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MARKET ISSUES: OIL

Dated Brent: The Pricing Benchmark for Asia-Pacific Sweet Crude Oil

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Foreword by
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Platts Dated Brent is the true, recognized barometer of global sweet crude oil economics. For this reason it is widely used as a key macro indicator for global economic growth.

As the most broadly accepted global crude oil benchmark, Dated Brent always faces intense scrutiny from producers, end-users, traders, governments and financial market regulators who are all keen that this published benchmark price fully converges with market price. In light of this responsibility, Platts continues to devote watchful attention and thought leadership to maintain and evolve the systems supporting the price assessment of the Dated Brent benchmark.

At the same time that other traditional sweet crude benchmarks used in the US and Asia are declining in accuracy and usefulness, Platts Dated Brent is growing in its breadth and depth of contractual usage around the world. Dated Brent is increasingly being used to determine the value of sweet crude in the North Sea, West Africa, the Mediterranean, South and Latin America, Canada and North America, Central Asia and in Russia. More than 60% of the world's internationally traded crude oil is priced against Dated Brent.

In the last two years, many producers and consumers in Australasia and Asia have in turn adopted Platts Dated Brent for a greater share of physical cargo pricing, as regional benchmarks fall into disrepair. The Dated Brent benchmark has thus taken on an increasingly significant role in the determination of oil prices in the entire Asia-Pacific region. This position paper examines and explains the reasons for this ongoing and accelerating trend.

WHAT IS DATED BRENT?

Platts Dated Brent is the recognized benchmark price assessment of the spot market value of physical cargoes of North Sea light sweet crude oil. As a consistent underlying price it supports a broad range of derivative instruments accessible via futures exchanges and in over-the-counter markets worldwide. Dated Brent and its derivatives are used by active market participants to hedge their daily, short-term and long-term market price risk for crude oil, as well as for correlated refined oil products, natural gas, gas liquids and condensates.

The term 'Dated' refers to the physical cargo price for North Sea Brent light crude which has been allocated a specific forward loading date. North Sea light sweet crude oil grades Forties, Oseberg and Ekofisk are also deliverable into the Dated Brent contract, under a mechanism known as alternative delivery.

The combination of these four alternatively deliverable grades Brent, Forties, Ekofisk and Oseberg is known as BFOE. This mechanism gives Dated Brent a robust supply of approximately 1.4 million barrels per day of production, which provides the price benchmark with a sustainable volume of tradable crude oil for its own protection from undue market influence.

DOES DATED BRENT REPRESENT ONLY NORTH SEA ECONOMICS?

Producers and buyers of Dated Brent are unconstrained by geography or logistics to compete freely for the marginal price of North Sea light crude. Open international trade flows of crude into and out of the North Sea allow the Dated Brent benchmark to express the true dynamics of crude oil supply and demand in the Atlantic basin.

When the price of Dated Brent is relatively high, the North Sea attracts grades of sweet crude oil from West Africa and the Mediterranean Sea; and when the price is relatively low, cargoes of sweet crude oil flow out of the North Sea basin to the United States. In this way, Dated Brent is a true barometer of global sweet crude economics, and represents the global close of oil markets with a European timestamp.

In order to account for the time (and therefore price) difference between a European timestamp for Dated Brent and trading of regional Asia-Pacific crude grades during Asian hours, Platts also publishes an Asian Dated Brent price with a timestamp at Asian market close at 0930 hours GMT. Platts also publishes all of its regional Asia-Pacific sweet crude assessments at a differential (premium or discount) to Asian Dated Brent (ADB), for relative comparison. These differentials to Asian Dated Brent rise and fall based on Asian fundamentals of supply and demand, and are also influenced by competition from Dated Brent-priced West African sweet crudes entering the region.

WHY IS THE ASIA-PACIFIC REGION TURNING TO DATED BRENT FOR PRICING OF CRUDE OIL?

Fundamental forces of physical supply and demand underpin this change.

a) Asia-Pacific supply growth of locally-produced crude oil is lagging increasingly the growth rates of demand from fast developing and developed countries in the region. The Asia-Pacific region is becoming increasingly net short of crude oil (about 17 million barrels per day and climbing), requiring greater imports of crude which are already priced to Dated Brent, such as those from West Africa, North Africa and Central Asia.

b) The volume of crude oil produced from ageing Asia-Pacific oil fields is in natural decline.

This particular includes Asia's traditional large crude fields Tapis (light sweet crude produced in Malaysia), Minas and Duri (medium and heavy sweet crude produced in Indonesia) which had been used as sweet crude pricing benchmarks for the Asia-Pacific region.

c) There are currently no new sources of sweet crude oil in the Asia-Pacific region with enough volume to underpin a viable price benchmark.

This structural shift has encouraged the following evolution in decision-making amongst active crude oil buyers and sellers in the region:

a) Asia-Pacific countries with a declining surplus of locally-produced crude oil (such as Indonesia, Malaysia and Vietnam) are keeping more crude oil captively in their domestic refinery systems rather than releasing the oil for export under spot or term sale contracts.

b) Benchmark crude grades like Tapis, Minas and Duri with diminishing spot cargo availability have lost their usefulness as accurate or reasonable barometers of spot market prices for similar sweet crude grades in the region.

c) In the absence of new sweet crude oil fields or reliable pricing instruments which can serve to reflect the economics of Asia-Pacific spot crude prices, the global reference of Dated Brent has been considered and adopted.

WHY ISN'T ASIA-PACIFIC CONTINUING TO USE LOCAL, TRADITIONAL SWEET CRUDE PRICE BENCHMARKS?

Historically, the pricing of sweet crude oil delivered to refineries in Asia has been dominated by local benchmarks.

Malaysia's Tapis crude oil, from the South China Sea offshore Malaysia's Terengganu state, has been a widely used benchmark for light (high API rating), sweet (low sulfur) crudes and condensates produced in the Asia-Pacific region.

Meanwhile, waxy Indonesian Minas ('Sumatran Light') and viscous Duri ('Sumatran Heavy') from Dumai terminal have served respectively as benchmarks for medium, sweet crudes, and for heavy, sweet crudes produced in the Asia-Pacific region.

But in recent years, production has dwindled from these former giants. Tapis production has shrunk from 360,000 b/d (or 18 cargoes equivalent of maximum 600,000 barrels) to around 280,000 b/d currently; Minas from a peak of around 420,000 b/d (or 18 cargoes equivalent of maximum 700,000 barrels) to around 200,000 b/d currently; and Duri from a peak of 325,000 barrels per day (or 14 cargoes equivalent of maximum 700,000 barrels) to around 200,000 b/d currently.

More critically for the determination of prices, the number of cargoes available for trading in the spot market has dwindled as production has shrunk, and as producers withhold more volume for their own refinery systems. Currently, only one 600,000 cargo of Tapis is exported into the spot market each month. Similarly, only 300,000 barrels of Minas is currently made available each month in the spot market. A total 2 million barrels of Duri is still available each month for spot trade, equivalent to a third of production.

The absence of cargoes available for spot trade, on most of the twenty or more days of any given calendar month, makes objective price determination of Tapis, Minas or Duri very challenging for market participants. Since it is difficult to observe the spot price of these grades even for their own assessment of value, they are not suitable to be chosen as representative prices (benchmarks) for other sweet crudes.

CAN THE VOLUME UNDERPINNING TRADITIONAL ASIAN SWEET BENCHMARKS BE RESTORED?

The production of crude from Tapis, Minas or Duri fields is in natural decline. Without renewed investment in field exploration and production, or commingling of nearby fields of equivalent quality, this trend will continue.

In some cases, the use of similar crude oils for alternative delivery against a benchmark can make up for declines in production of the brand-name crude oil itself. This has been demonstrated as a functional pricing model in the case of Dated Brent (adding Forties, Oseberg and Ekofisk crudes) and for Dubai (adding Oman and Upper Zakum crudes). For alternative delivery, added grades are of equivalent quality (usually superior to serve as a safety valve against determined buying of the base grade), nearby location (to reduce price distortions from freight differences) and of significant volume (to make a meaningful difference to spot market testing of benchmark grade availability).

However, in Asia-Pacific, there are no grades which have all the characteristics of similar quality, proximity and significant spot volume, to offer reasonable alternative deliverables for the old benchmarks of Tapis, Minas and Duri. Either the alternatives are too different in quality (such as Vietnamese burning grades once mooted as a cap to Minas), or too far away (such as Australian light sweet grades once considered as a cap to Tapis, or West African medium sweet grades once considered as a cap to Minas, or east Russian grades such as Vityaz, Sokol or ESPO), or of insufficient spot volume (such as similar sweet grades from many small fields in Malaysia and Indonesia, as a potential support for Tapis or Minas).

In the absence of short-term volume support from alternative grades, and in the knowledge of inevitable long-term demise of Tapis, Minas and Duri, these Asia-Pacific sweet crude benchmarks have naturally deteriorated as meaningful benchmarks for other regionally produced sweet crude grades. In lieu of viable local alternatives, producers, refiners and traders in the marketplace have begun to allocate an increasing proportion of their pricing exposure to European light sweet benchmark Dated Brent as a result.

HOW EXTENSIVELY AND HOW FAST IS DATED BRENT BEING ADOPTED IN THE ASIA-PACIFIC REGION?

According to Platts data and a regional survey of contractual usage, nearly 40% of Asia's petroleum consumption, or about 8 million barrels per day, is currently linked to Dated Brent or Brent proxies (such as derivative Brent futures).

Australia's heavy sweet crude fields such as Vincent, Stybarrow, Enfield, Pyrenees and Van Goh, have in the past two years become priced off Dated Brent assessments, instead of Minas or Duri, which would have been the expected benchmarks historically.

Papua New Guinea's Kutubu crude and Australia's Cossack crude have also been sold priced off Dated Brent assessments since May 2010, replacing Tapis which was the traditional sweet crude benchmark. In turn, Australia's North West Shelf Condensate and Bayu Undan Condensate sales have also been priced off Dated Brent assessments.

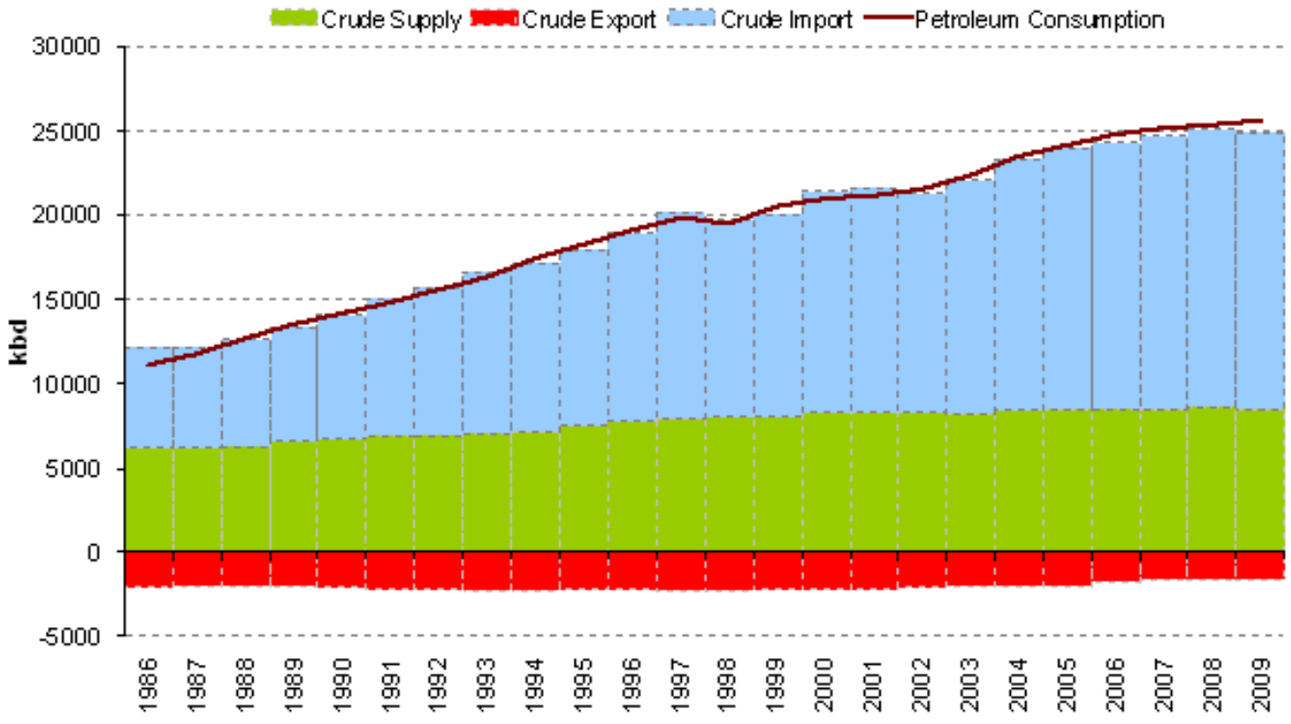
In August 2010, Vietnam started to look to move to a 50-100% Dated Brent allocation in its pricing formula for its spot crude sales. The Vietnamese crude formula for term supply is currently based on Minas, but is currently under review by PetroVietnam for a switch to Dated Brent exclusively, or a combination of Dated Brent with some residual Minas pricing.

In December 2010, Indonesia's Pertamina made its first bid for West African and Asian spot crudes on the Platts Market on Close assessment process on Dated Brent basis. Pertamina's open tender in the MOC over the two days is also believed to be the first open crude purchase tender by any national oil company. Pertamina is also currently reviewing the pricing formula (Indonesian Crude Price of ICP) for its long term crude supply, considering Dated Brent as a substitute for Minas as the new underlying pricing of its many grades on differential basis.

In April 2011, Malaysia's state-owned Petronas confirmed that it will be changing its Petronas Term Price or Official Selling Price (OSP) for the sale and purchase of Malaysian Crude Oil under term contracts, to a Dated Brent-based pricing formula from June 1. Under the new plan, Petronas will price all of its crude grades fully on Platts Dated Brent assessments from June 1, replacing Tapis as the benchmark price.

For more information, please email asia_crude@platts.com and pricegroup@platts.com. A decline in the production from major crude fields coupled with growth in petroleum consumption in the Asia-Pacific region have exacerbated its short oil position and created a requirement for as much volumes in crude imports as the petroleum consumption for the entire North American continent.

Appendix 1: Asia's growing short oil position



Data sources: International Energy Agency, various estimates

A decline in the production from major crude fields coupled with growth in petroleum consumption in the Asia-Pacific region have exacerbated its short oil position and created a requirement for as much volumes in crude imports as the petroleum consumption for the entire North American continent.

Countries and refiners in the Asia-Pacific region now require about 17 million barrels per day of crude oil and condensate imports to meet petroleum products demand in the region. This has necessitated Asia-Pacific refiners to price more crude oil supply using Dated Brent as a reference price.

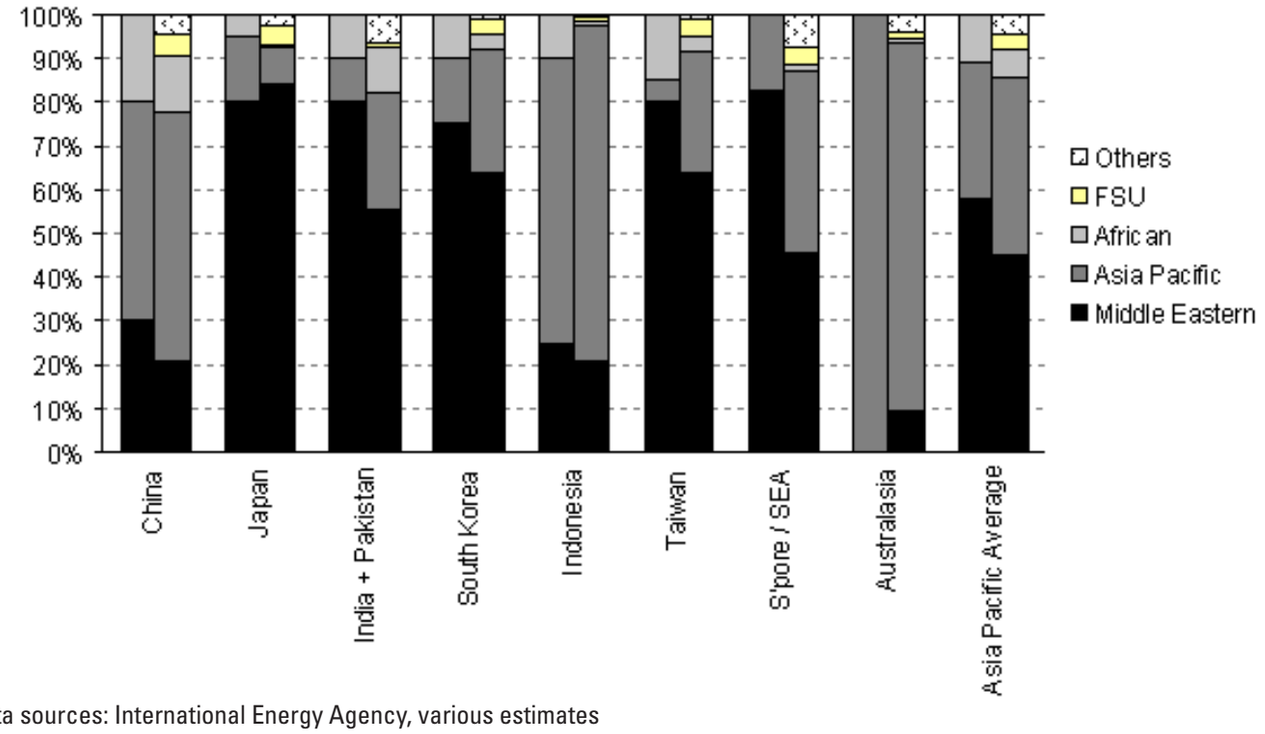
Analysis of the consumption patterns of Asian refiners also reveals an increasing prevalence of Dated Brent pricing, through growing demand for West African sweet crudes, which price almost exclusively off Dated Brent.

Asian refiners combined consume around 1.53 million barrels per day of West African sweet crudes in 2009, accounting for about 7% of the crude slate in Asia.

This pricing trend is particularly a result of China's strong oil demand growth in recent years. China alone accounts for approximately 0.95 million barrels per day of Asia's total 1.53 million barrels per day of West African crude oil demand.

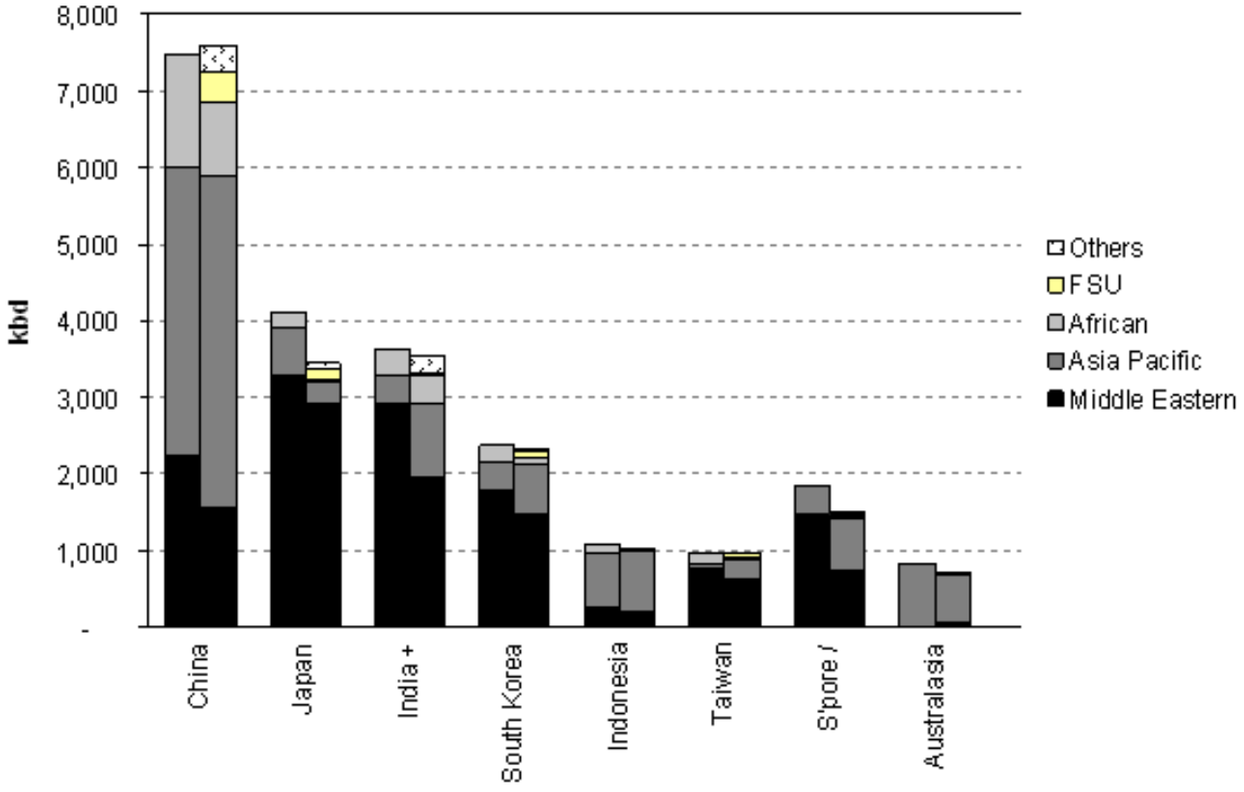
The regulatory changes to use cleaner and less sulfurous petroleum products are also changing the crude appetite in the region. West African and Asian sweet crude grades now make up close to 50% of Asian refinery slate of crudes, displacing some of the historical staple of Middle East crudes which are heavier and more sulfurous.

Appendix 2: Proportion of crudes consumed by refineries in Asia-Pacific (2008 vs 2009)



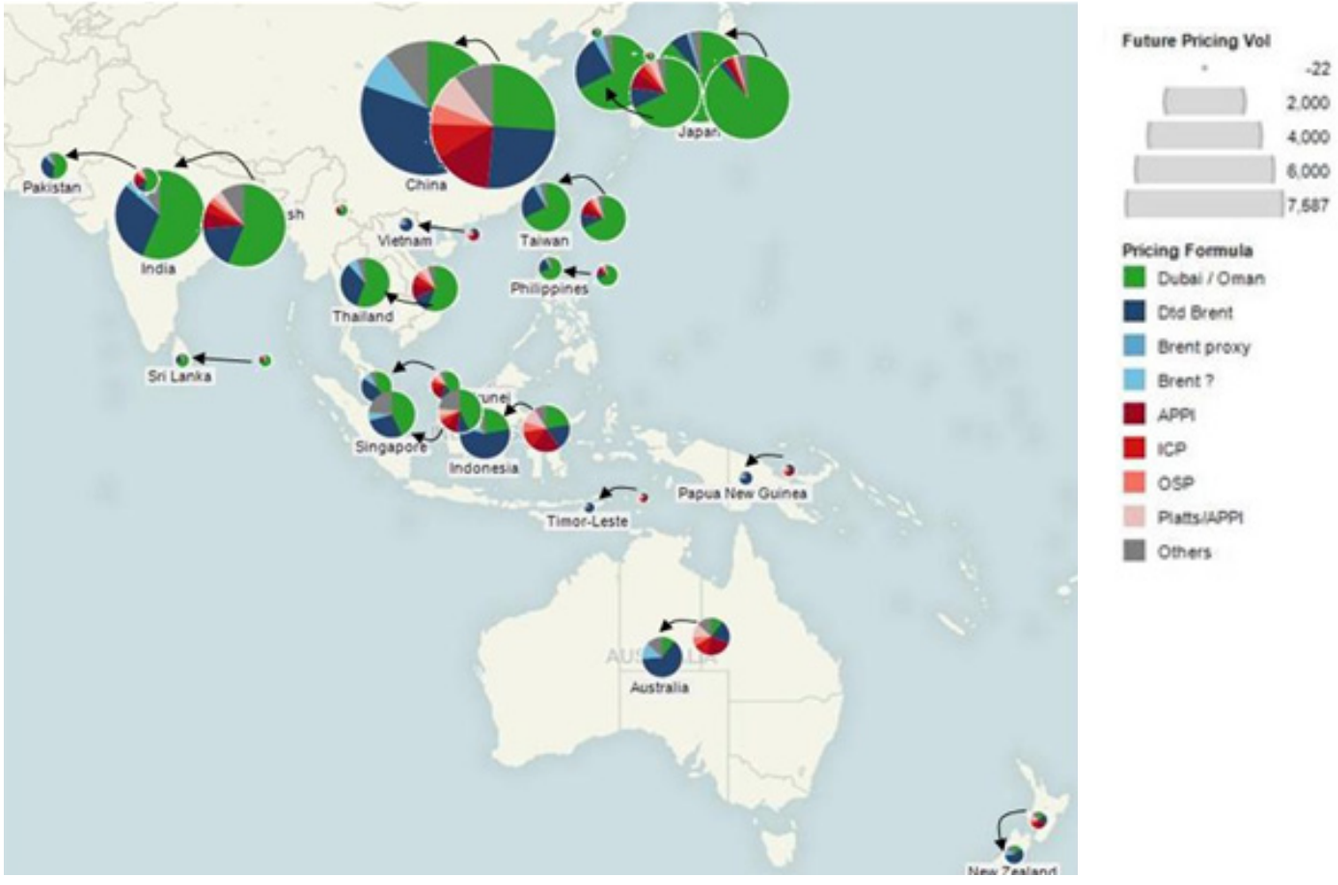
Data sources: International Energy Agency, various estimates

Appendix 3: Volumes and source of crude oil consumed in Asia-Pacific (2008 vs 2009)



Data sources: International Energy Agency, various estimates

Appendix 4: Asia's changing crude diet – a perspective on pricing usage



Data source: Platts

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