Interconnected Energy Systems
S&P Global Platts Analytics

JODI 14th International Conference

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S&P Global Platts Analytics today is …..

More Integrated

Crude Oil

Natural Gas

Electric Power

Natural Gas Liquids (NGLS)

Metals

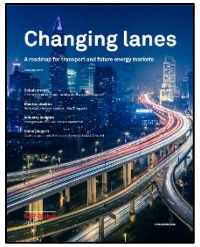
Agriculture

Petro-chemicals

Shipping

Coal

With more global coverage



and more Innovative.

Satellite data

Weather information

Well monitoring

Ship Tracking

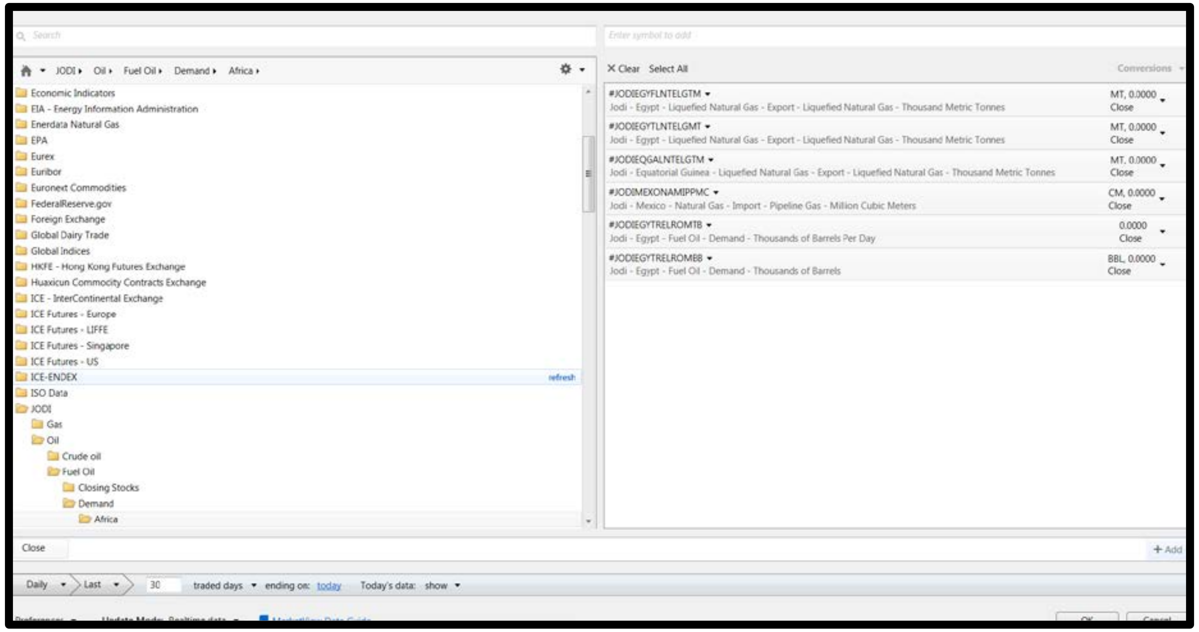
Customs Data

Machine Learning

How are Platts Analytics analysts utilizing JODI data?

Products Utilizing JODI Data

- Crude Commodity Flow dataset
- World Energy Demand Model
- Short Term Energy Demand
- Country-level gas balances
- Scenario Planning Service



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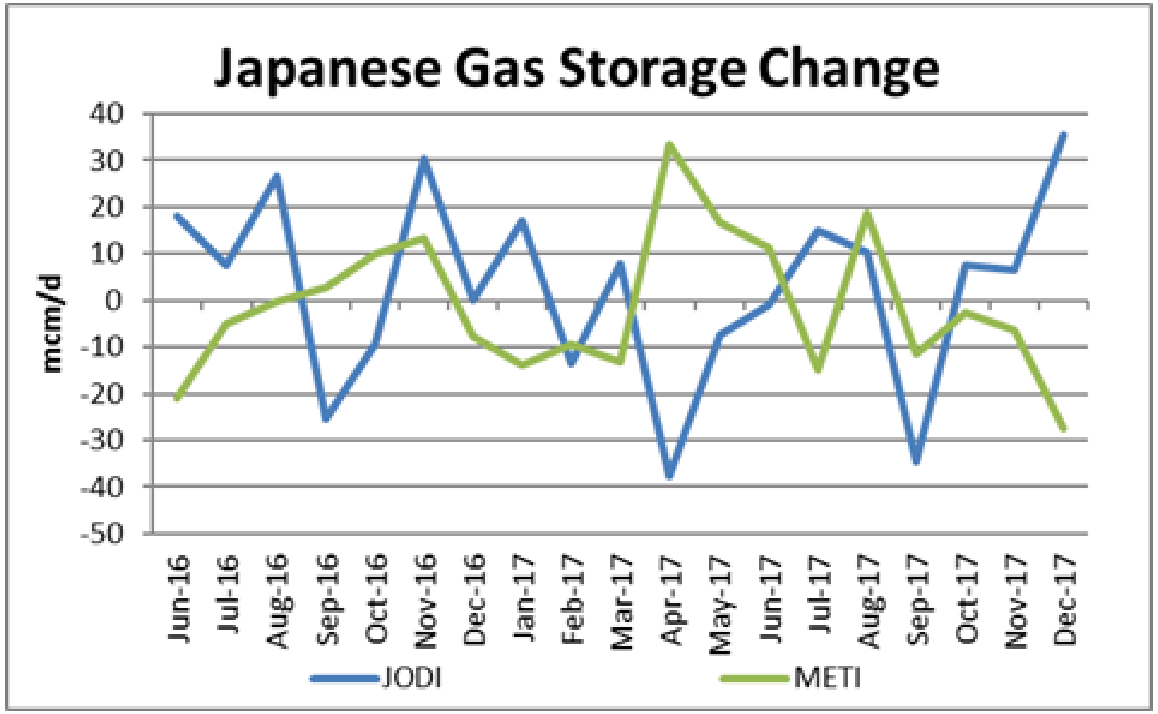
How can JODI further improve the confidence-in and use of JODI data?

Metrics Watched by Platts Analytics

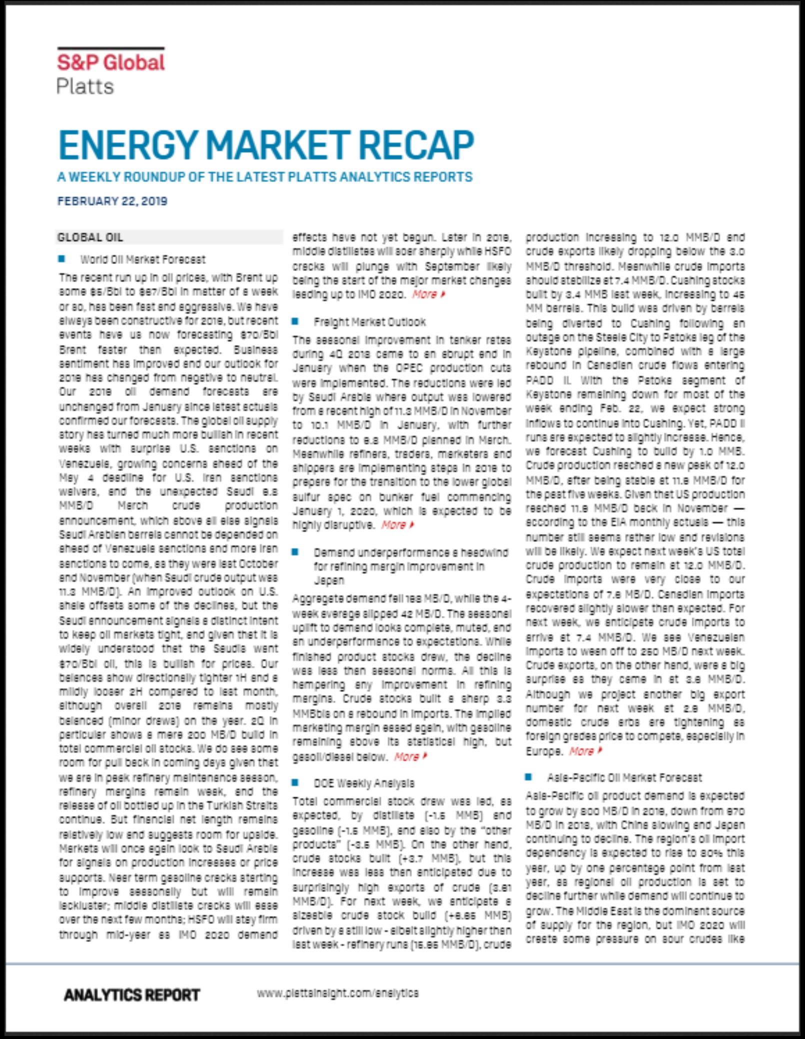
- **Consistency**: JODI figures consistent with official government figures

- **Frequency**: Reliable Reporting Intervals

- **Granularity**: Stretch further downstream and into power sector



Innovative market insights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ENERGY MARKET RECAP

A WEEKLY ROUNDUP OF THE LATEST PLATTS ANALYTICS REPORTS

FEBRUARY 22, 2019

GLOBAL OIL

■ World Oil Market Forecast

The recent run up in oil prices, with Brent up some $5/Bbl to $67/Bbl in matter of a week or so, has been fast and aggressive. We have always been constructive for 2019, but recent events have us now forecasting $70/Bbl Brent faster than expected. Business sentiment has improved and our outlook for 2019 has changed from negative to neutral. Our 2019 oil demand forecasts are unchanged from January since latest actuals confirmed our forecasts. The global oil supply story has turned much more bullish in recent weeks with surprise U.S. sanctions on Venezuela, growing concerns ahead of the May 4 deadline for U.S. Iran sanctions waivers, and the unexpected Saudi 9.8 MMB/D March crude production announcement, which above all else signals Saudi Arabian barrels cannot be depended on ahead of Venezuela sanctions and more Iran sanctions to come, as they were last October and November (when Saudi crude output was 11.3 MMB/D). An improved outlook on U.S. shale offsets some of the declines, but the Saudi announcement signals a distinct intent to keep oil markets tight, and given that it is widely understood that the Saudis want $70/Bbl oil, this is bullish for prices. Our balances show directionally tighter 1H and a mildly looser 2H compared to last month, although overall 2019 remains mostly balanced (minor draws) on the year. 2Q in particular shows a mere 200 MB/D build in total commercial oil stocks. We do see some room for pull back in coming days given that we are in peak refinery maintenance season, refinery margins remain weak, and the release of oil bottled up in the Turkish Straits continue. But financial net length remains relatively low and suggests room for upside. Markets will once again look to Saudi Arabia for signals on production increases or price supports. Near term gasoline cracks starting to improve seasonally but will remain lackluster; middle distillate cracks will ease over the next few months; HSFO will stay firm through mid-year as IMO 2020 demand effects have not yet begun. Later in 2019, middle distillates will soar sharply while HSFO cracks will plunge with September likely being the start of the major market changes leading up to IMO 2020. More ▸

■ Freight Market Outlook

The seasonal improvement in tanker rates during 4Q 2018 came to an abrupt end in January when the OPEC production cuts were implemented. The reductions were led by Saudi Arabia where output was lowered from a recent high of 11.3 MMB/D in November to 10.1 MMB/D in January, with further reductions to 9.8 MMB/D planned in March. Meanwhile refiners, traders, marketers and shippers are implementing steps in 2019 to prepare for the transition to the lower global sulfur spec on bunker fuel commencing January 1, 2020, which is expected to be highly disruptive. More ▸

■ Demand underperformance a headwind for refining margin improvement in Japan

Aggregate demand fell 188 MB/D, while the 4-week average slipped 42 MB/D. The seasonal uplift to demand looks complete, muted, and an underperformance to expectations. While finished product stocks drew, the decline was less than seasonal norms. All this is hampering any improvement in refining margins. Crude stocks built a sharp 3.3 MMBbls on a rebound in imports. The implied marketing margin eased again, with gasoline remaining above its statistical high, but gasoil/diesel below. More ▸

■ DOE Weekly Analysis

Total commercial stock draw was led, as expected, by distillate (-1.5 MMB) and gasoline (-1.5 MMB), and also by the "other products" (-3.5 MMB). On the other hand, crude stocks built (+3.7 MMB), but this increase was less than anticipated due to surprisingly high exports of crude (3.61 MMB/D). For next week, we anticipate a sizeable crude stock build (+6.85 MMB) driven by a still low - albeit slightly higher than last week - refinery runs (15.85 MMB/D), crude production increasing to 12.0 MMB/D and crude exports likely dropping below the 3.0 MMB/D threshold. Meanwhile crude imports should stabilize at 7.4 MMB/D. Cushing stocks built by 3.4 MMB last week, increasing to 45 MM barrels. This build was driven by barrels being diverted to Cushing following an outage on the Steele City to Patoka leg of the Keystone pipeline, combined with a large rebound in Canadian crude flows entering PADD II. With the Patoka segment of Keystone remaining down for most of the week ending Feb. 22, we expect strong inflows to continue into Cushing. Yet, PADD II runs are expected to slightly increase. Hence, we forecast Cushing to build by 1.0 MMB. Crude production reached a new peak of 12.0 MMB/D, after being stable at 11.9 MMB/D for the past five weeks. Given that US production reached 11.9 MMB/D back in November — according to the EIA monthly actuals — this number still seems rather low and revisions will be likely. We expect next week's US total crude production to remain at 12.0 MMB/D. Crude imports were very close to our expectations of 7.6 MB/D. Canadian imports recovered slightly slower than expected. For next week, we anticipate crude imports to arrive at 7.4 MMB/D. We see Venezuelan imports to wean off to 250 MB/D next week. Crude exports, on the other hand, were a big surprise as they came in at 3.6 MMB/D. Although we project another big export number for next week at 2.9 MMB/D, domestic crude arbs are tightening as foreign grades price to compete, especially in Europe. More ▸

■ Asia-Pacific Oil Market Forecast

Asia-Pacific oil product demand is expected to grow by 800 MB/D in 2019, down from 870 MB/D in 2018, with China slowing and Japan continuing to decline. The region's oil import dependency is expected to rise to 80% this year, up by one percentage point from last year, as regional oil production is set to decline further while demand will continue to grow. The Middle East is the dominant source of supply for the region, but IMO 2020 will create some pressure on sour crudes like

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