



ICIS and the role of a PRA in LNG Market Development

LNG Producer-Consumer Conference

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Ben Wetherall

Head of Gas & LNG, ICIS Energy



ICIS is one of the world's leading price reporting agencies

- ◆ Founded 1979 with a global team of nearly 800 people covering 180 commodities.
- ◆ Experience in bringing price transparency to formative energy markets. Covering LNG markets for over 10 years with Japan DES price history from 2009.
- ◆ The most referenced PRA for gas prices in Europe . many LNG and pipeline contracts referencing ICIS prices.
 - NBP and TTF traded over-the-counter volumes reached 2.25tcm in year to October \pm 6.
 - ICIS gas and LNG market data used by governments, regulators and exchanges across Europe.
- ◆ The biggest specialised global LNG price reporting and analyst team. LNG price indexation, news and analysis from offices in Tokyo, Singapore, Shanghai, London and Houston.



ICIS LNG prices for Japan – EAX or Japan DES

SPOT LNG – EAST ASIA HALF MONTH INPUTS														\$/MMBtu		
	1H Dec 2016	Day on day diff	Data Used	2H Dec 2016	Day on day diff	Data Used	1H Jan 2017	Day on day diff	Data Used	2H Jan 2017	Day on day diff	Data Used	1H Feb 2017	Day on day diff	Data Used	
EAX	7.300	0.050	I	7.300	0.050	I	7.400	0.100	I	7.400	0.100	I	7.300	0.050	I	
Japan	7.300	0.050	I	7.300	0.050	I	7.400	0.100	B	7.400	0.100	B	7.300	0.050	I	
South Korea	7.300	0.050	I	7.300	0.050	I	7.400	0.100	B	7.400	0.100	B	7.300	0.050	I	
China	7.300	0.050	I	7.300	0.050	I	7.400	0.100	I	7.400	0.100	I	7.300	0.050	I	
Taiwan	7.300	0.050	I	7.300	0.050	I	7.400	0.100	I	7.400	0.100	I	7.300	0.050	I	

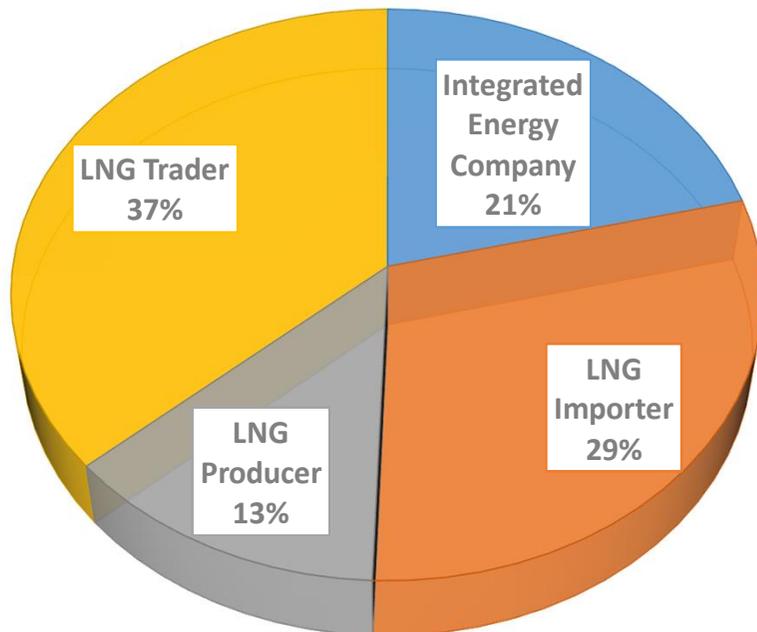
Data used key: B – Bid/offer, T – Transaction, S – Spread, F – Fundamentals, I – Interpolation/extrapolation. The key codes represent the primary data type used to make the assessment.

- ◆ **ICIS East Asia Index (EAX)** - Arithmetic average of the daily, published DES assessments for **China, Japan, South Korea and Taiwan**.
- ◆ Single value published daily for two forward months (half-months and whole months).
 - ◆ EAX price history from June 2010. Japan DES price history from 2009.
 - ◆ Firm bid and offer table published daily for East Asia
 - ◆ We keep internal bid/offer records for all markets

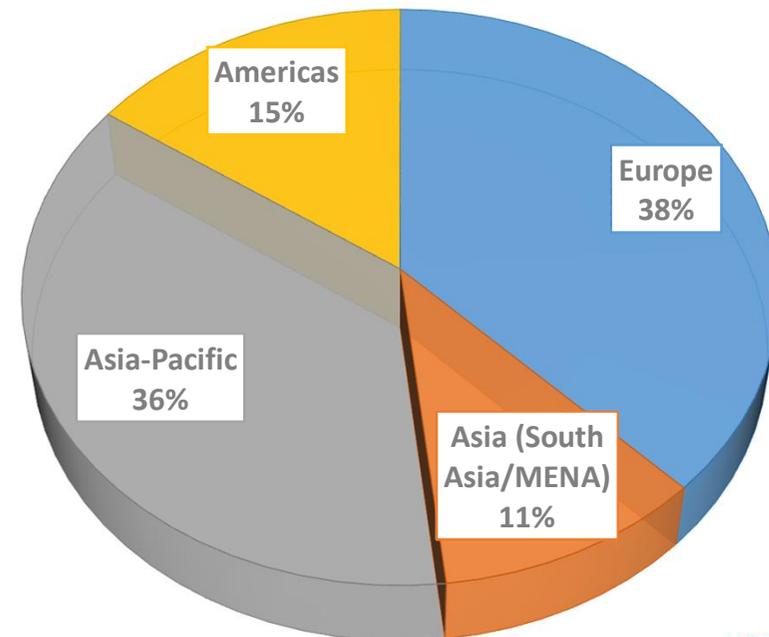
LNG market information sourcing – diverse range of market contributors

ICIS LNG editorial team . 93 different companies directly contributed to LNG price assessment process during October 2016. Many multiple contributors over the course of the month.

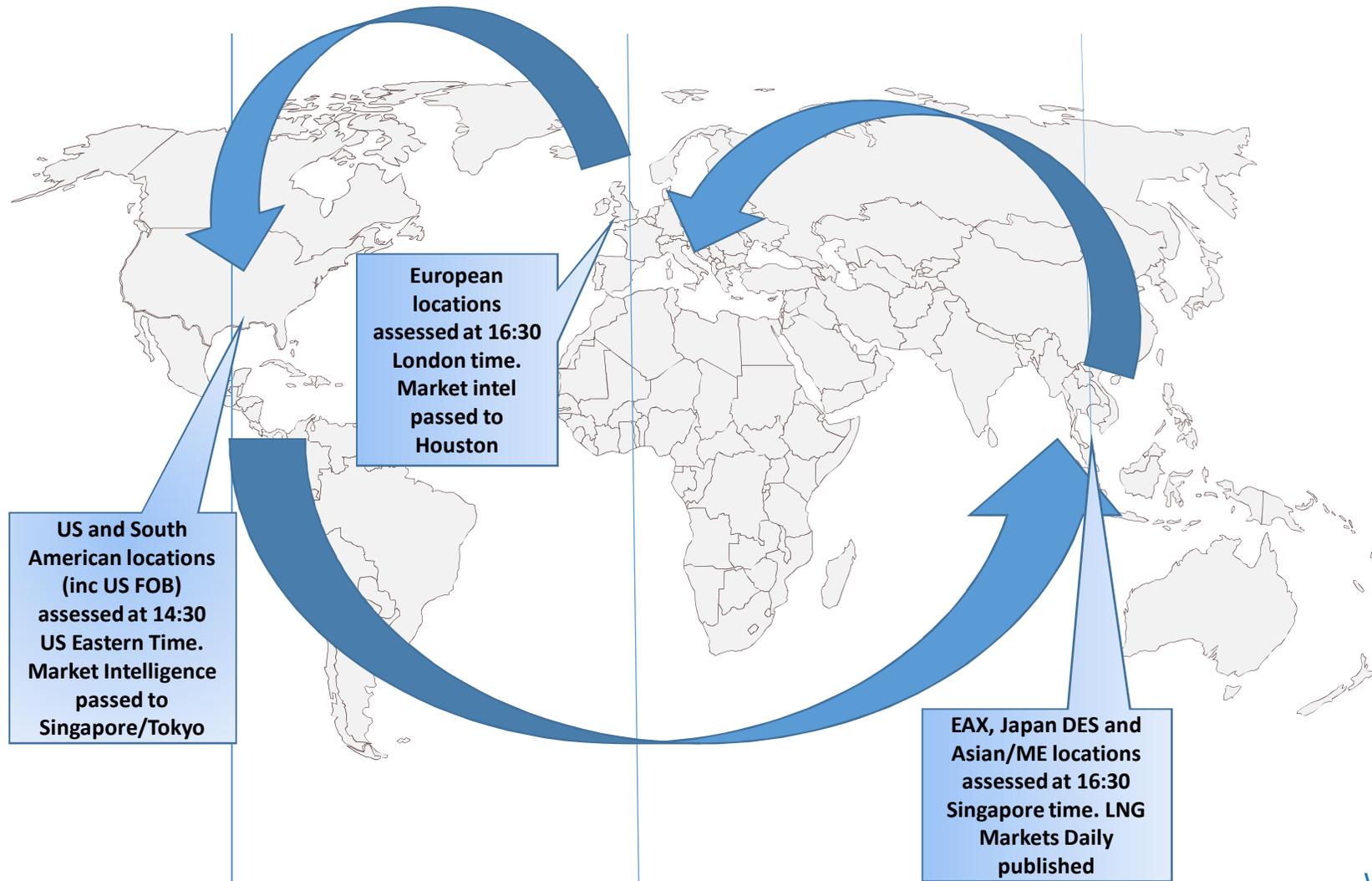
Categorisation of LNG price contributors – October '16



Geographic location by headquartered location – October '16



Real-time global LNG market intelligence and coverage

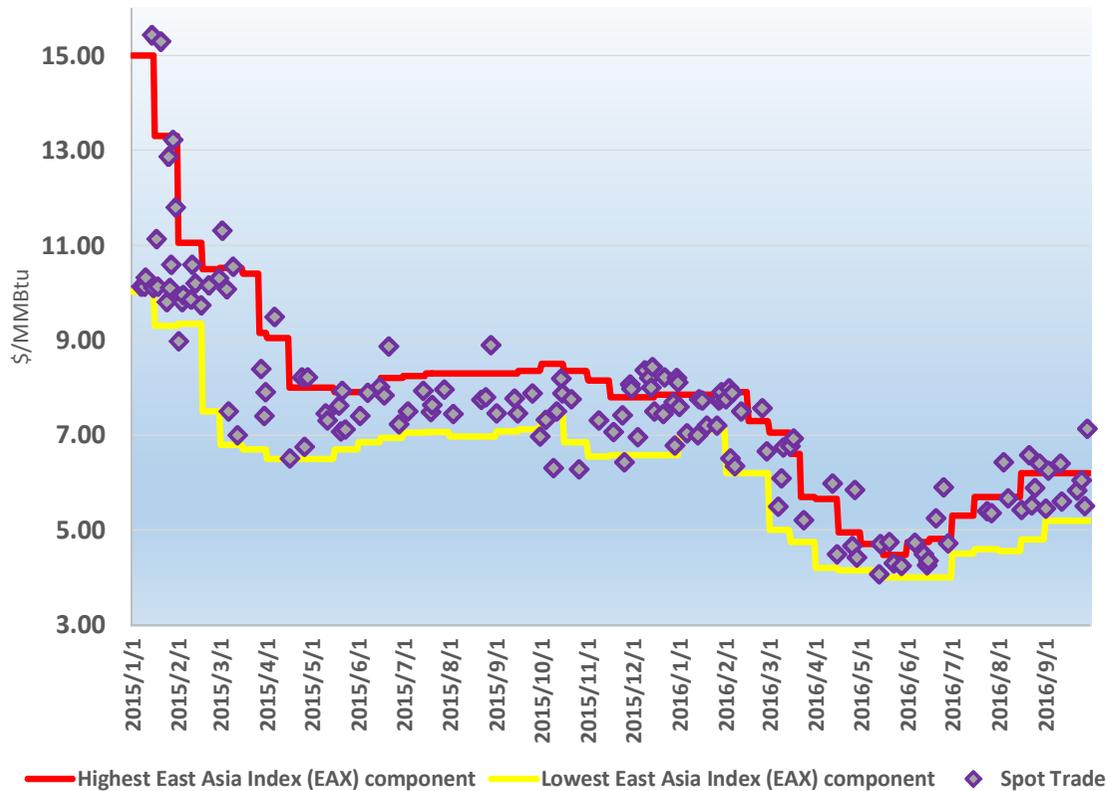


How do you know if we're getting it right?

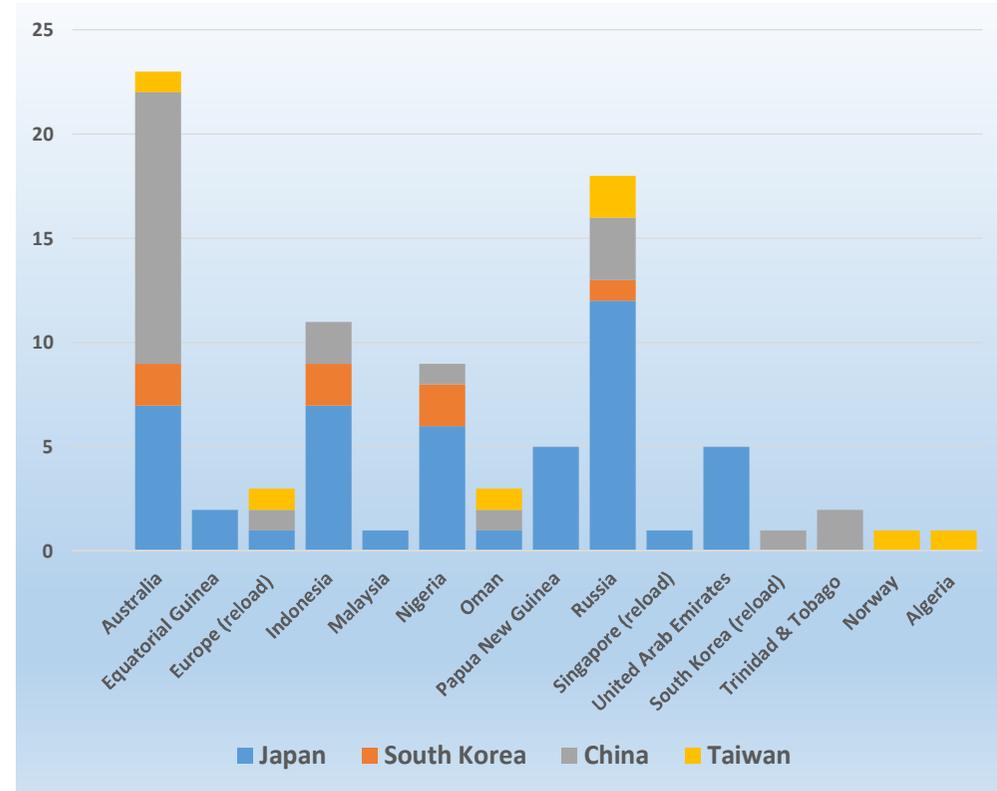
We gather and confirm deals and plot them against our assessments continuously.

LNG editors and analysts use ICIS proprietary real-time market intelligence platform and other supporting data sources to support price assessment process

East Asian spot trade vs EAX January 2015 – October 2016



East Asia 2016 indicative spot cargo deliveries (excl Qatar)

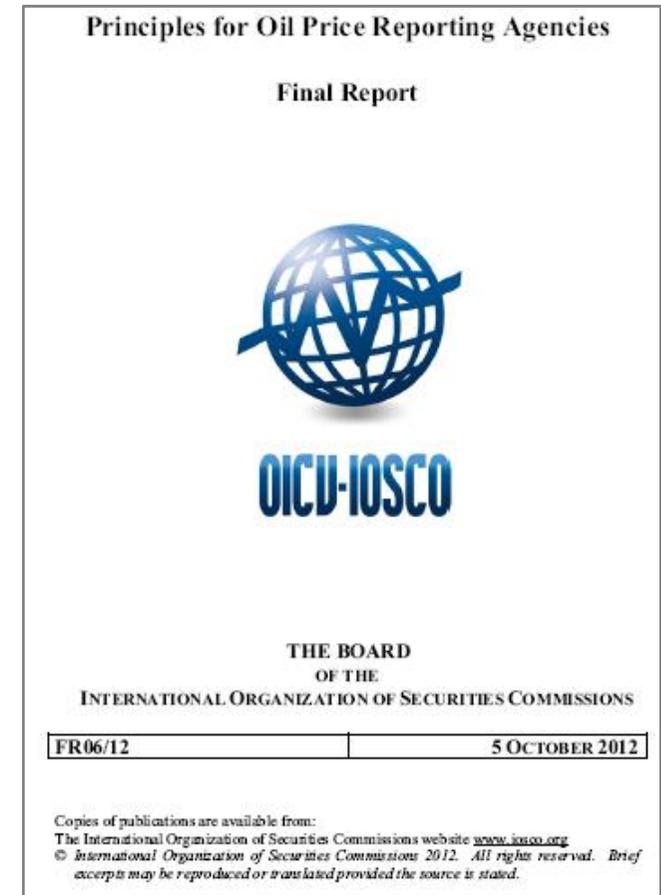


ICIS LNG policies and price assessments comply with IOSCO principles for PRAs

- ✓ **ICIS LNG prices** - successful external audit on compliance with IOSCO principles for LNG for past three years.

Why does the industry index to PRA prices?

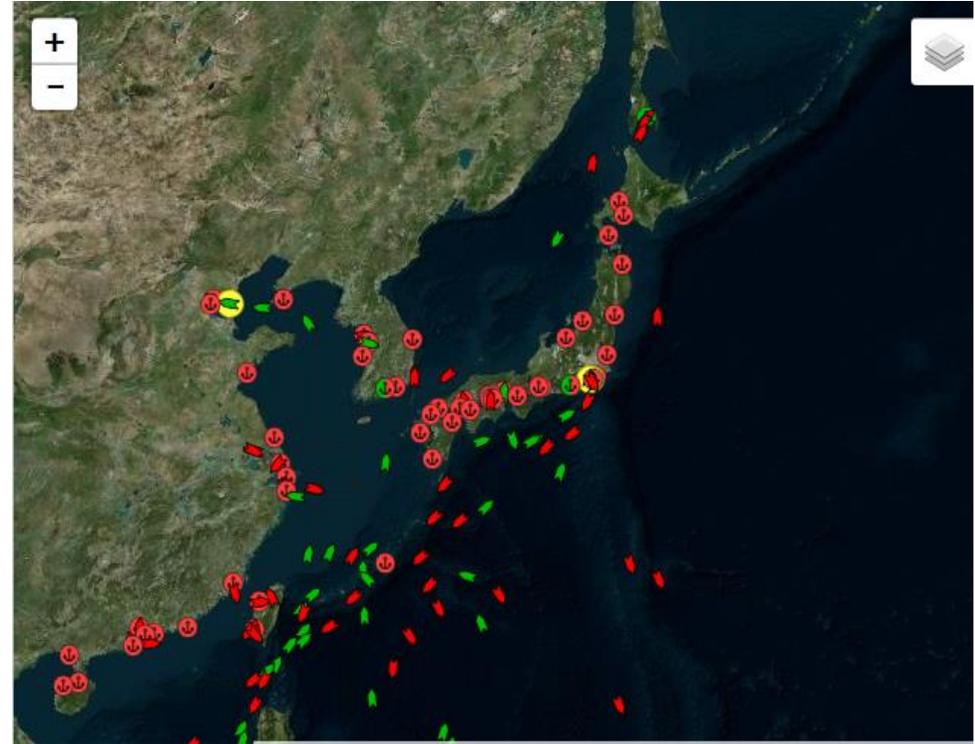
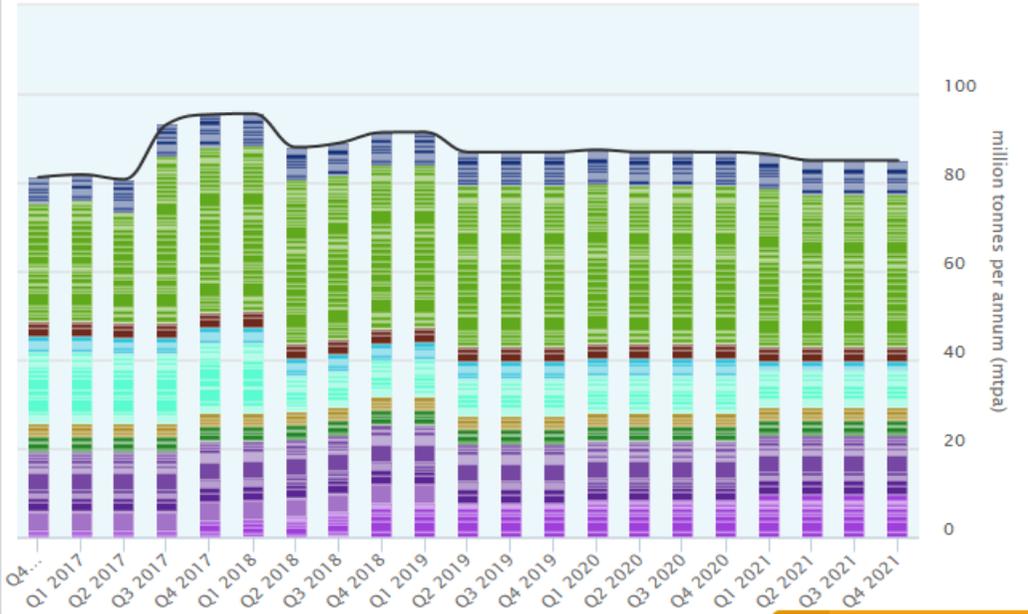
- ✓ **Independent** . with no commercial participation in the market, PRAs are trusted by market participants.
- ✓ **Neutral** . Price reporters take information from the whole market.
- ✓ **Transparent** . All methodologies are made public, as is trades data - bring transparency to formative markets.
- ✓ **Experience** . the major price reporting agencies have been designing methodologies and monitoring markets for decades. They have an open and consultative process for this.



CONTRACTED PORTFOLIO BALANCE

Firm Flexible

Quarterly Yearly



Thank you.....

Ben Wetherall

Head of Gas & LNG

ICIS Energy

+ 44 78 26 89 36 31

ben.wetherall@icis.com