

Crude Oil Markets Review

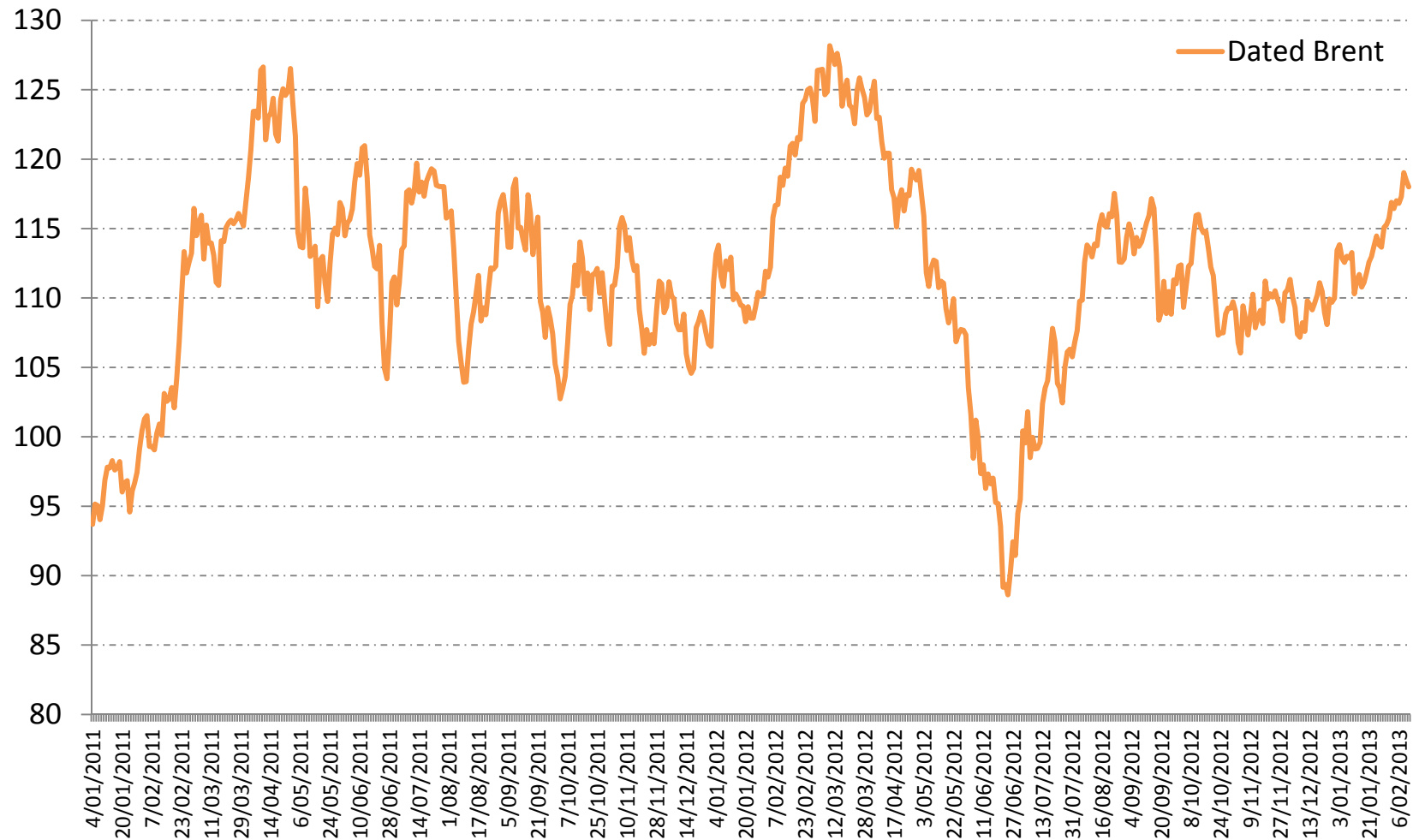
Jorge Montepeque, Platts London Oil Forum
February 18, 2013



Agenda

- The big picture: more supply, more demand
- Impact of shale oil
- Futurization of derivatives markets
- Review of key benchmarks
- North Sea proposals

Dated Brent, \$/b



Key Market Developments in 2012

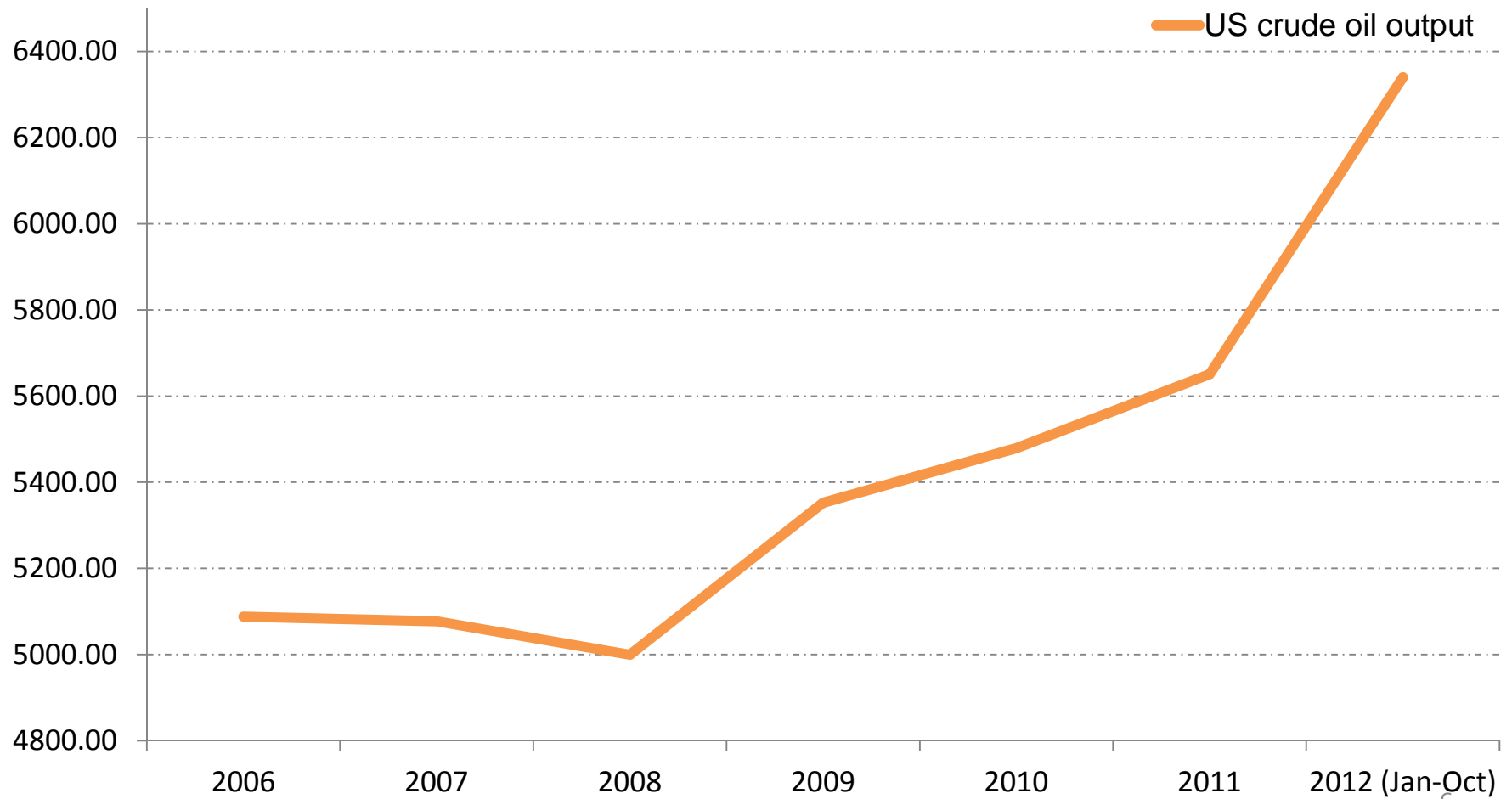
- Rising crude oil flows from Middle East: Abu Dhabi, Oman and Iraq
- Increase in ESPO volumes in the Far East
- Changes of Urals flows, Ust-Luga launch
- Iranian embargo versus rising Saudi production
- US shale oil production grabs world attention

Global Oil Supply

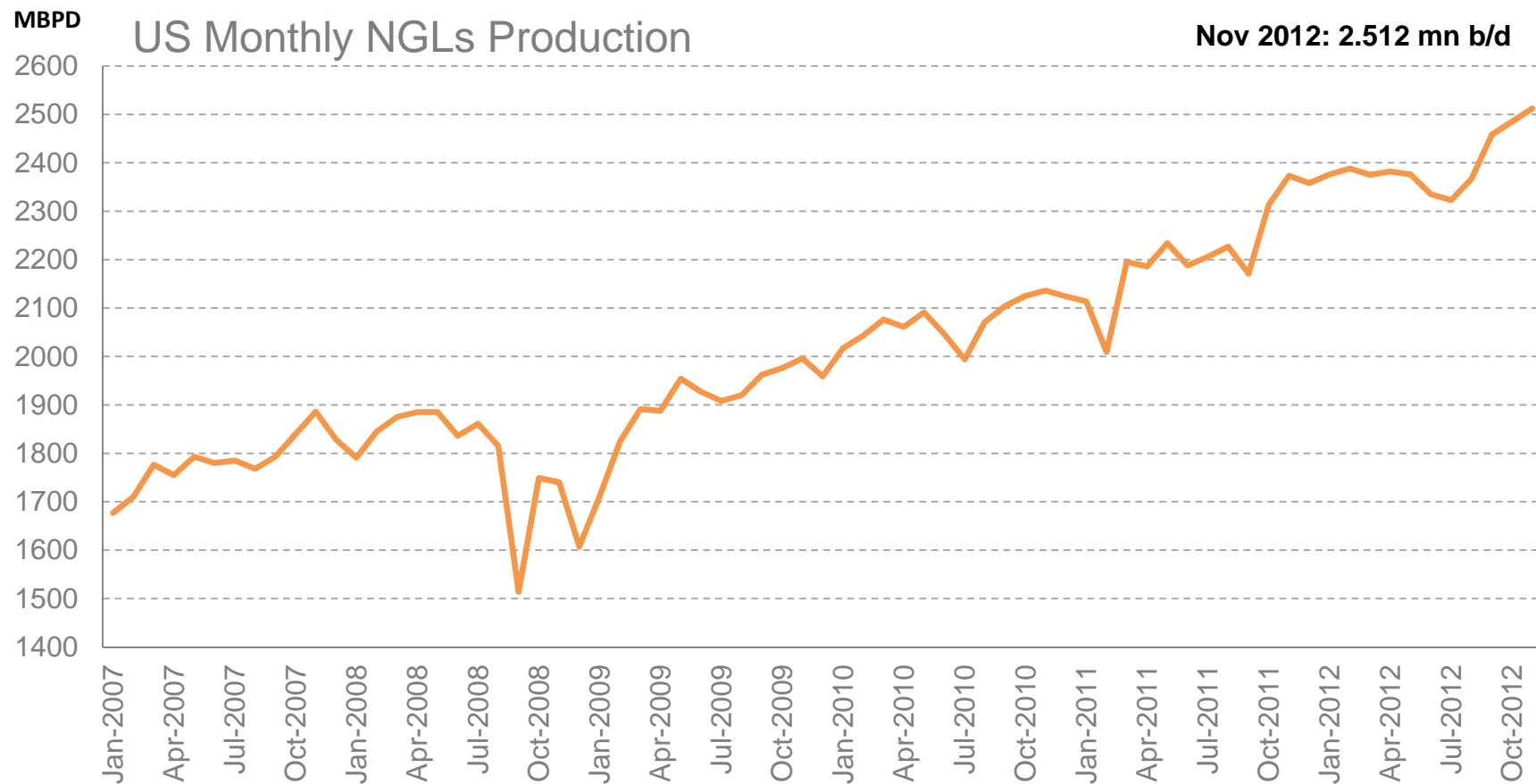
Top Oil Producers in 2012, Mb/d*			
Country	2011	2012	Change
Russia	10.66	10.73	0.07
Saudi Arabia	9.04	9.59	0.55
US	8.13	9.1	0.97
China	4.1	4.17	0.07
Canada	3.51	3.76	0.25
Iran	3.62	3	-0.62
Iraq	2.67	2.95	0.28

*Including conventional crude oil, non-conventional crude oil, condensates, NGLs, biofuel

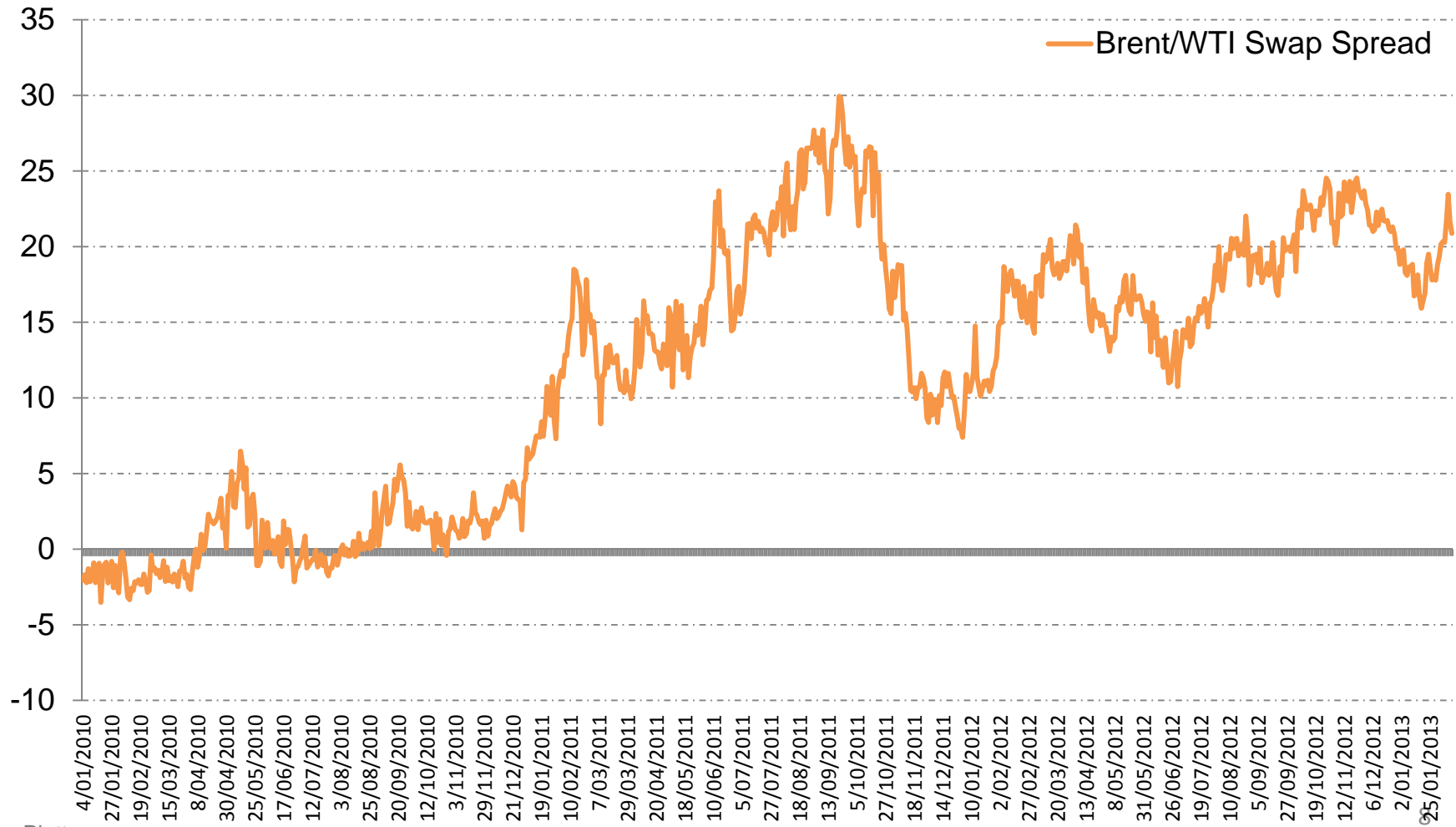
US Field Crude Oil Output '000 b/d



US Monthly Natural Gas Liquids (NGLs)



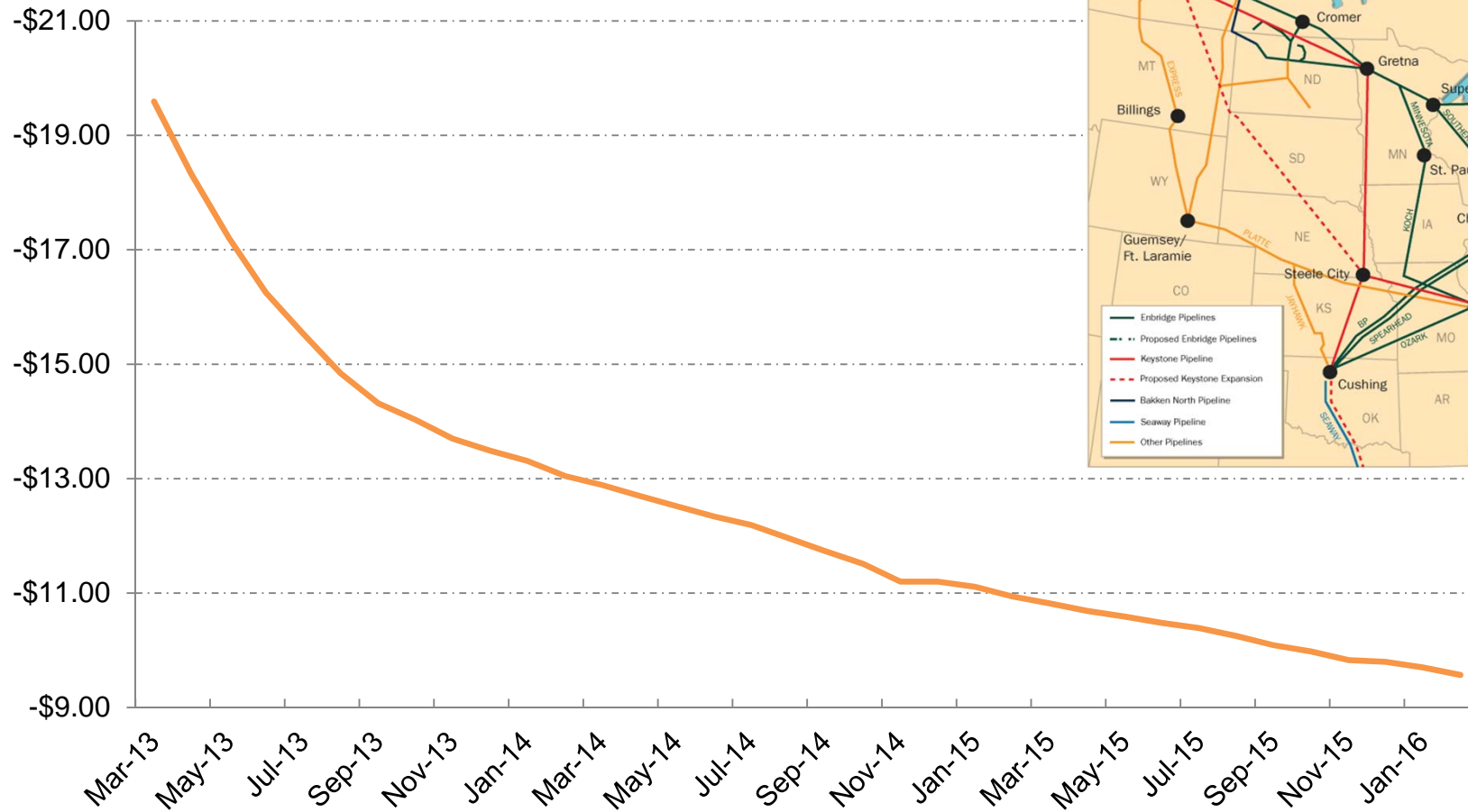
WTI/Brent \$/bbl



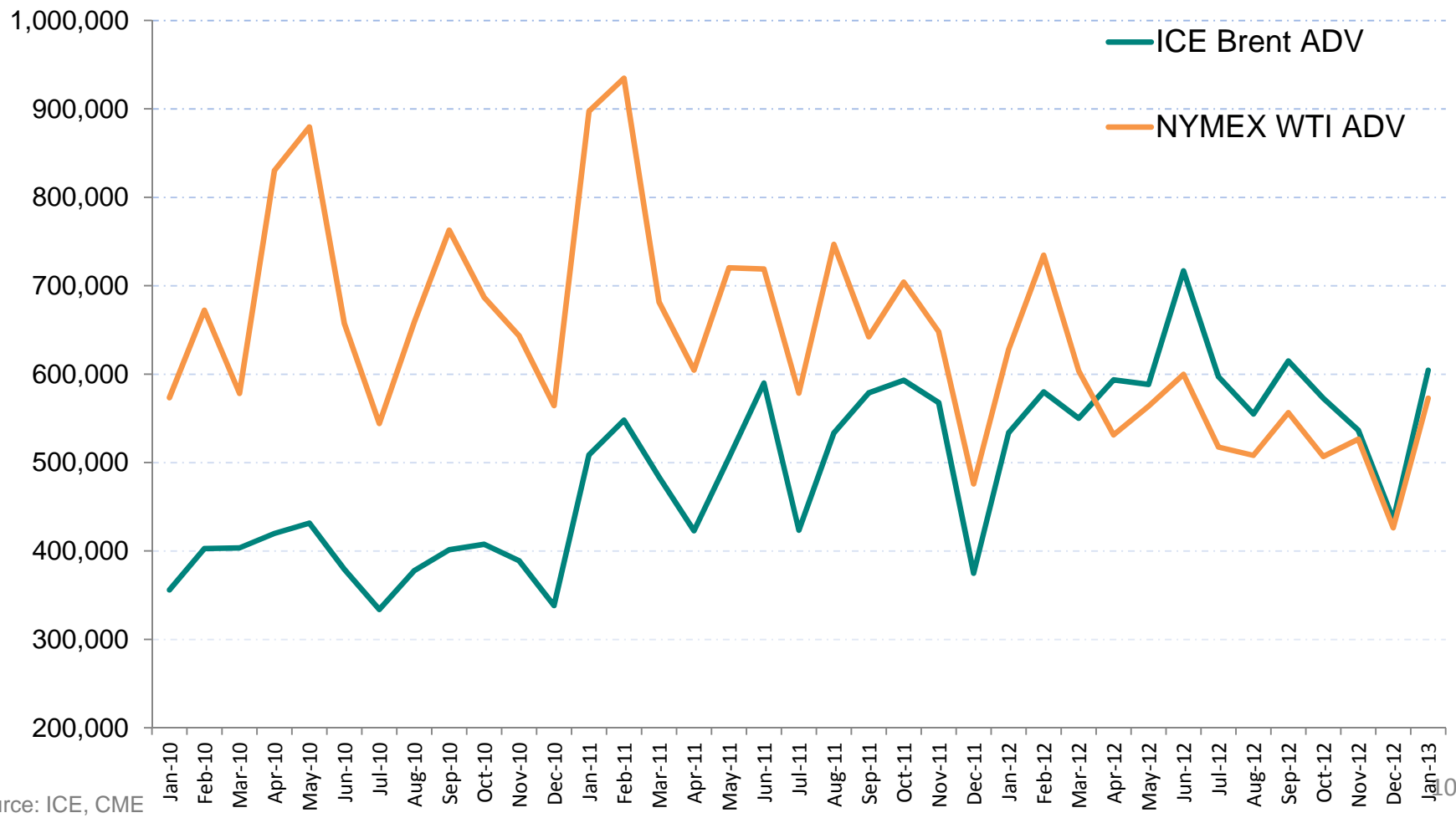
Source: Platts

WTI/Brent spread swaps for March 2013–Jan 2016

\$/bbl (Feb 14, 2013)



ICE Brent/CME WTI Futures



Source: ICE, CME

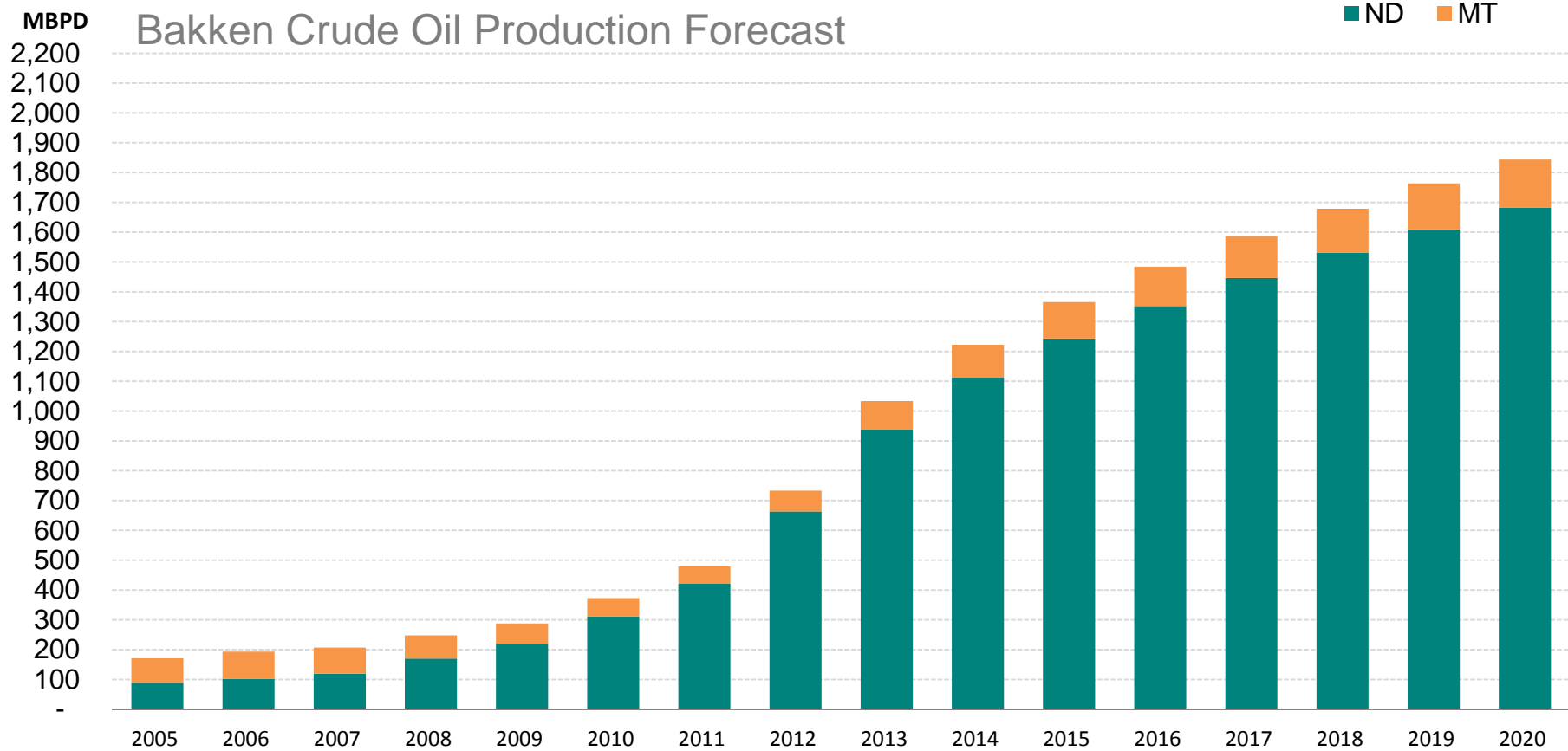
US Key Pipeline Projects

- Enterprise **Seaway** Pipeline (400 kb/d) – reversed in May 2012 – a 50:50 joint venture between Enbridge and Enterprise -- ships crude oil from Cushing to Freeport through Jones Creek, northwest of Freeport, to Texas City
- TransCanada **Keystone XL** is to ship crude from the Athabasca oil sands in Canada to Cushing, Oklahoma (830 kb/d) and onward to the US Gulf Coast (591 kb/d)
- Energy Transfers Partners have proposed to convert a natural gas pipeline into a 400 kbd **Trunkline** crude oil line from Illinois to Texas
- **Magellan Longhorn** Segment Products Pipeline Conversion to Crude Oil (Q1 2013) to ship 75,000 b/d crude movements from Crane, TX to Houston refineries. The pipeline will increase to the full 225,000 b/d capacity during mid-2013
- **Sunoco Logistics Partners' Permian Express Pipeline** - 150,000 b/d crude movements from Wichita Falls to Nederland/Beaumont, TX

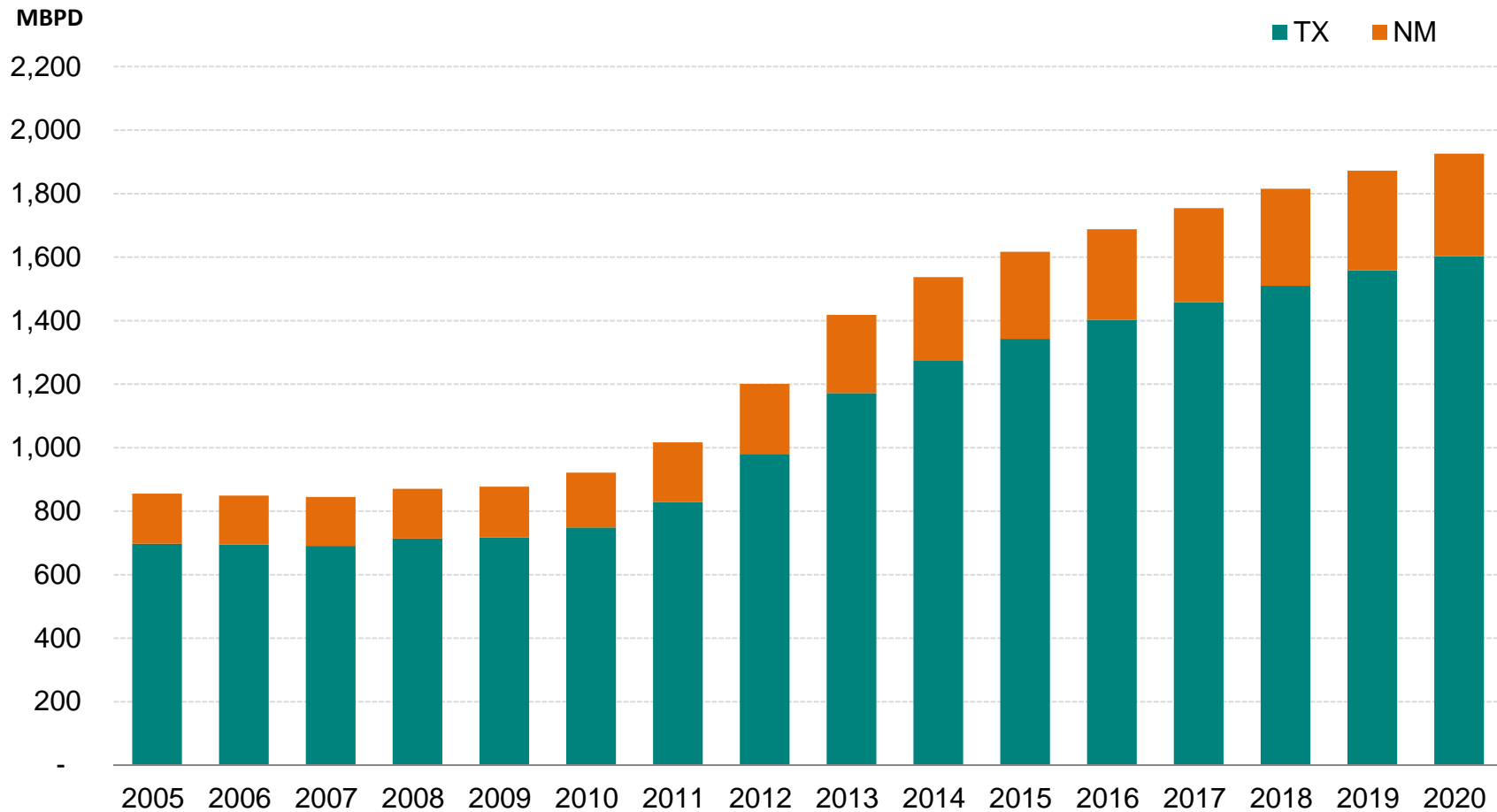
US East Coast Diverts to Bakken Blend

- Bakken production at **672,084 b/d** average September-November 2012
- US East Coast refineries substitute WAF, North Sea and East Canadian barrels with North Dakota's Bakken Blend (by rail).
- In 2012, Bakken deliveries to the East Coast averaged near 70,000 b/d.
- By the end of 2013, Bakken rail deliveries to the East Cost could average 100,000-150,000 b/d
- Bakken consumers in USAC:
 - Astra Oil already began railing Bakken in to its 40,000 b/d refinery in Tacoma, Washington
 - BP is constructing a railway project at its 234,000 b/d Cherry Point refinery in Ferndale, Washington to receive Bakken crude oil
 - Philadelphia Energy Solutions' refinery currently rails in 20 kb/d of Bakken (potential increase to 140-180 kb/d) PES is planning to rely on Midcontinent crudes for 55% of the refinery's crude oil capacity in the coming years.
 - Phillips 66's Bayway refinery in New Jersey to buy 50,000 b/d effective 2013
 - Delta Airlines' Trainer refinery effective 2013
 - PBF Energy's Delaware City refinery

Bakken Expected Production



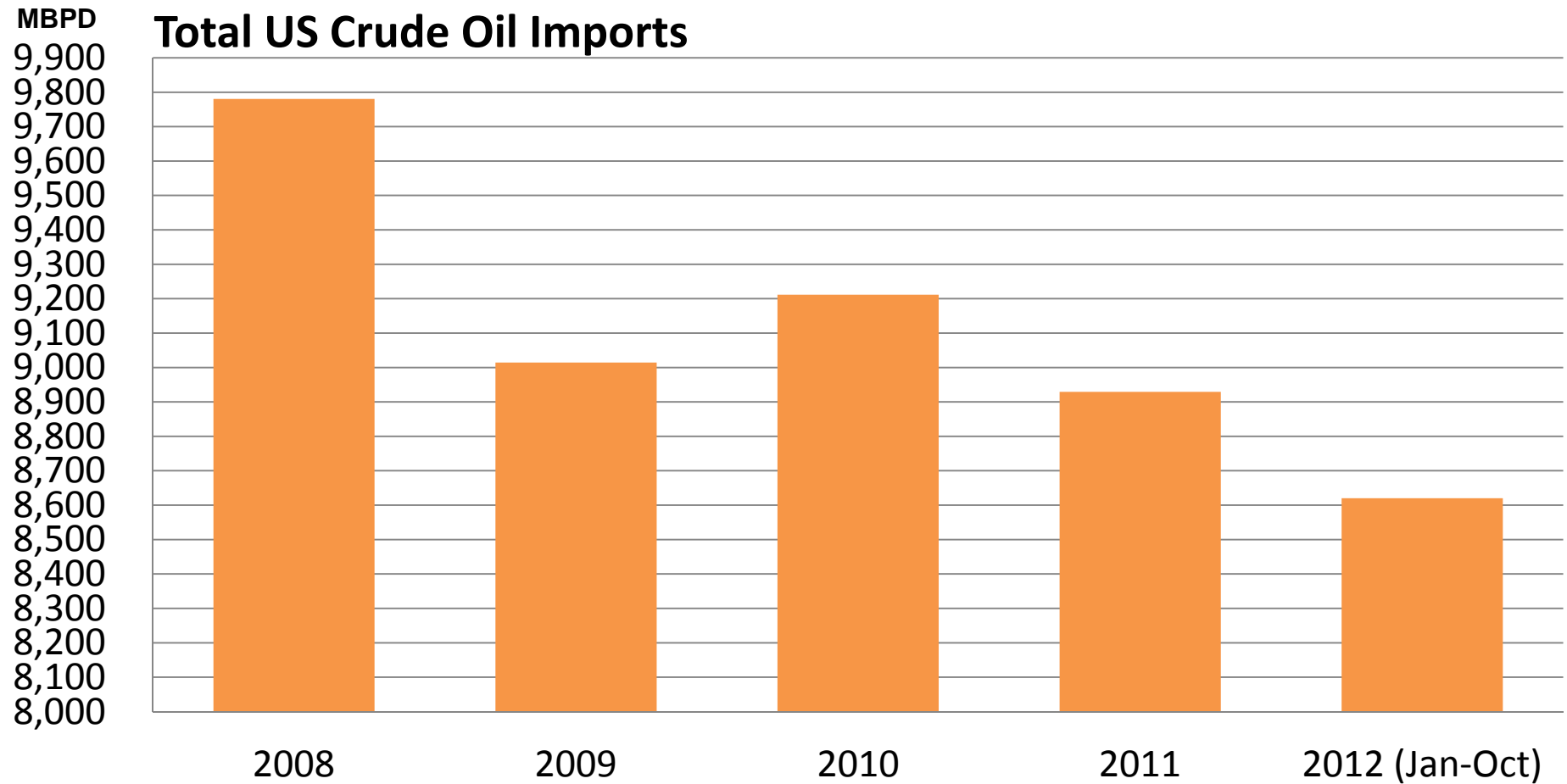
Permian Basin Production Forecast



US Gulf Coast Diverts to Domestic Crude Oil

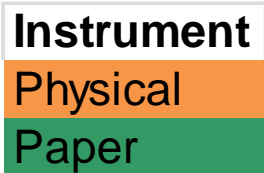
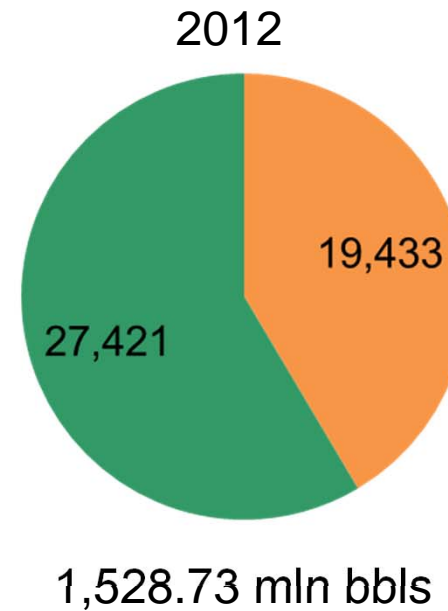
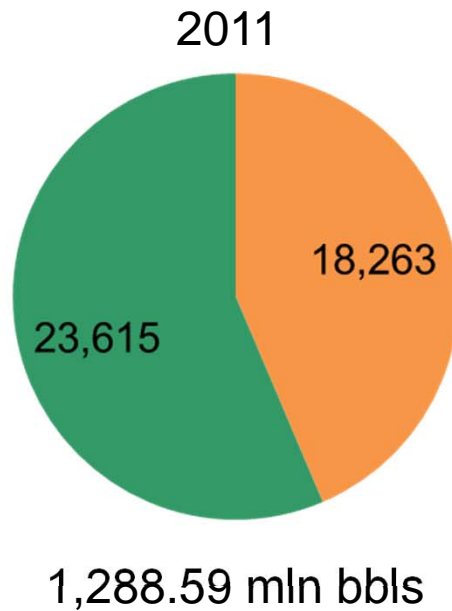
- Eagle Ford oil production average at **340,000** b/d Jan-Nov 2012
- Eagle Ford condensate production average at **72,126** b/d Jan-Nov 2012
- **Valero** replaced **all its foreign light oil imports** with domestic crude at its Gulf Coast and Memphis, Tennessee, plants in Q4 2012
- **Valero** is currently consuming a total of 140,000 b/d of Eagle Ford Shale crude at its refineries (95,000 b/d Three Rivers refinery, 205,000 b/d Corpus Christie refinery, 90,000 b/d Houston refinery in Texas, 135,000 b/d Meraux in Louisiana)
- Canadian heavy crude oil flows push back import from Mexico and Venezuela
- **LyondellBasell** terminated shipments of Saharan Blend into USGC refineries
- **Philadelphia Energy Solutions** will ship Eagle Ford and other Gulf Coast crudes by Jones Act vessels when the arbitrage allows
- **Petrobras' Pasadena Refining System Inc** is also refining about 20,000-30,000 b/d of Eagle Ford

US Import Less Crude Oil



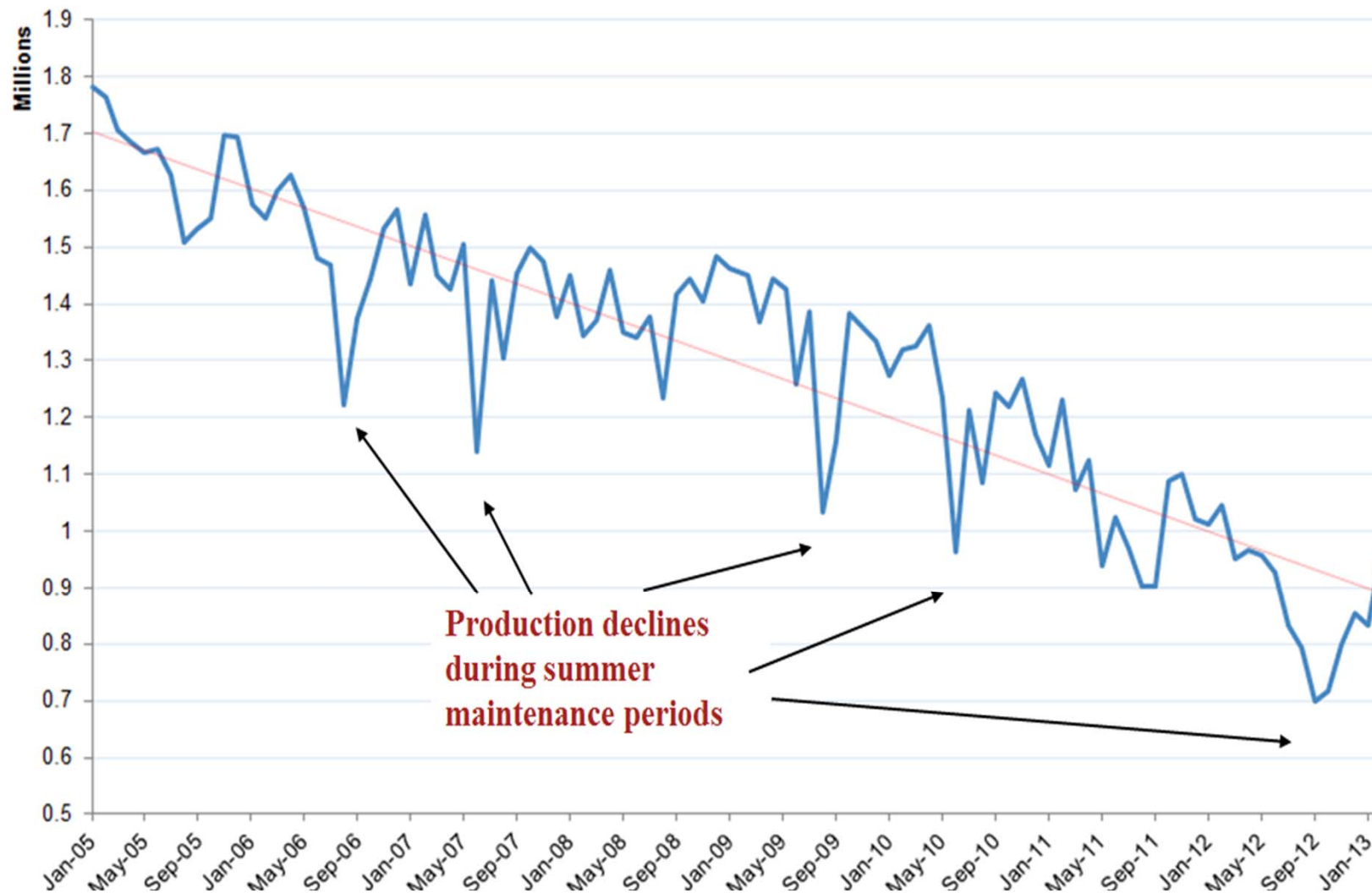
Futurization of Swaps. Platts eWindow Data

Trade Data



Swaps liquidity up 16% in 2012 vs. 2011

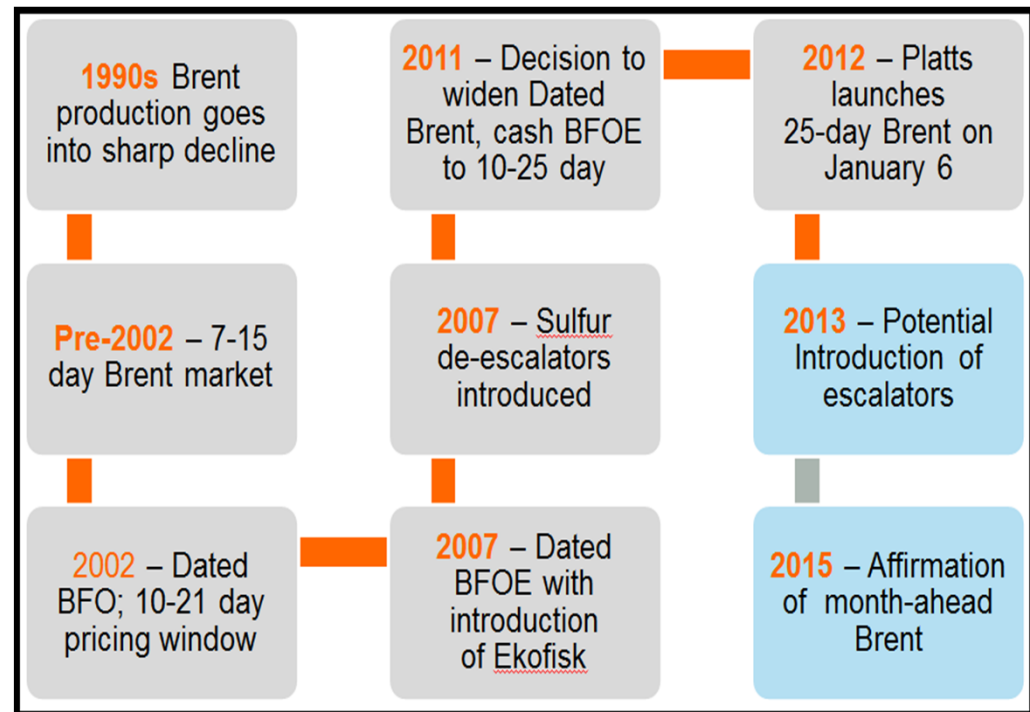
The North Sea: Production Decline in BFOE



A Shared Vision For Brent

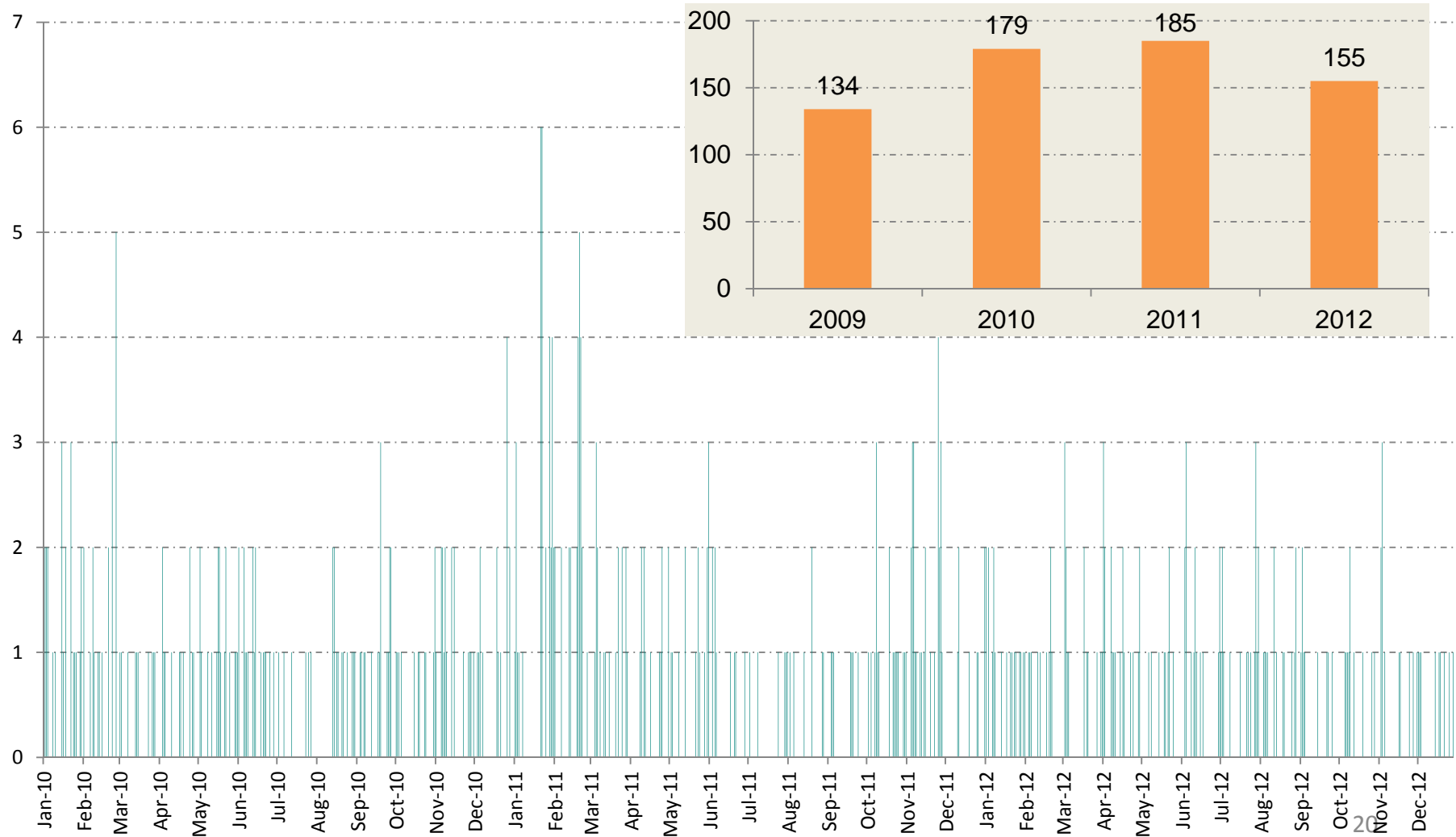
Since 2010, we have shared a 15-year vision for Brent with market stakeholders

- **2012:** 25-days Dated Brent
- **2013:** Introduce escalators
- **2015:** Month-ahead Dated Brent
- **2014-2020:** New alternate crudes
Move to 45 days
- **2018-2025:** Potential move to include CIF cargoes

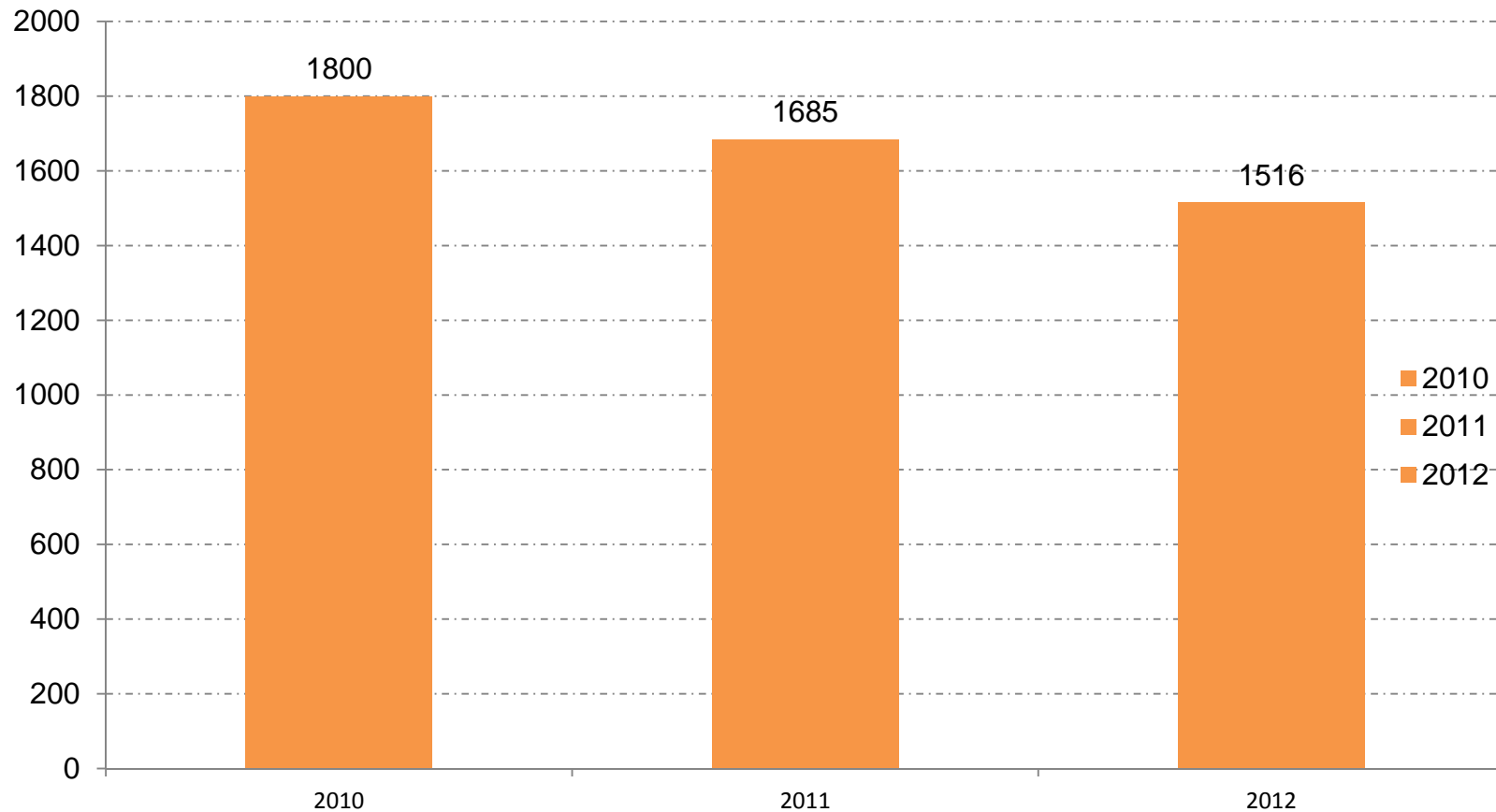


A long-term, shared market vision is vital for market confidence

Forties Cargo Trades in Platts MOC

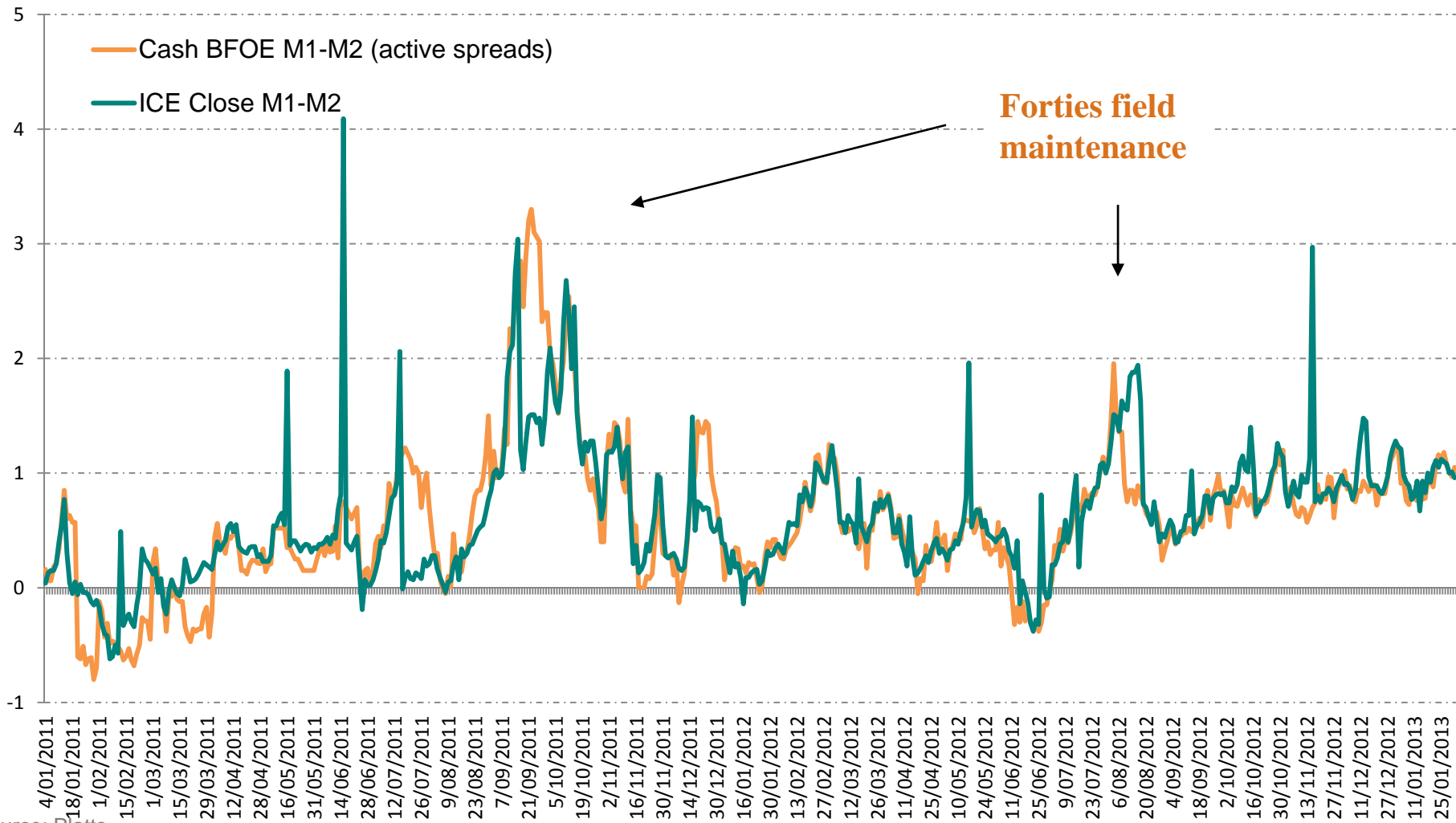


BFOE Partial Trades in Platts MOC



Huge rise in bilateral trade at futures expiration time.
 Example: July 16, 2012; 17.8-mil bbls total during day

Behavior of Inter-month Brent Spreads



Brent Growing Importance to CME and ICE

CME Announces trading volume record in NYMEX Brent Futures

CHICAGO, Jan. 18, 2013 /PRNewswire/ -- CME Group, the world's leading and most diverse derivatives marketplace, today announced a record in daily trading volume for its NYMEX Brent (BZ) crude oil futures contract. These contracts are listed by and subject to the rules of NYMEX.

Brent Crude Oil Last Day Financial Futures trading volumes jumped yesterday to 30,250 contracts, a 38 percent increase over the previous record of 21,997 set on August 8, 2012. CME Group has seen strong interest in its Brent contract so far this year, with average daily volume of 9,217 so far in January, an increase of 100% over ADV of 4,589 in 2012. CME Brent is available on CME Globex, the Trading Floor, for clearing over CME ClearPort, and over CME Direct, a free, web-based trading platform for listed and over-the-counter markets.

Platts Role in the Evolution of Crude Oil Benchmarks

- Platts continues to monitor production trends, quality changes, refinery and demand patterns to ensure its physical assessments are in line with the market
- Platts approaches issues both on a short- and long-term basis and communicates about challenges or potential changes in an open and interactive manner, including bilateral discussions, open forums, Platts welcomes open and frank feedback
- Platts is independent and neutral in its decision making process but is consultative and inclusive of all parties views and concerns prior to those decisions
- Platts' objectives are editorial and geared to maintain the integrity of the assessments published
- Platts is focused on ensuring its assessments provide needed information and benchmark requirements including transparency and reliability to all market stakeholders

Transparency in De-escalator Process

MH1500

Subscriber note: Platts to state monthly Forties de-escalator on 25th of month London(Platts)--20Nov2012/1055 am EST/1555 GMT

Following industry feedback, Platts will state the sulfur de-escalator applied to the North Sea's Forties crude oil every month at 3 pm London time, on the **25th of the month** prior to the month of implementation. In case the 25th of the month is a non-working day in the UK, the de-escalator will be announced on the closest business day prior to the 25th. As an example, the de-escalator for December would be announced on the 23rd of November, at 3 pm London time. Under this approach, Platts will state the de-escalator, whether or not the value of the de-escalator is being changed. The de-escalator may change if there is a significant and sustained event in the crude market, as affected by refined products and other relevant factors that affect the economics of Forties. Otherwise, the de-escalator would be reiterated with no change. Platts will publish **the editorial basis for the determination** of the de-escalator level on its website platts.com. For comments please contact europe_crude@platts.com and pricegroup@platts.com

What are Escalators?

- **A cost paid by a buyer** of a crude cargo to the seller, in return for receiving a better quality cargo of crude than guaranteed at time of trade
- A mechanism that “closes the gap” between base crudes and higher-value alternates, making it more likely that a seller will deliver a higher-quality crude against commitments to buyers when needed
- Already used in other commodity markets where alternative deliveries are part of a physical settlement mechanisms
- The opposite of de-escalators, which are **a cost paid to a buyer** as compensation by a seller who delivers a lesser quality cargo of crude than guaranteed at time of trade

The Escalator Concept

- The North Sea production declined further in 2012 with four grades' output down to about 700,000 b/d
- Brent performed well in 2012, aided in part by the move to 25 days which opened further forward cargo delivery
- Alternative delivery also worked exceptionally well in 2012 with Ekofisk supplied at critical times
- However, futures exhibited several price spikes attributed to various reasons, including: time disconnect, lack of crude by the expiration date and the impact of the daily average
- Industry has been moving further towards requesting implementation of an escalator used when delivering 'better' crude which would pave way for growing role for Ekofisk and Oseberg
- Escalator would establish a 'premium' paid to supplier of better crude
- Premium would be a function of market price and would account for potential volatility

Platts Has Been Consulting with the Industry Since 2011

Platts Crude Oil Workshop June 2011

Escalators

- Escalators contemplated for Ekofisk and Oseberg
- Escalators to be designed with ample consultation with the industry and will incorporate refinery input
- Escalators would result in buyer of BFOE contract maintaining obligation to accept any of the grades and seller maintaining the obligation to provide any grade
- Escalator would set level of payment that receiver of non Forties cargo would pay supplier in acknowledgment for delivery of superior material
- Analysis also needed for escalator in addition to de-escalator of Forties in event of substantial variability in quality

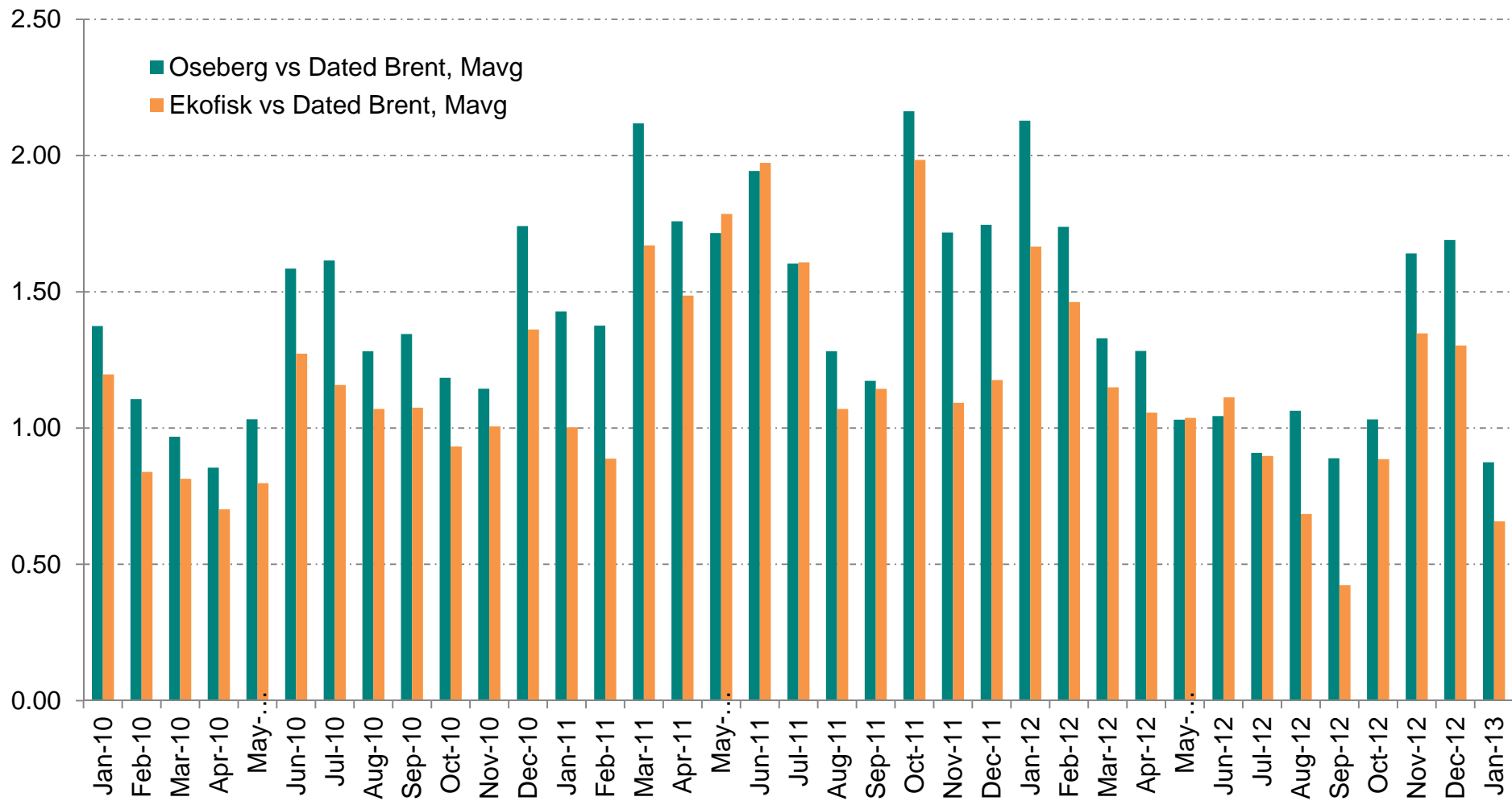
De-escalator/Escalator Process



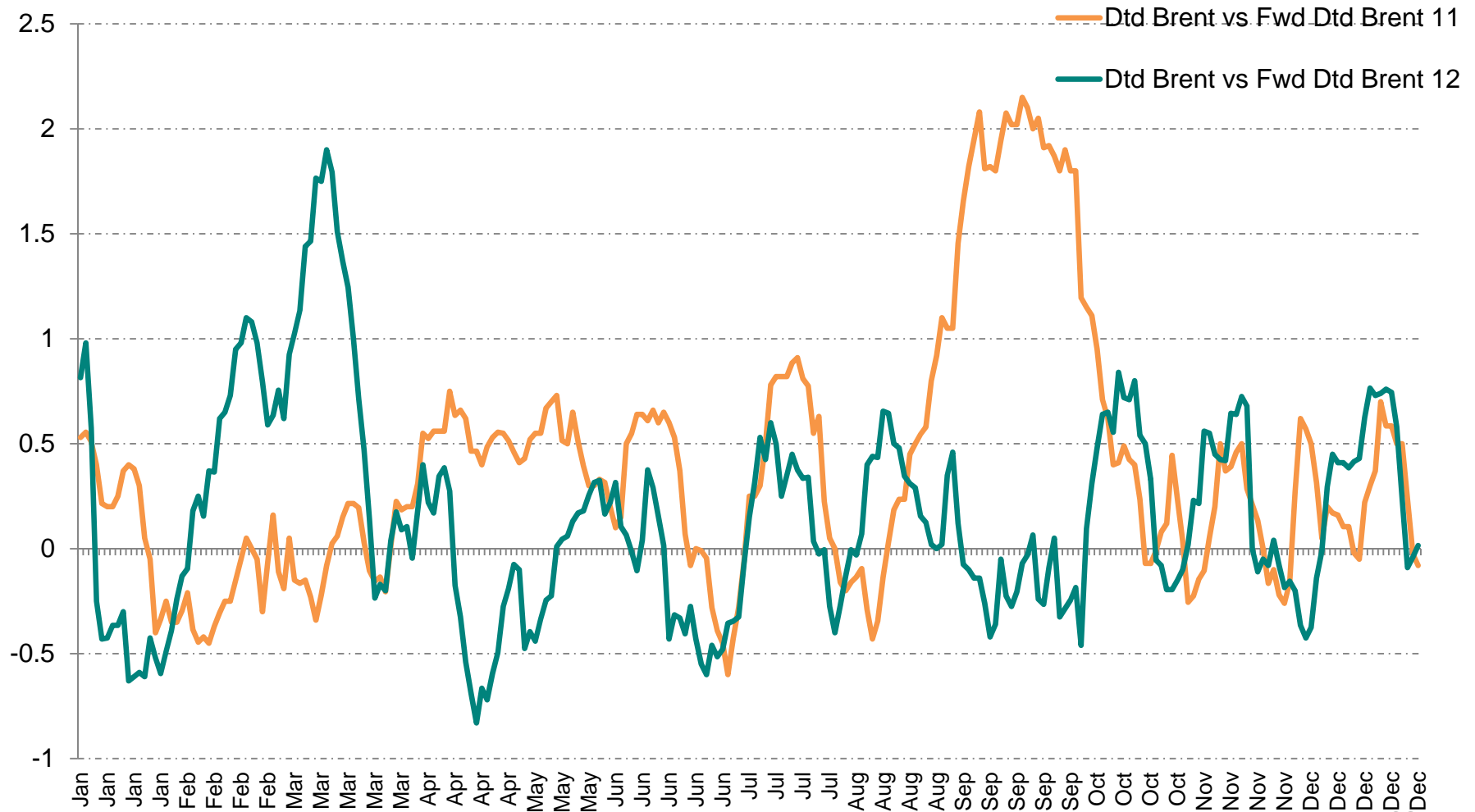
Changes Should Maintain the Market Balance



Escalators Would Apply to High-Value BFOE Crudes



Dated Brent Differentials



Platts Proposes to Launch Escalators From June

- Subscriber note: Platts proposes to launch Oseberg, Ekofisk escalators for June Brent BFOE
- Platts proposes to introduce price escalators reflecting quality premiums for Oseberg and Ekofisk crude oils in its North Sea Dated Brent, cash Brent (BFOE) and related assessment processes for cargoes loading from June 2013 onwards. Following an extensive period of bilateral engagement with participants in the marketplace, public forums held in London last year and after reviewing public proposals, Platts proposes to publish at the beginning of each month a set of escalators for cargoes loading the following month (month after). Escalators would be paid by buyer to seller for nomination and delivery of Oseberg and Ekofisk into a physical BFOE transaction. The escalators would be considered in the assessment process for Dated Brent and related instruments as well. No escalator is contemplated for Brent or Forties.
- Oseberg and Ekofisk escalators would be established by observing the net price differences between these typically premium grades and the most competitive grade of crude among Brent, Forties, Oseberg and Ekofisk during the full month prior to announcement. Escalators for Oseberg and Ekofisk would be published at 50% of the observed premiums for those two crudes to the most competitive BFOE crude oil. No escalator would be announced if the observed price difference between the grades is less than 50 cents/barrel.

Escalator Example

- As an example, under this proposal Platts would observe price differences between the crude grades during the month of April, and announce Oseberg and Ekofisk escalators on the first business day of May, for cargoes loading in June. This proposed calendar aligns with typical trading practices, where June cargoes are primarily traded in the month of May. Platts is also considering a mid- and end-year review of escalators to publicly analyze, review and address any application issues.
- Platts will review all comments received up to March 10, 2013, and create a website repository for those wishing to submit written comments for public view. Please send all comments and queries to europa_crude@platts.com and pricegroup@platts.com, with a clear indication if comments are intended for publication by Platts for public review, if desired.

New Brent Architecture in 2015

- A further adaptation will be necessary
- January 2015 could see a full-month prior Brent nomination process (M-2)
- Instruments would expire on the month's last working day
- ICE has announced similar timelines for Brent NX

Month-ahead Brent From March 2015

- Subscriber note: Platts confirms plans for month-ahead Brent from March 2015
- Following continued feedback and engagement since 2011, Platts confirms its plans to move in March 2015 to full month-ahead assessment processes for its North Sea Dated Brent, cash Brent (BFOE) and related markets. Platts has been consulting with the industry over the need to modify calendars from the existing 25-day structure to a full month-ahead structure, to reflect a continued trend towards farther-forward trading in the physical markets.
- The affirmation of a month ahead timing structure means that March cash Brent 2015 BFOE would last be assessed on January 30, 2015. Dated cargoes would follow the same structure, with Platts considering in its assessment process dated cargoes loading in March 2015 onwards where the seller would provide the buyer with a full month notice of the loading laycan. Please send all comments to europa_crude@platts.com and pricegroup@platts.com

Consultation Opens on Possible 45-day Brent

- Subscriber note: Platts opens consultation on possible 45-day structure for Brent from 2020
- Platts requests feedback on a proposal to potentially adjust the timings reflected in its Brent crude oil assessment processes to a 45-days-ahead structure in the year 2020. Platts currently assesses Dated Brent and related instruments using a 25-day structure, and has confirmed that this will evolve to a full month-ahead structure in 2015. These developments, as well as the proposed move to a 45-day structure, align with the evolution of North Sea supply trends towards the trading of cargoes with longer lead times ahead of loading.
- Platts recognizes the need to provide clarity in various long-term calendars as Brent liquidity extends further into the future. Please send all comments to europa_crude@platts.com and pricegroup@platts.com

Move to a 20-45 Day Assessment Period For Dated Brent

Market consultation:

To extend Dated Brent assessment period to 20-45 days forward in 2018-2020?



We want your feedback
Email: oil@platts.com and
pricegroup@platts.com





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