



Global Gas Price Convergence

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#WGC2018 FUELING THE FUTURE



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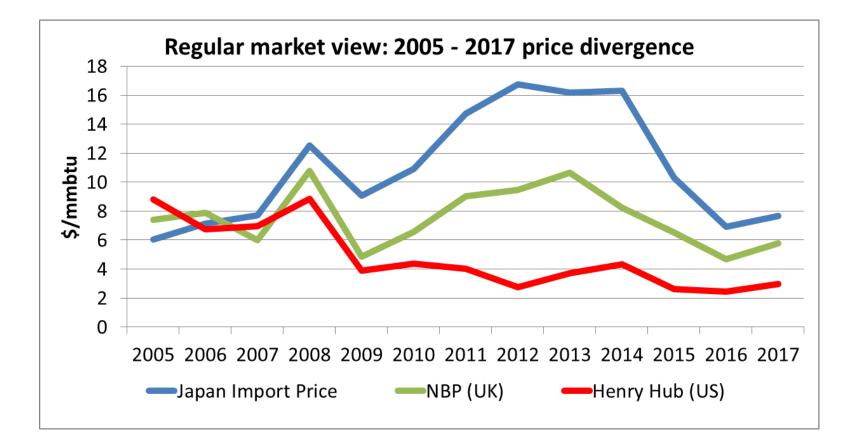
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Conventional view on global gas prices – divergence?





Economic Pricing Theory

Law of one price:

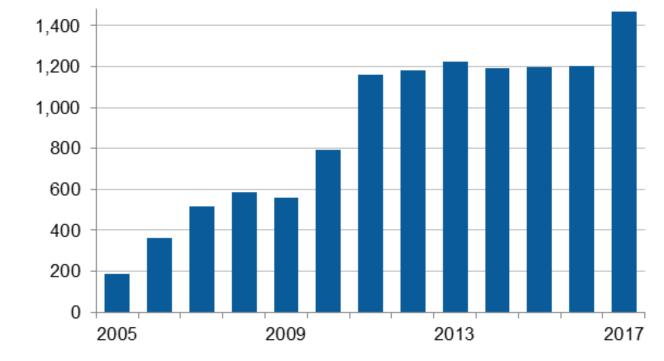
improved markets

more arbitrage

price convergence



Improved gas markets – Increased LNG trade

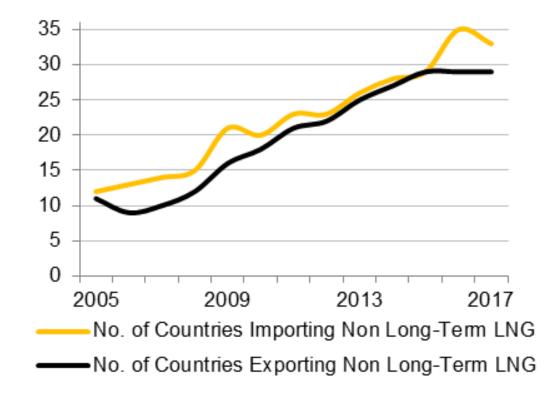


No. of LNG Cargoes Traded (contract duration < 5 years)

#WGC2018 FUELING THE FUTURE No. of Cargoes

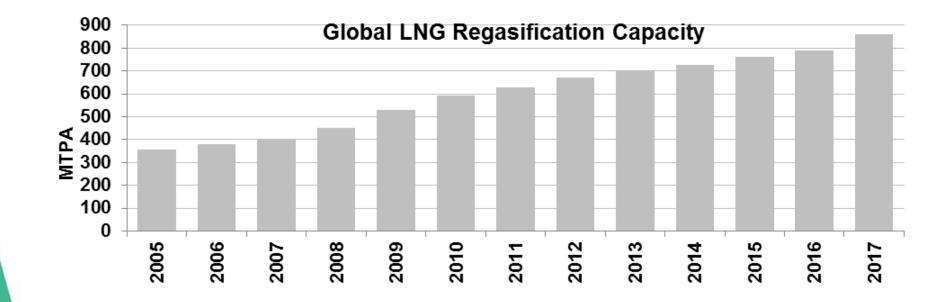


Improved gas markets – Increased number of LNG players



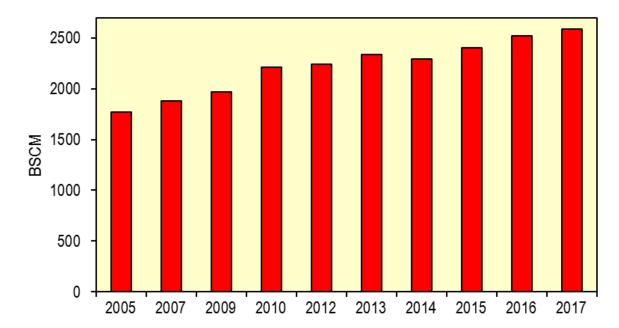


Improved gas markets – Increased global regas capacity





Improved gas markets – Increased market related pricing



Global volumes of market related gas pricing



Research

Conventional market view based on leading regional price benchmarks: price divergence

Expectation based on improved markets: price convergence

Can the IGU Wholesale Gas Price Survey shed more light on this (apparent) contradiction?

IGU Wholesale Gas Price Survey:

- Dataset of 100+ annual prices of countries
- subsets based on import level, pricing mechanism, IGU region



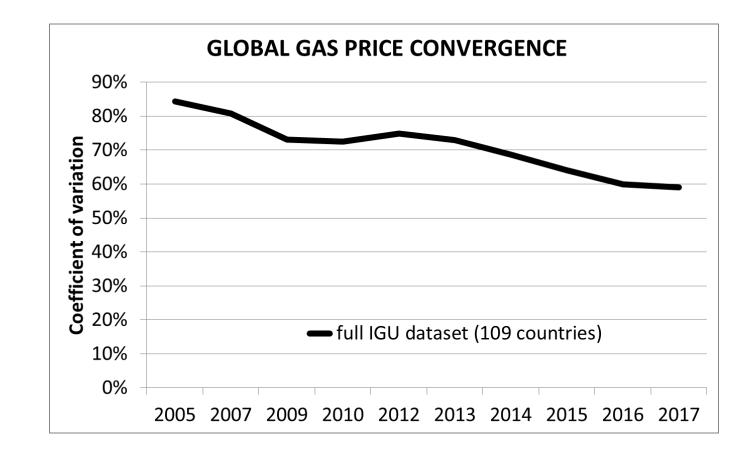
Measuring price convergence

Coefficient of variation:

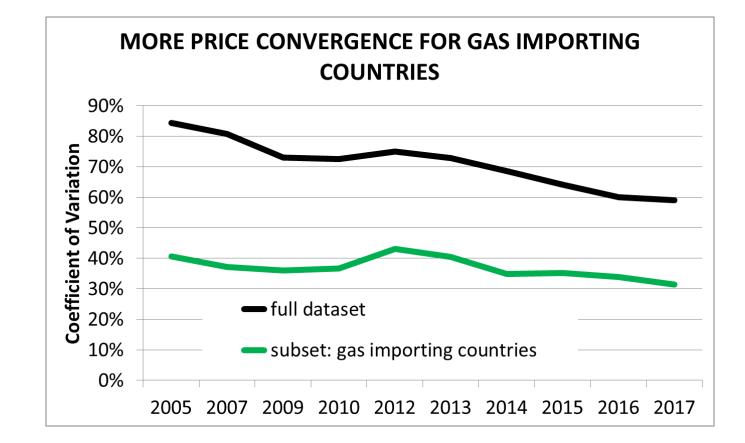
- Standard deviation / mean price
- Limited number of data points (10 years) for a large number of price lines (109 countries)
- Countries are allocated to different subsets with different average gas prices



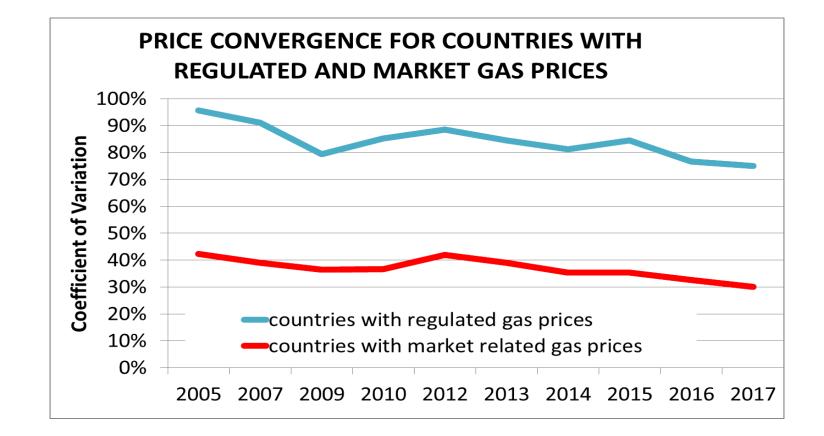
Results



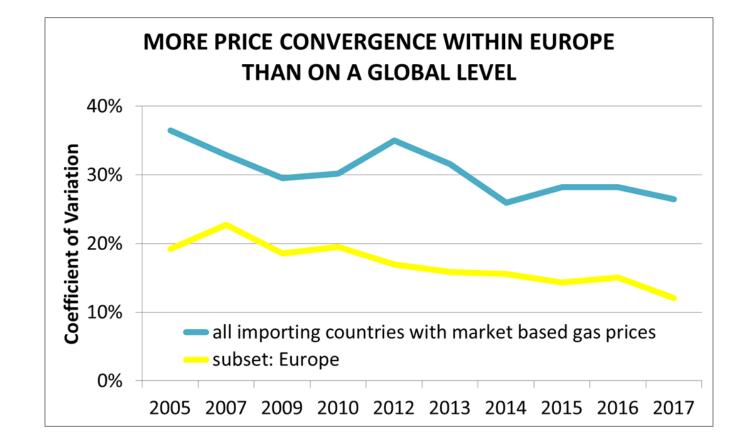




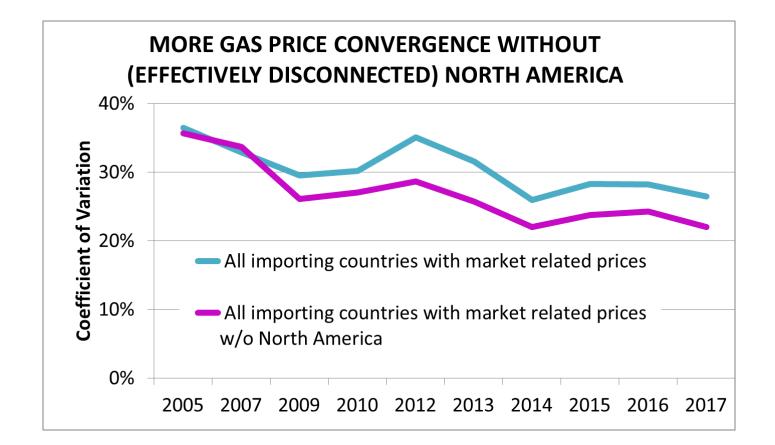














Key Messages

- Global gas prices have been converging since 2005
 - Based on IGU dataset including 100+ countries
 - Measured by Coefficient of Variation
- Improving global gas market
- There is more price convergence for countries:
 - Importing gas
 - With market related prices (especially oil related)
 - Within Europe
 - Outside North America
- On a global level regulated prices are getting more aligned with market related prices