



Benefits of JODI for OPEC A focus on natural gas data

Presented by:

OPEC Secretariat



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- OPEC's contribution to JODI
- JODI natural gas data & their importance for OPEC
- JODI natural gas data usage in OPEC research
- Interaction between energy commodities & data transparency
- Conclusion

JODI: A manifestation of the producer-consumer dialogue



7th IEF Meeting in Riyadh 2000

- OPEC as one of the participating organizations
- Strong support from the very early days of the Initiative
- Efforts to increase oil data transparency for the benefit of producers & consumers



Launching of Joint Oil Data Exercise (JODE) - 2001

- Designing the original oil data questionnaire a challenge
- Substantial contribution to the methodology & overall design
- OPEC - one of the founder organizations

March 2012 (Kuwait): Launch of the extended JODI world oil database



May 2014 (Moscow): Launch of JODI world gas database



November 2005 (Saudi Arabia): Launch of JODI world oil database



OPEC's strong support to JODI continuous

Training workshops

Technical cooperation

Capacity building

Dialogue

OPEC Member Countries JODI Oil Smiley Faces for Period January-June 2019

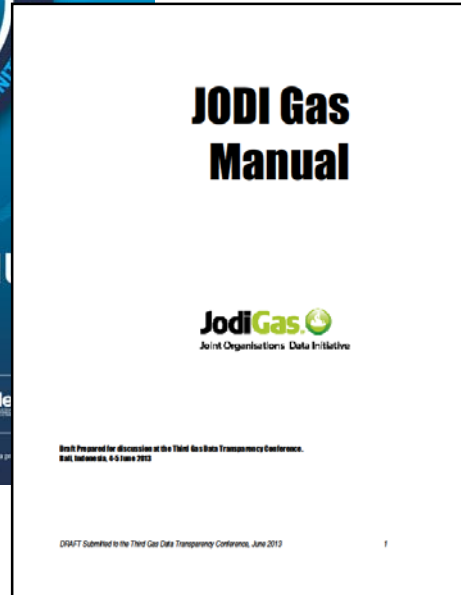
Country	Sustainability	Timeliness	Completeness	Sustainability	Timeliness	Completeness
Algeria	4	3	100%	☹️	☹️	😊
Angola	6	6	100%	☹️	😊	😊
Congo*	--	--	--	--	--	--
Ecuador	6	6	100%	☹️	😊	😊
Gabon	6	6	100%	☹️	😊	😊
Equatorial Guinea	6	2	100%	☹️	☹️	😊
IR Iran*	--	--	--	--	--	--
Iraq	6	6	100%	☹️	😊	😊
Kuwait	6	6	100%	☹️	😊	😊
Libya*	--	--	--	--	--	--
Nigeria	6	6	100%	☹️	😊	😊
Saudi Arabia	6	6	100%	☹️	😊	😊
U.A.E.*	--	--	--	--	--	--
Venezuela	6	6	5%	☹️	😊	😊

*No data submitted

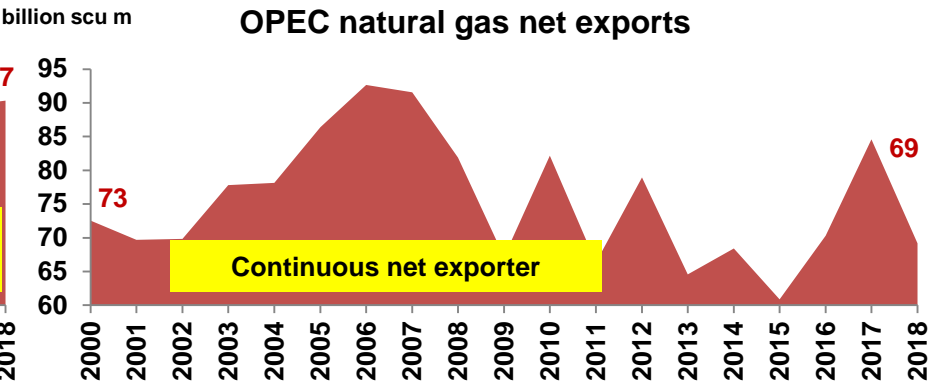
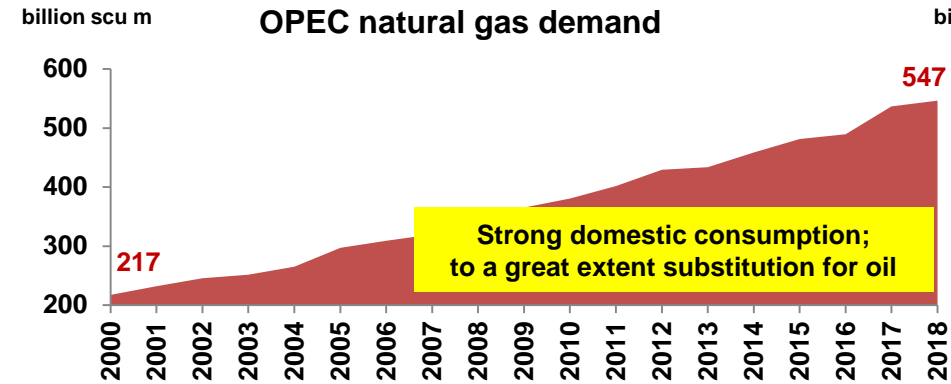
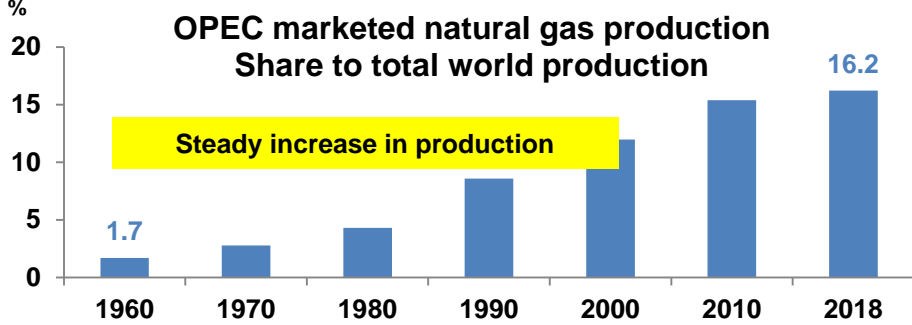
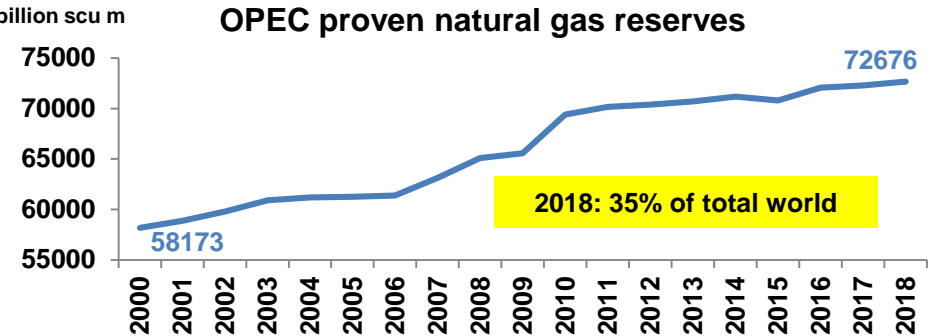
OPEC Member Countries JODI Gas Smiley Faces for Period January-June 2019

Country	Sustainability	Timeliness	Completeness	Sustainability	Timeliness	Completeness
Angola*	--	--	--	--	--	--
Ecuador	6	6	100%	☹️	😊	😊
Gabon	6	6	20%	☹️	😊	😊
Iraq	6	6	100%	☹️	😊	😊
Kuwait	6	6	100%	☹️	😊	😊

*No data submitted



OPEC MCs are key players in natural gas



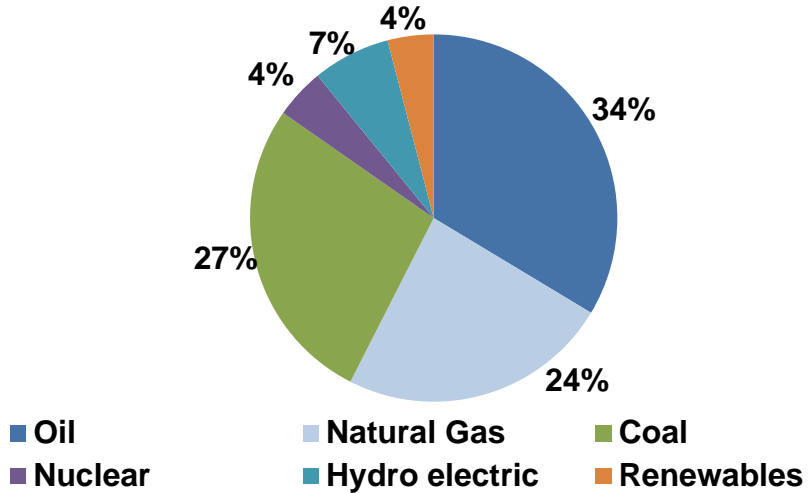
Source: OPEC Annual Statistical Bulletin (ASB) 2019

Natural gas strongly interacts with oil...

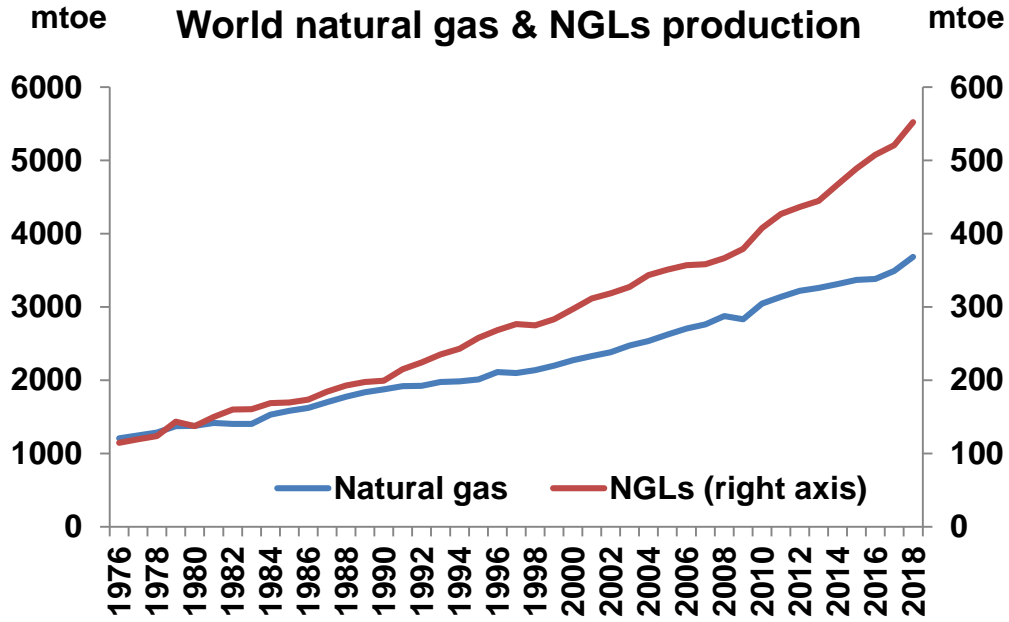


- Oil market assessment requires assessment of natural gas markets; increasing interaction also with other commodities

World energy demand by energy commodity in 2018



World natural gas & NGLs production



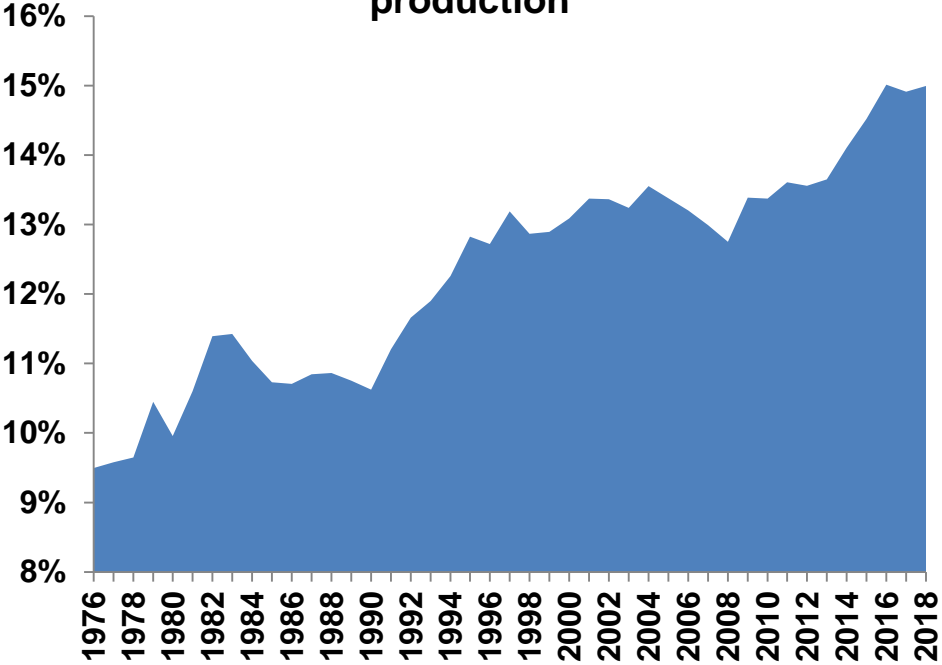
Source: OPEC Secretariat & BP Statistical Energy Review 2019

Source: OPEC Secretariat

...both in primary & secondary side



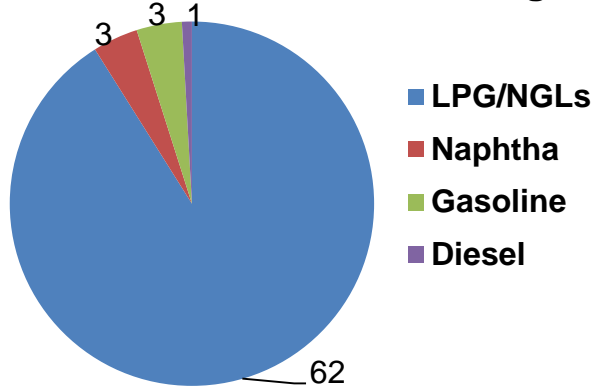
Share of total world NGLs in natural gas production



Source: OPEC Secretariat

- Natural gas & oil interaction
 - Primary side (NGLs)
 - Secondary side (all products, specifically the lighter, LPG, naphtha)
 - Petrochemical industry

Production of petroleum products Shares derived from natural gas



JODI is complementary for OPEC research



OPEC RESEARCH

- Pioneer in energy data collection
- Data driven research & decision making
- Comprehensive information system to support decisions

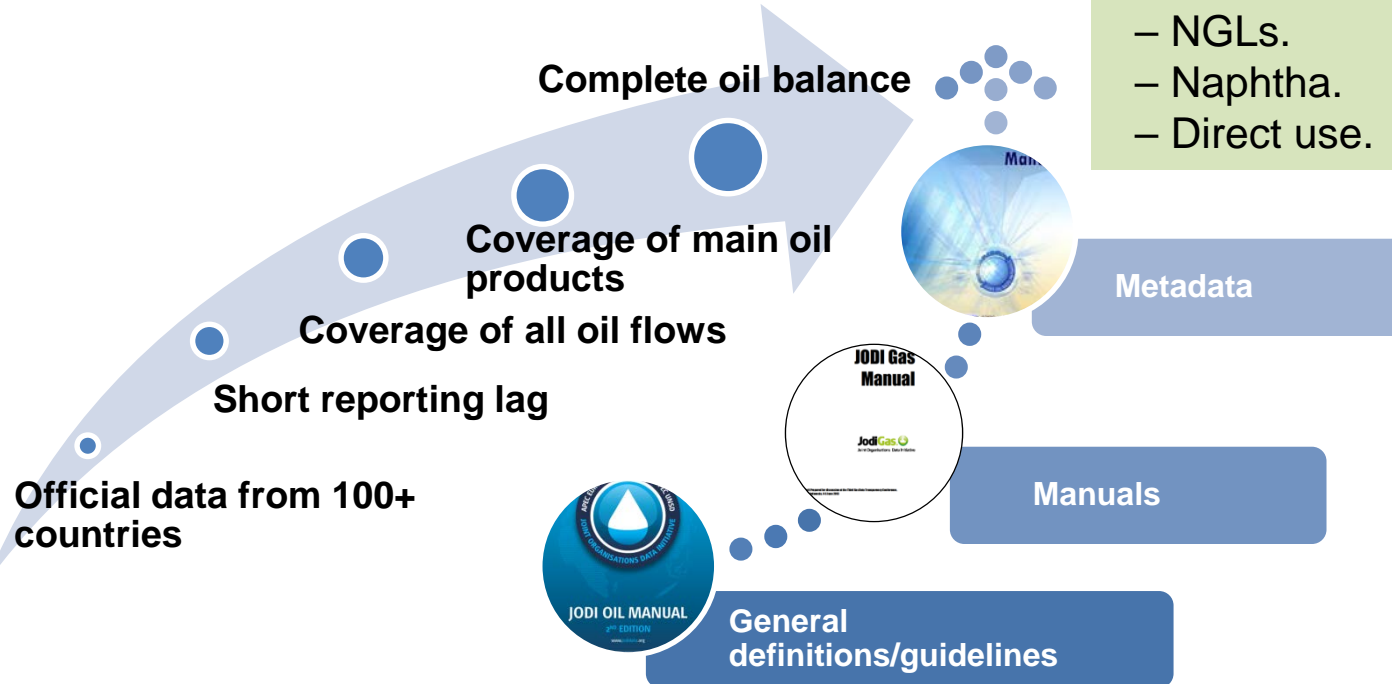
JODI

- Essential for energy data transparency
- Official freely accessible country data
- Oil & natural gas fundamental flows
- Wide coverage of oil & natural gas flows
- Technical metadata

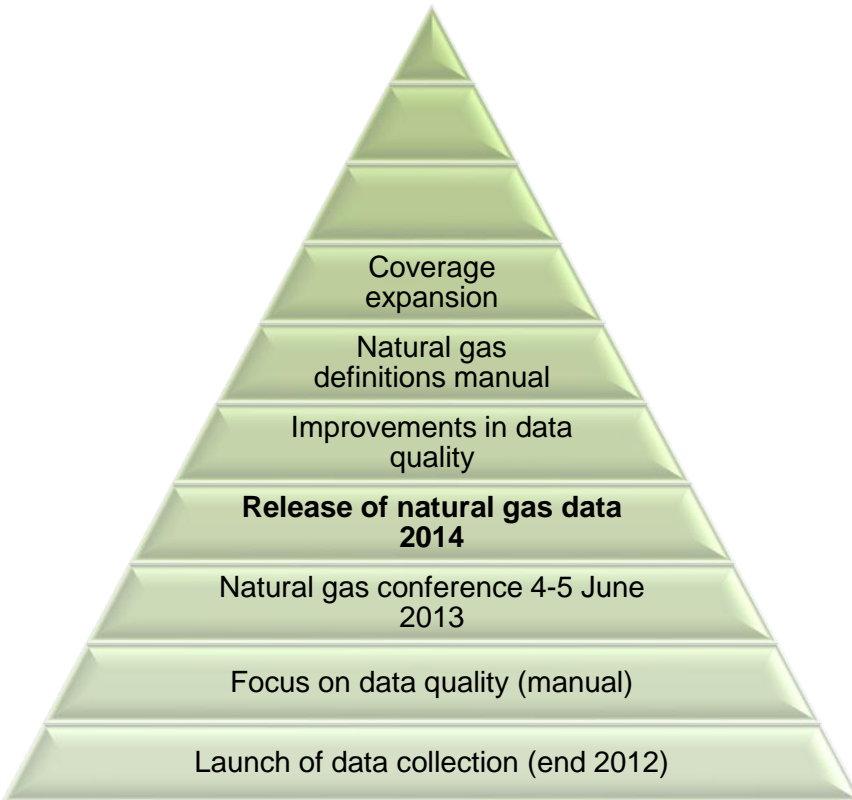


JODI oil is very rich in coverage

- Unique information, not accessible elsewhere
 - NGLs.
 - Naphtha.
 - Direct use.



JODI gas provides most recent official data and is continuously improving



- **85+ countries**
- **All main flows**
- **Monthly gas balance**
- **Metadata**
- **Definitions**
- **Manuals**

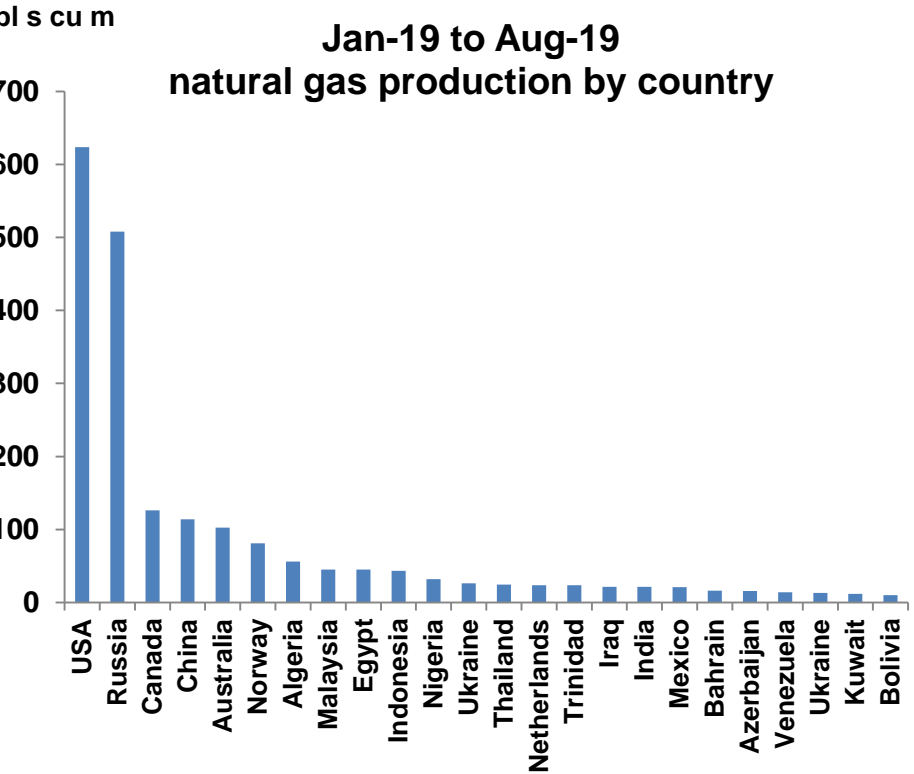
- As for oil, the JODI natural gas database is an **important data source** and utilized for updating natural gas **production, demand and trade information**;
- There are industry reference data sources including **BP** statistics, **Cedigaz**, **IEA** statistics and **EIA** statistics, but
- **None of these natural gas data sources provide monthly data.**



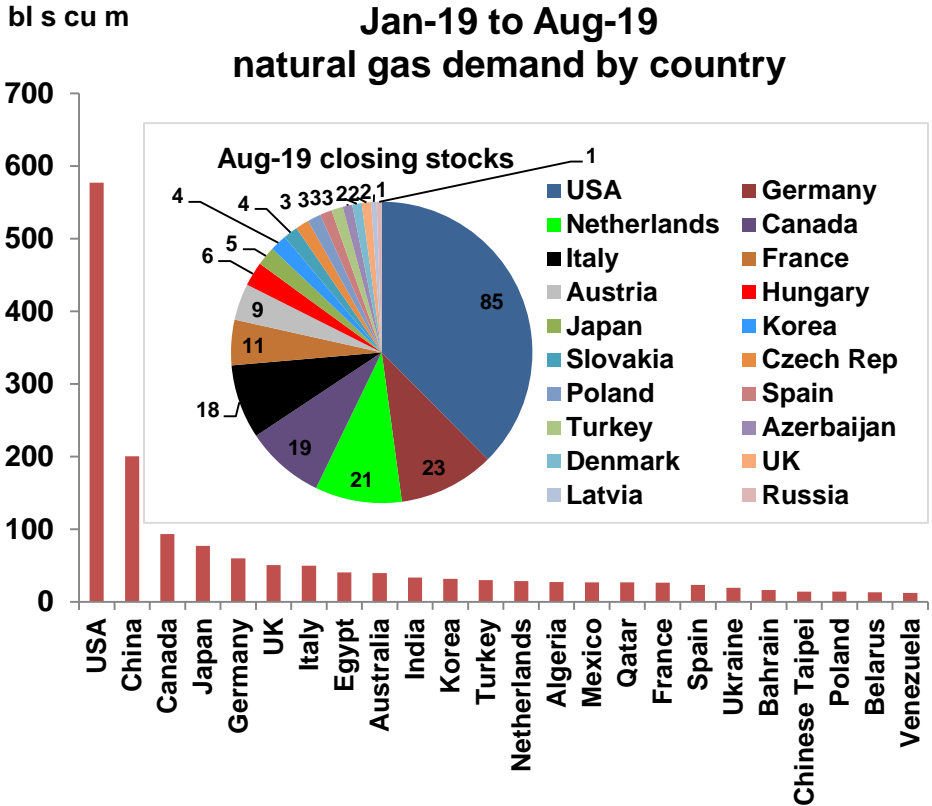
- **Natural gas production**: Natural gas production forecasts based on historical consumption data; as interaction between natural gas and oil is significant, **oil forecasting accuracy** depends partly also on **natural gas forecasting accuracy**.
- **Natural gas demand**: Natural gas demand forecast is based on adding growth projections to an existing baseline – similar issues as for natural gas production.
- **Natural gas demand for electricity generation**: Natural gas serves as substitution for residual fuel and crude direct use.
- **Natural gas trade**: Natural gas trade flows; in particular LNG and pipeline trade.
- **Natural gas stocks**: Inventories reflect interaction between supply and demand.

For all the above flows, JODI provides the most recent information – on monthly basis.

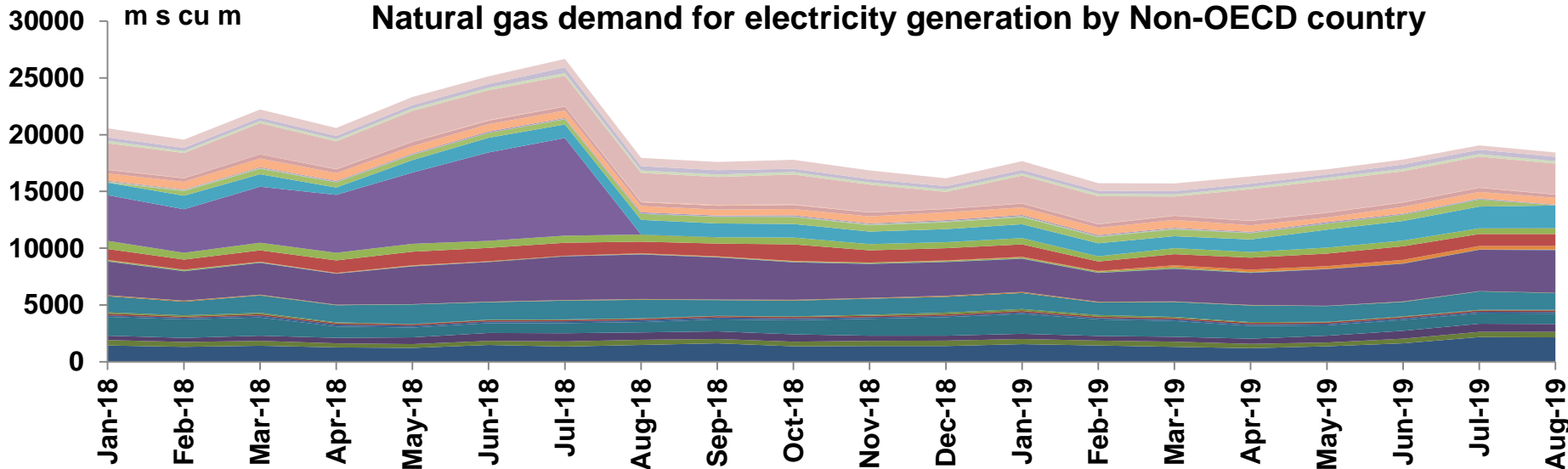
JODI data used by OPEC to assess natural gas markets



Source: JODI natural gas world database

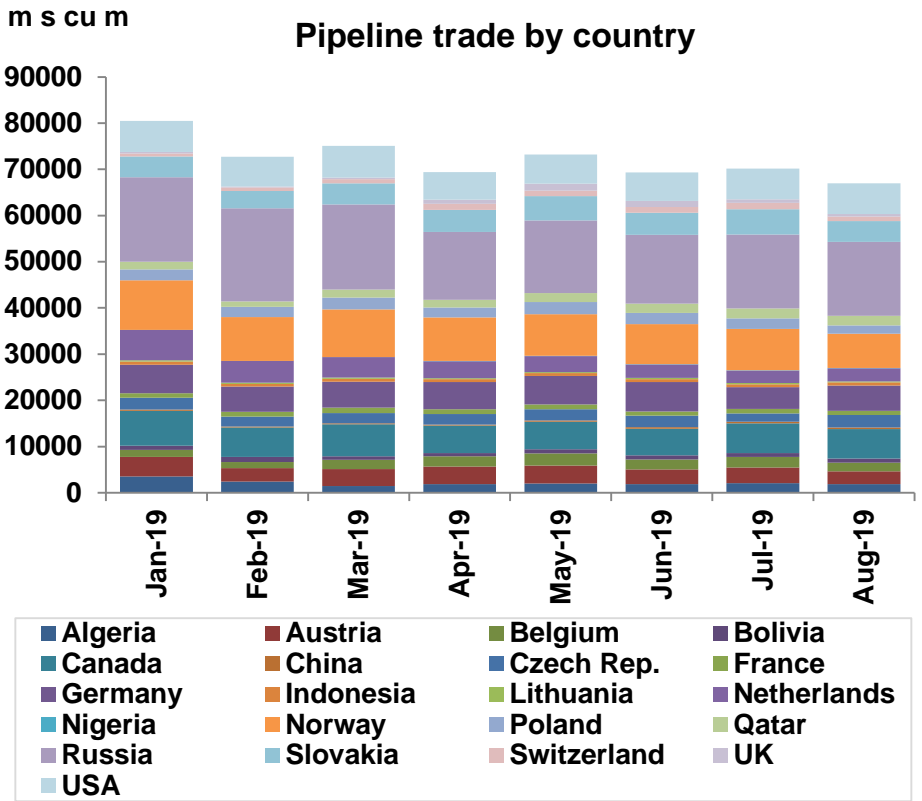
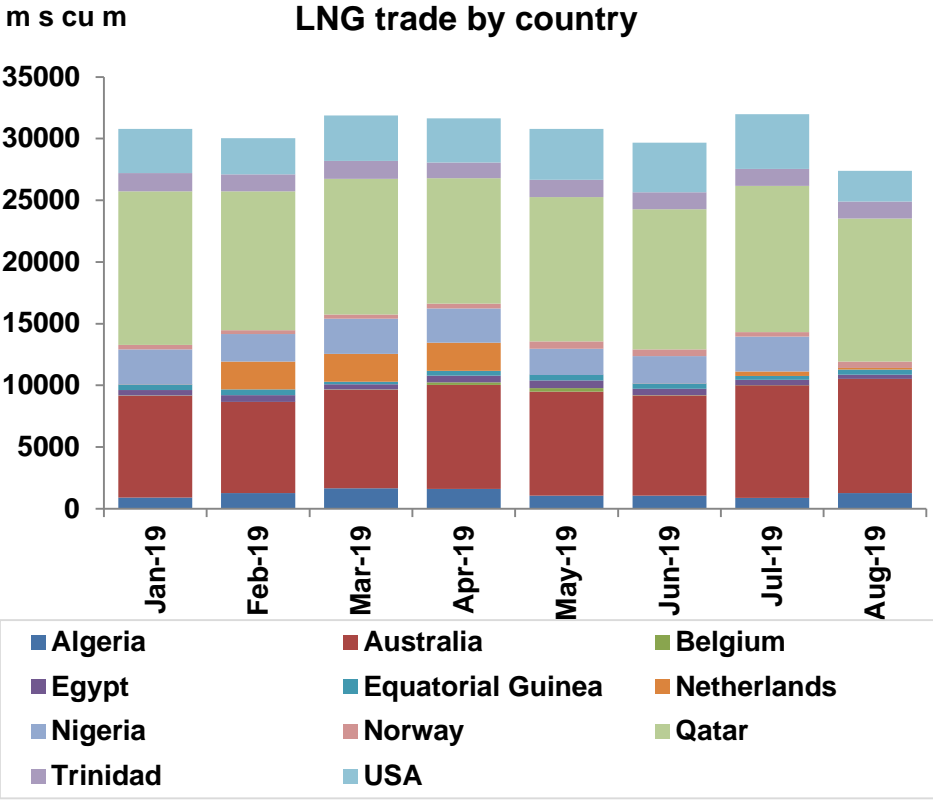


JODI data used by OPEC to assess natural gas markets

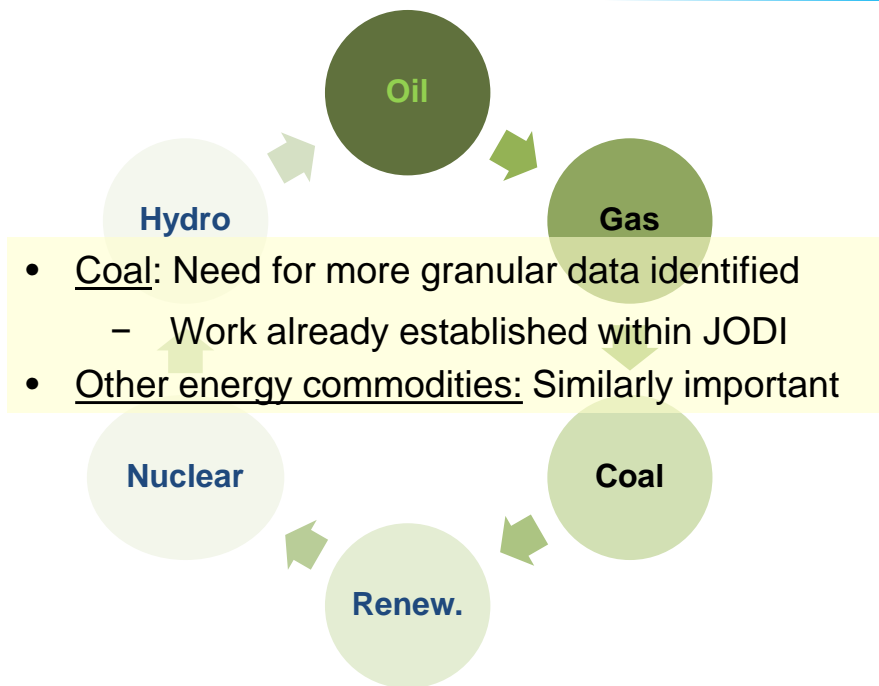
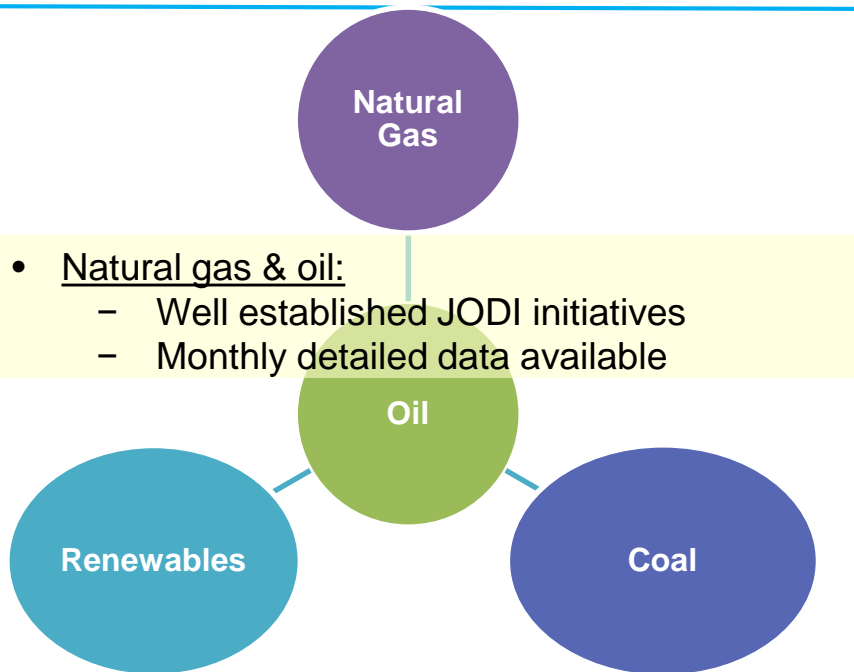


- | | | | | | |
|----------------|-------------------|-------------------|-------------|-------------|---------------------|
| ■ Algeria | ■ Azerbaijan | ■ Bahrain | ■ Belarus | ■ Bolivia | ■ Brunei |
| ■ Bulgaria | ■ Chinese Taipei | ■ Croatia | ■ Ecuador | ■ Egypt | ■ Equatorial Guinea |
| ■ Georgia | ■ Hong Kong China | ■ India | ■ Indonesia | ■ Iran | ■ Iraq |
| ■ Kuwait | ■ Malta | ■ Moldova | ■ Morocco | ■ Nigeria | ■ Philippines |
| ■ South Africa | ■ Thailand | ■ Trinidad/Tobago | ■ Tunisia | ■ Venezuela | |

JODI data used by OPEC to assess natural gas markets



Interaction between energy commodities



Better understanding of energy transition when data transparency is applied to all energy commodities

Looking ahead: more data required ...



Oil & gas trade by origin/destination

International bunkers, petchem feedstocks

More products – asphalt, coke, lubricants

Other energy commodities

LNG trade by destination



- JODI oil & gas databases are widely used within the industry.
- JODI is the central platform & benchmark for official energy data.
- Further success of the Initiative will strongly depend on the
 - Usability, relevance & accuracy of available energy information
 - Cooperation between all relevant energy market players – countries, organizations and the industry.
- Ultimate goal is to achieve global energy markets data transparency.
- OPEC & its Member Countries will continue their strong commitment towards JODI, particularly focusing on oil & gas data quality as well as supporting the expansion of the Initiative to cover other energy commodities.



Thank You.

