of the global physical total, with grades in Europe, the US and Asia tending to reference Brent (Either 'Dated' or ICE Brent), in 'outright' or 'flat' price terms.

Where regional markers lose pricing power, Brent has been seen to then be used more as an alternative. In Asia, the decline of alternative sweet markers like APPI (Asian Petroleum Price Index) Tapis or Minas, and the linkage of Dubai to Brent through the Brent/Dubai sweet/sour spread helps refiners to assess processing alternatives as well as allow some regional grades to price most of their own flat price using Brent's very large liquidity pool, to which a small differential is then applied for the quality of the local grade. Russian exports eastwards are an increasing factor, with ESPO volumes rising, but so far still priced as a spread to the core Platts Dubai price which remains Asia's preferred physical benchmark. Alternatively, in Malaysia, Indonesia, Vietnam and Australia Brent

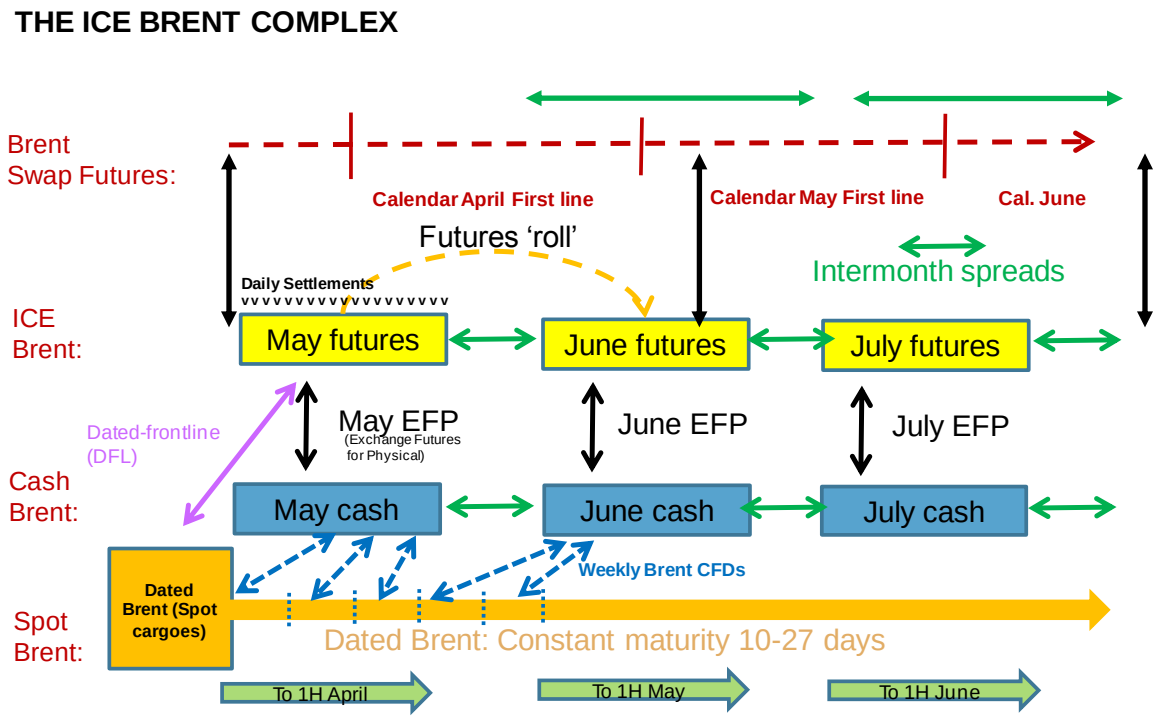
is simply used now as a preferred price to the local marker. Examples of Asia product spreads to Brent are a consequence of this development, and liquidity a powerful attraction for reliable pricing.

Other very large imported physical crudes to Europe such as Russian Urals and Saudi Arab Light both use Brent (Dated and ICE Brent respectively), as do almost all grades around the Mediterranean, African imports into Europe, and of course the North Sea's many own fields. In the United States, crude oil grade trading has seen some splintering of benchmarks used for physical pricing, with the ASCI used for Arab Gulf and Latin American imports into the US Gulf (as well as US domestic sour crude prices), LLS as a coastal and hence non-discounted version of WTI, and other US domestic grades (such as Mars) all increasingly competing with WTI in physical Contract pricing, and seeing some enhanced forward trading, although WTI remains the most important basis series of financial Contracts for US pricing. LLS tends to correlate very well with Brent as a coastal-grade able to be reached by international arbitrage (at least on the inward leg), and is often seen as a proxy for it within the US. A number of US-based end-user and refiner product hedgers are now preferring to use Brent for product hedging as it better correlates with internationally-arbitraged US product exports or imports, which are not constrained by WTI's pipeline infrastructure, or the hurdles to exporting US crude.

The highly liquid globally interlinked financial and physical crude oil market ensures that the value of each crude oil marker around the world has efficient and real-time price discovery against both geographic and quality comparatives. This way, the whole pricing system establishes individual values and robust pricing through the interconnections between crude oil markets. This aids margining through proxies, settlements, and allows less liquid markets to lean on the more liquid core crude oil markers described above.

Figure 2 below illustrates just some of the pricing and liquidity links that exist around the ICE Brent series of Futures, Swaps, and their related physical markets. Although this is merely a small section of the total catalogue of related instruments and pooled liquidity, one can clearly see the links between Spot Brent (Dated) and Forward physical Brent (25-day BFOE Cash), the Brent One, Two and Three-month CFD Swaps that link those two physical instruments, and the inter-month spreads that exist between all the included instruments.

Figure 2: The ICE Brent instrument complex:



In general, spread liquidities tend to be more liquid than outright prices of more marginal instruments; the largest volume remains in the Futures, so from that core price liquidity in spreads in turn fans out to discover implied outright prices in other instruments, both crude and product, for which an outright market also exists. The market is highly efficient in ensuring that any mismatch temporarily existing between implied and actual price is quickly eliminated. A larger version, somewhat like Chart 1, would bring in cracks to ICE Brent and inter-product relationships in addition, for which a global matrix exists. This is the cornerstone and a valuable feature of global interdependent oil futures and swap markets.

The international Crude oil market is composed of related but individual markets for various grades, comprised of sweet and sour grades (various degrees of sulphur content, high sulphur content makes it a sour crude, low sulphur a sweet crude like Brent crude) and the other key factor the API, how thick the consistency of the crude oil is, whether light or heavy (thick). These two important qualities of crude oil determine which oil refineries around the world can use that crude oil, they also determine the cost of refining that crude oil as high sulphur and heavy crudes in particular will require many more costly pre-treatment processes before the oil can be used to make valuable petroleum products.

The financial Crude Oil market is the largest of all the financial oil markets as the input for all refineries. It is the backbone of the whole physical oil market and the pricing core to the petroleum products market as the feedstock for oil refineries. Although product fundamentals may lead the crude price direction in turn, product prices tend to be expressed as crude plus a spread rather than the converse. Crude markets also have generally the most active forward market, quoted for many years in the future. The international crude oil derivatives market has been well established since the early 1980's with liquidity growth enabling the efficient pricing and trading of the market through very volatile periods such as the Gulf War in Iraq in 1991, 2001, and the very dramatic rise and fall of the Oil market during 2008.

Financial contracts for the underlying global physical Crude oil market are the longest-running and most liquid. The relationship between different qualities of crude oil , locations and also the relationship between Brent, WTI, Dubai and the Refined petroleum products markets like Gasoil, jet fuel, fuel oil, gasoline and naphtha (the refinery crack spreads) match the key flows of physical Oil around the world and already serve the needs of the industry.

The most used series of physical pricing indices for the Crude oil market include those published by the Intercontinental Exchange (ICE Brent), Platts, and CME, with the market pricing focused for liquidity purposes on a number of key geographical physical trading hubs, crude oil qualities, and size of delivery quantity i.e. the biggest size being the Very Large Crude Carrier (VLCC) at 2 million barrels a cargo, down to smaller vessels of approximately 500,000 barrels.

Depending on the spread between different physical locations and the arbitrage quality spread, physical crude Oil can be observed to move between Northwest Europe to the USA , West Africa to the USA and Asia, the Mediterranean to Europe and USA and finally from the Arabian Gulf to Europe, the USA and Asia. The biggest demand growth and oil flow increase continues to be in Asia, and in particular China and India. These movements of physical Crude oil are in large quantities on board very large Cargo size vessels and are represented by the “Cargoes” swap contracts.

Crude Oil Swaps are generally available as a basis against cargo size parcels and although in the financial crude oil markets you may be able to execute 25,000 to 50,000 barrels minimum, in the physical market cargoes typically range in size between 500,000 barrels up to a VLCC at 2 million barrels. In each case, the financial swap is entirely aligned with a physical spot assessment appearing within the Platts European Marketscan publication or physical deals on ICE.

Besides the average of the month contracts, in order to meet the needs of the industry there also exists an active market for Balance of the Month or ’Balmo’ swaps, primarily around hedging specific physical requirements. These are priced for the remaining days of a calendar month, not the full calendar month like a fixed price Contract. For example, if a Balmo Contract is executed on the 4th day of the month, then the Contract will be priced from the 4th day of the month to the last business day of the Contract month. Balmo Contracts allow Crude

oil market participants greater flexibility in customizing the time period used to hedge an exposure. These are less liquid, but the price implication from one to the other is generally strong.

II. Middle Distillates

The global middle distillate market, composed of related but individual markets for various grades of heating oil, diesel transport fuel on road, or for maritime use, jet and other gasoils has evolved over time, with ICE Gasoil Futures in Europe as the largest single liquidity source, complemented by US Heating Oil Futures, Singapore Gasoil, and a host of related differential basis contracts around such primary outright price instruments (see Figure 1).

The financial Gasoil market is one of the largest financial oil markets which has been well established since the late 1980's with liquidity growth enabling the efficient pricing and trading of the market through highly volatile periods such as the Gulf Wars in Iraq in the early 1990's and in 2001. The Oil industry has standardized the financial Contracts that enable effective price risk management for the underlying global physical Gasoil market, the relationship between different qualities, locations and also the relationship between Gasoil and the Brent Crude oil market used by refineries to make petroleum products, i.e. the refinery profit margin also known as the crack spread. These match the key flows of physical Gasoil around the world and already serve the needs of the industry.

The most commonly used series of physical pricing indices for middle distillate markets is published by Platts, with market pricing focused for liquidity purposes on a number of key geographical physical trading hubs, Gasoil qualities, and size of delivery quantity i.e. a large cargo ship or a smaller barge type vessel. Other grades and regional markets then trade and price as differentials off these key pricing hubs. The use of cash-settled swaps in particular allows any physical term Contract which are frequently written on a calendar monthly average floating basis against a Platts physical spot price index to effectively be re-fixed with a financial swap.

The key pricing hubs are Mediterranean (MED), Northwest Europe (NWE), Rotterdam (RDAM), New York Harbor (NYH), United States Gulf Coast (USGC), and Singapore. Depending on the spread between different physical locations, the arbitrage spread, physical Gasoil can be observed to move between Northwest Europe – Mediterranean, Mediterranean and Middle East, Europe and Asia, and USA to Europe and vice versa. These movements of physical Gasoil are in large quantities onboard Cargo size vessels and are represented by the Cargo swaps.

Increasingly large quantities of ULSD (Ultra-Low Sulphur Diesel) are moving from the US to Europe, and from Asia also to Europe, pricing on an outward basis from local pricing bases in Singapore or the US Gulf/New York Harbour, or on arrival, often with a differential quality basis on top, provided by a differential swap on top of the ICE Gasoil basis Future. Physical spot distillate markets trade on a price basis of: ICE Gasoil plus differential for quality and location; so do the derivatives for reliable convergence between the two. Depending on the exact quality of the eventual oil, between 85% (CIF NWE Jet cargoes) and 99.8% (0.1% Gasoil barges) of the total outright price basis will be covered by the core Futures basis, which is the bedrock of price discovery and efficient trading in the European distillate market, and by extension as an importing zone beyond that to global distillate markets.

In general, lower sulphur content has been mandated across global markets either directly or through imposition of carbon costs, which has seen a steady fall in the sulphur content of the typical Gasoil specification in use from one of 5000 parts per million (ppm) in 1983, to that of just 10ppm.

The global Gasoil (Diesel) market is a very liquid and well established physical market providing fuel for end users in the Marine and Road transportation industry, Power Generation, and as a fuel for home heating oil. It represents about a third of the production output from crude oil refineries around the world, and the largest sector within global distillates markets.

Balance Month or 'Balmo' swaps, which take an assessor's price from the day of trade to the end of that calendar month, rather than an entire calendar month allow the very precise hedging of physical prices, and thus allow perfect hedges to be constructed where the physical price exposed to is exactly matched by the tenor of the swap and the related physical index.

Distillates in use as heating oil include the existing 0.1% or 1,000ppm grade, plus the legacy US 0.2% grade which will be phased out across US states gradually in the period up to 2014, but which remains the most important US grade for physical and related swaps until May 2013. Heating oil's significance has declined with the ready availability of cleaner natural gas. This grade is likely to continue in a less central role, and join the roster of grades to be expressed as differential to the newer 10ppm (Europe) and 15ppm (US) diesel grades which will take over core pricing function of previous higher-sulphur grades, whilst retaining the differential/basis mechanism to a separate liquidity pool. In Asia, the switchover is a little slower, although jurisdictions such as Korea and Japan are already on a ULSD standard comparable with the US and Europe. Singapore will move to a primary 500ppm core benchmark in 2013 from 5,000ppm previously, with the core Singapore Gasoil Contract incorporating that change within its specification.

Middle distillate are available as a basis in both cargo size and barges size (typically barges are of 2,000-4,000 metric tonnes in Europe, but typically only cargoes in Singapore, and again both types in the US (barges in New York Harbor). Cargoes of 10,000 metric tonnes and upward or 50,000 bbls in the US or Asia are typical with larger arbitrage vessels of up to 70,000 metric tonnes are in use to leverage differential pricing where or when it occurs with differing economic or refining conditions in different geographies. In Europe, swaps trade both in the Rotterdam barge basis, a Northwest Europe Cargo (Le Havre basis), and in the Mediterranean on an ex-Genova/Lavera port basis. In each case, the swap is entirely aligned with a physical spot assessment appearing within the Platts European Marketscan publication.

Middle distillate markets, in common with other refined product markets are also often traded as 'cracks' to a chosen crude basis, frequently that of Brent, in addition to a differential to flat price Gasoil. The multiplicity of spread price matrices assists price discovery and helps to triangulate value across multiple arbitrageable prices, whether by product quality e.g. Jet to Gasoil, or diesel to gasoil, or by spread to outright, for example by comparison to a crack value. Each of these ensures that value is tested against multiple liquidity pools and also assist by 'lending' liquidity from the most liquid instruments to less liquid markets, which might otherwise have less liquidity, were they to be reliant on flat price-only market indications.

In Singapore-based Asian spot and swap markets, the small number of alternative physical bases (relative to Europe, for example), and cargo-sized clips have allowed liquid trade in a very standardized outright price market, and this supplied sufficient liquidity for that market to function efficiently for trading purposes without an underlying local Futures market. Platts assessments are the most commonly used basis for physical spot assessments and the pricing basis for related swaps, allowing full alignment of term Contract pricing and hedging with swaps where required. The Singapore 0.5% Gasoil and the new 0.05% Gasoil grade which will take over in 2013 are the respective core benchmarks there.

Published assessments of the physical middle distillate markets market by Platts represent assessments of the trade in barges or cargoes in the periods between 3 and 15 days ahead for barges, and 10-25 days for cargoes (15-30 days in Asia); cargoes in Asia being further forward in time to reflect the typically longer sailing times in that region. European barges are quoted FOB (Free on Board) i.e. a lifting rather than a delivered price inclusive of freight; with cargoes' most liquid assessments reflecting FOB in Asia, but CIF (Cost including Insurance and Freight) as a delivered Contract in Europe. US cargoes also typically reflect FOB for vessels, although the US as a pipeline-dominated region will typically reflect FOB vessels where applied to vessels out of either the New York Harbor or US Gulf markets.

Jet is a global market, in each region following the typical middle distillate pattern. Singapore liquid middle distillates include Jet as a 'regrade' or differential to base Singapore Gasoil or as an outright; whilst in Europe this differential is expressed as a differential or spread to Gasoil, or as a crack to crude. Jet is a highly internationally-traded and relatively homogenized refined product like its sister diesel grade, which share a lighter

density than some other gasoils, and is readily arbitraged for what is a highly competitive aviation fuel market, composing often 25% or more of airline costs. Jet fuel pricing may be built up through layers of basis, allowing Jet to be priced as a gasoil crack to Crude, sometimes then with a Jet differential or regrade to the core gasoil base on top. The different components are traded on an opportunistic basis to allow airlines to attempt to optimize their eventual fuel cost, and which also makes the varying component of the total readily arbitraged against each other within the outright Jet price. Thus the final price can be hedged in one go or via a series of stages. The multiple avenues to a final price enable competition across the markets with their various counterparties and arbitrage to work against any pricing anomaly that might otherwise occur. This 'slicing' or 'layering' of outright price basis is a feature of many global oil markets.

III. Light End (Naphtha and Gasoline)

Naphtha is used primarily as a feedstock for production of Petrochemicals such as industrial and consumer plastics but also as a blendstock for higher-octane Motor Gasoline purposes as well, as are some of the NGLs (Natural Gas Liquids) such as Butane which is a key determinant of Gasoline specification. Naphtha is also substitutable to a degree with Propane and trades as a spread to it, particularly in winter. Thus the interdependency of pricing and liquidity is once again demonstrated in the admitted physical and derivative markets.

IV. Financial Power

CAISO

The California ISO (CAISO) manages approximately 80% of the state's electricity transmission and services over 30 million people. The ISO is a non-profit corporation that operates wholesale competitive electricity markets. Over 1,400 power plants service an estimated system generation capacity of 58,000 MW. CAISO is divided into 3 load regions: NP-15 which is serviced by Pacific Gas & Electric, SP-15 which is serviced by Southern California Edison, and ZP-15 which is serviced by San Diego Gas and Electric.[2] CAISO publishes actual and forecasted hourly load and LMP for these load regions as well as the LMP for the Palo Verde hub. Between January 2009 and July 2012, CAISO had an average hourly system load of 31,555 MW and a peak load of 47,282 MW.

[2] http://www.ferc.gov/market-oversight/mkt-electric/california.asp#rto