



4th IEF-KAPSARC ROUNDTABLE

Energy Security in Transition

Luis Bertrán, Secretary General, IGU

15 February 2018



Our headquarter in Barcelona



**IGU Secretary General
Mr Luis Bertran**

International Gas Union

Leading the future of the Industry

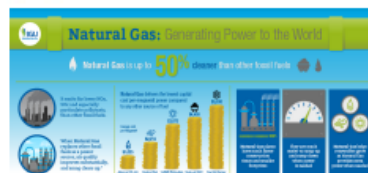
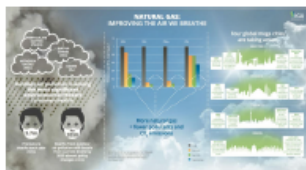
**As the global voice of gas,
IGU seeks to improve the quality of life by advancing gas as a
key contributor to a sustainable energy future**



91 Charter Members
72 Associate Members
Founded in 1931

IGU Secretariat
Barcelona, Spain

Presidency 2015-2018
Washington, DC USA
South Korea 2018-2021



Natural Gas Enables the Energy Transition

Paris
COP 21

Transition
takes time





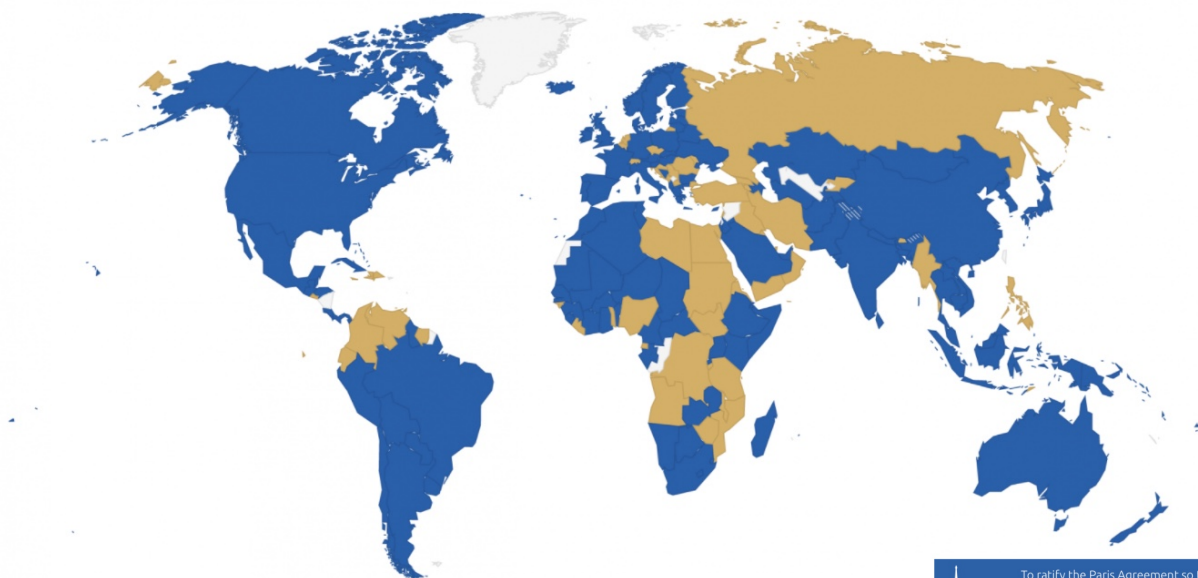
The role of Natural Gas in the Global Energy Mix

The Value of Natural Gas in the Future Energy Mix

- A transition to a lower carbon and sustainable energy future
- Improvement of quality of life
- Economic development and prosperity
- Eradicating energy poverty

Paris Agreement. Plans involved

174 Parties
have ratified
the Paris
Agreement



174 Parties have ratified of 197 Parties to the Convention

On 4 November 2016, the Paris Agreement entered into force.
[More information](#)

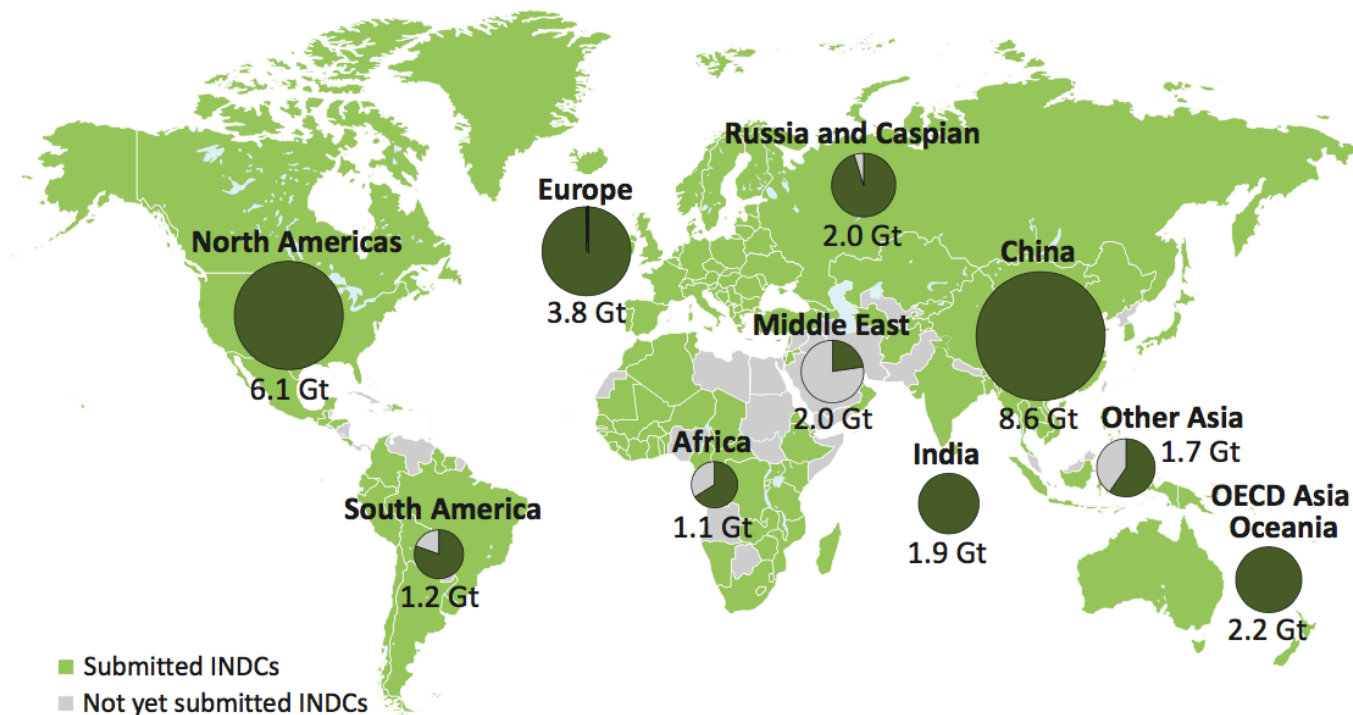
To ratify the Paris Agreement so that it enters into force these two conditions need to be met



Last updated:
22 March 2017

Paris Agreement. Plans involved

167 Parties have submitted their first NDC



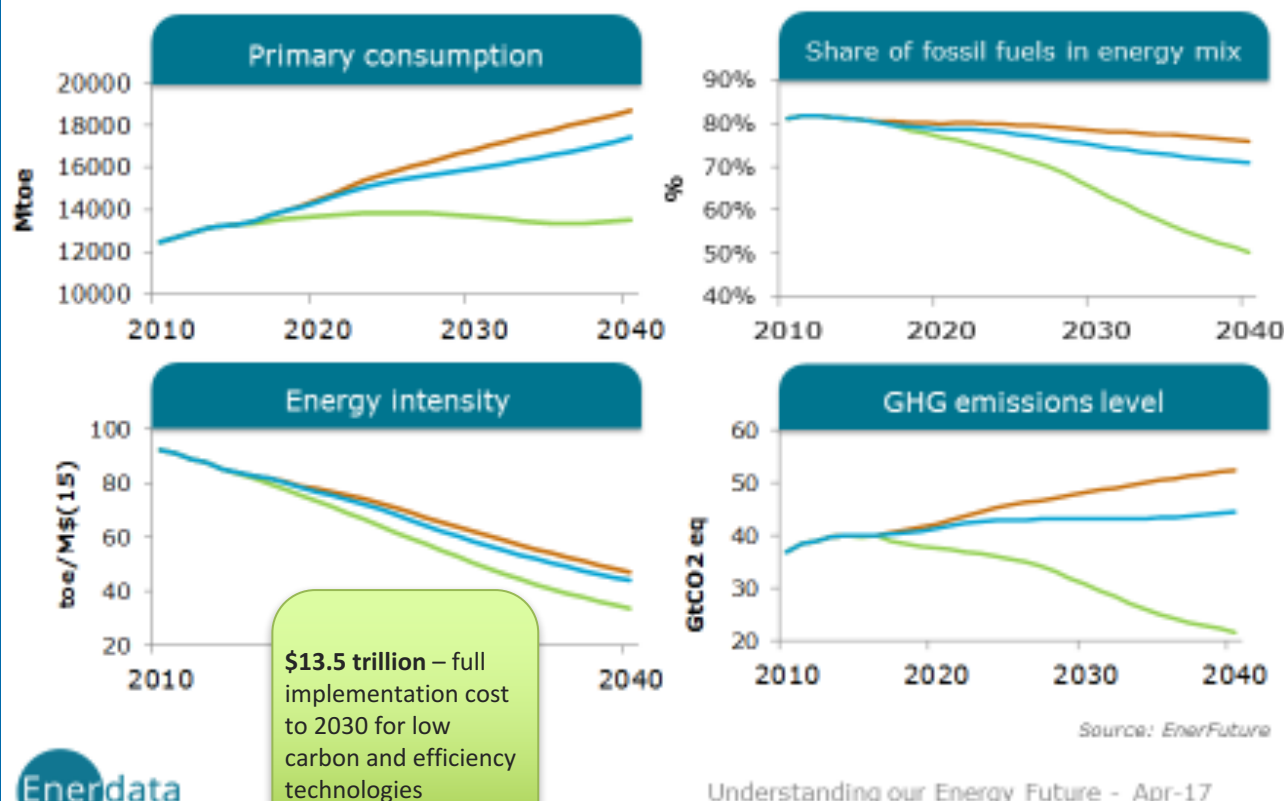
This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

(167 Parties have submitted their first NDC)

4. Paris Agreement. Plans involved

INDC's submitted cover over 90% of global fossil fuel demand and almost 80% of production

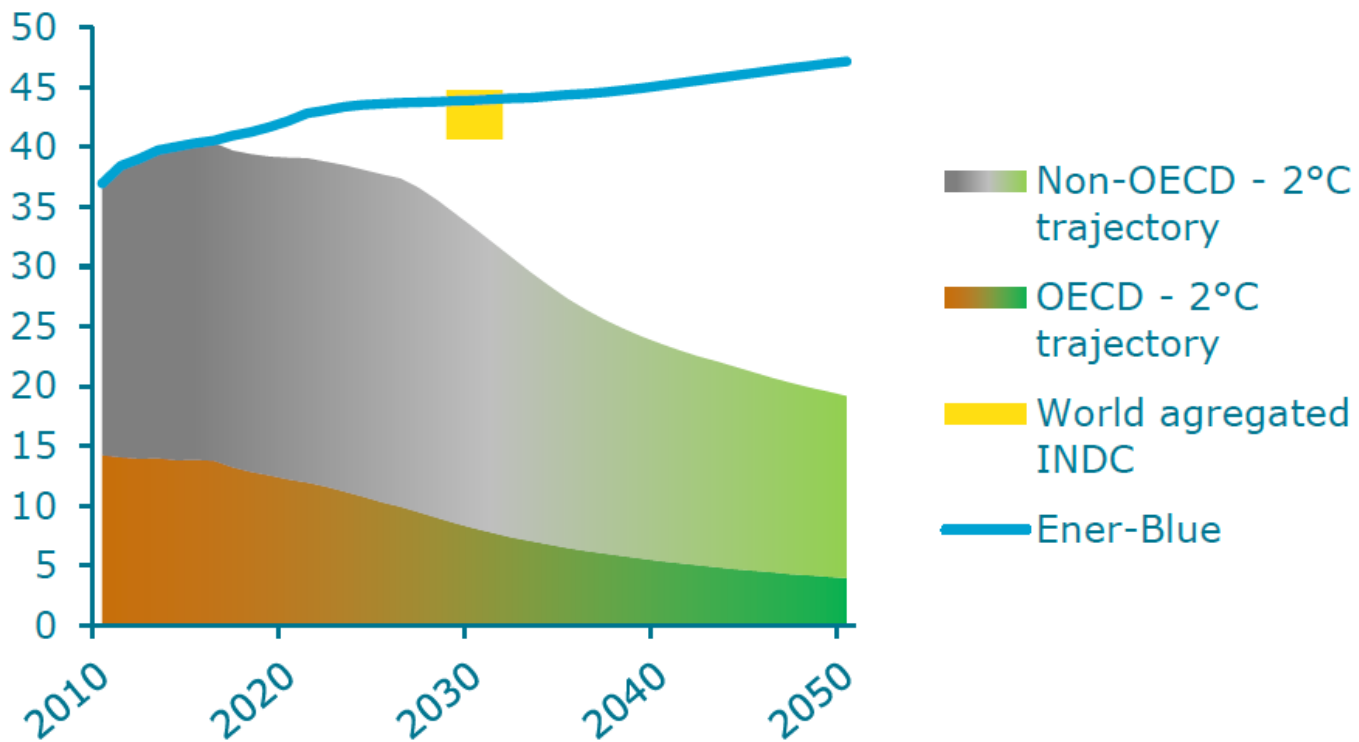
Key energy indicators by scenario



Paris Agreement. Plans involved

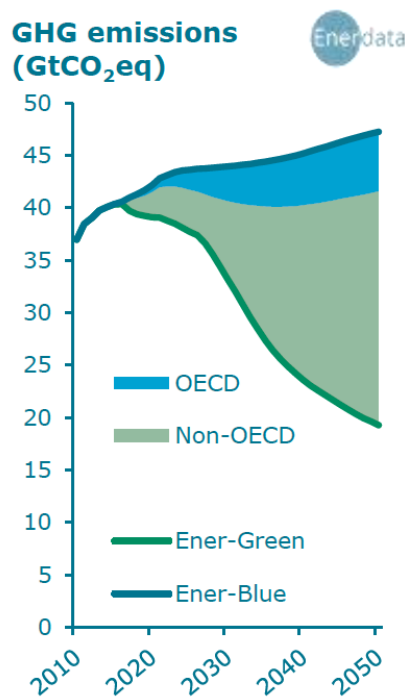
INDC's versus
2 °C trajectory.
Global GHG
emissions
forecast for
scenario

GHG emissions (GtCO₂eq)



Paris Agreement. Plans involved

500 GtCO₂ eq
is the
additional
cumulative
effort, from
NDC's
commitments
to 2 °C
scenario
(Ener-green)



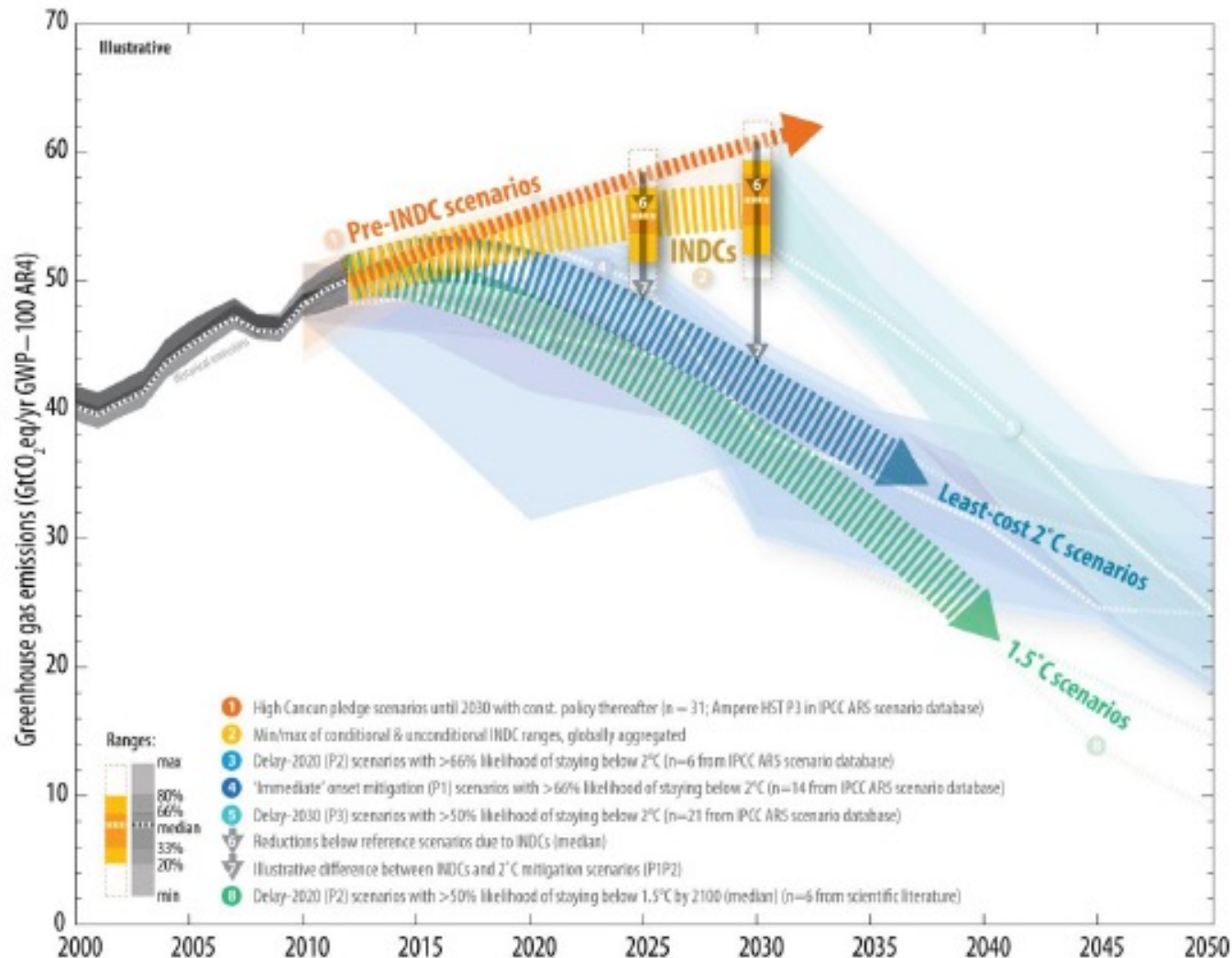
Distribution by region
Non-OECD



Additional cumulative GHG emission reduction (2015 – 2050) by major regions between INDC and 2°C scenarios

Paris Agreement. Plans involved

Global emissions resulting from the implementation of the INDC to 2 °C scenario (Ener-green)

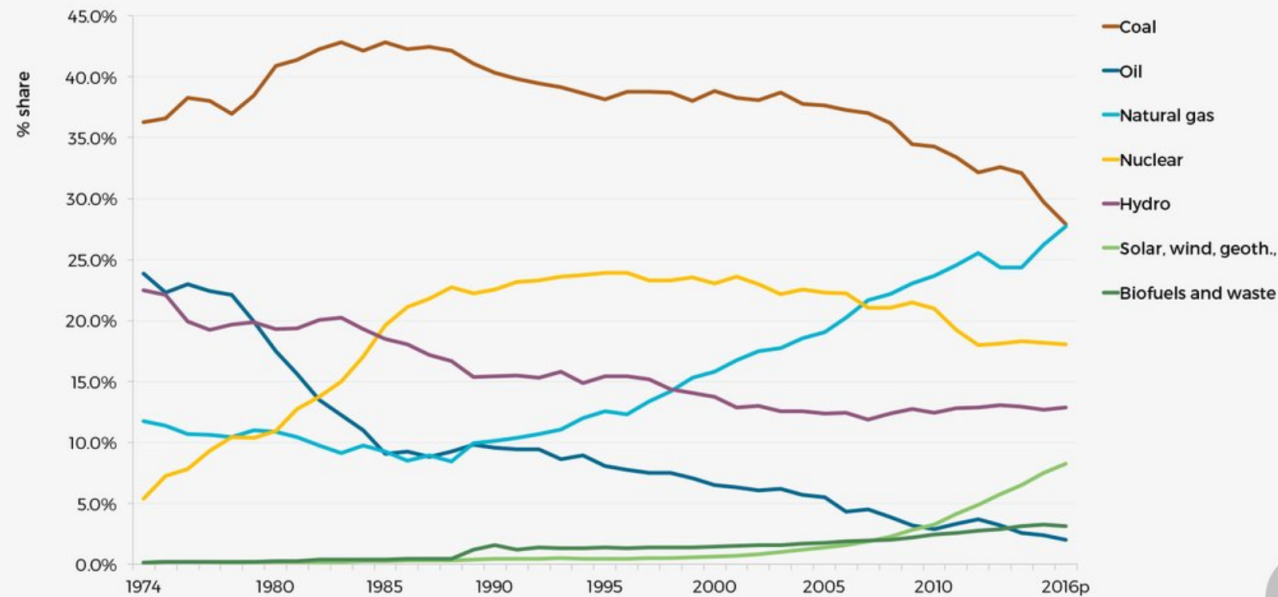


Sources: Intergovernmental Panel on Climate Change scenarios from scientific literature (see footnotes for determined contribution quantification).

Natural Gas Enables the Energy Transition

Electricity production by source

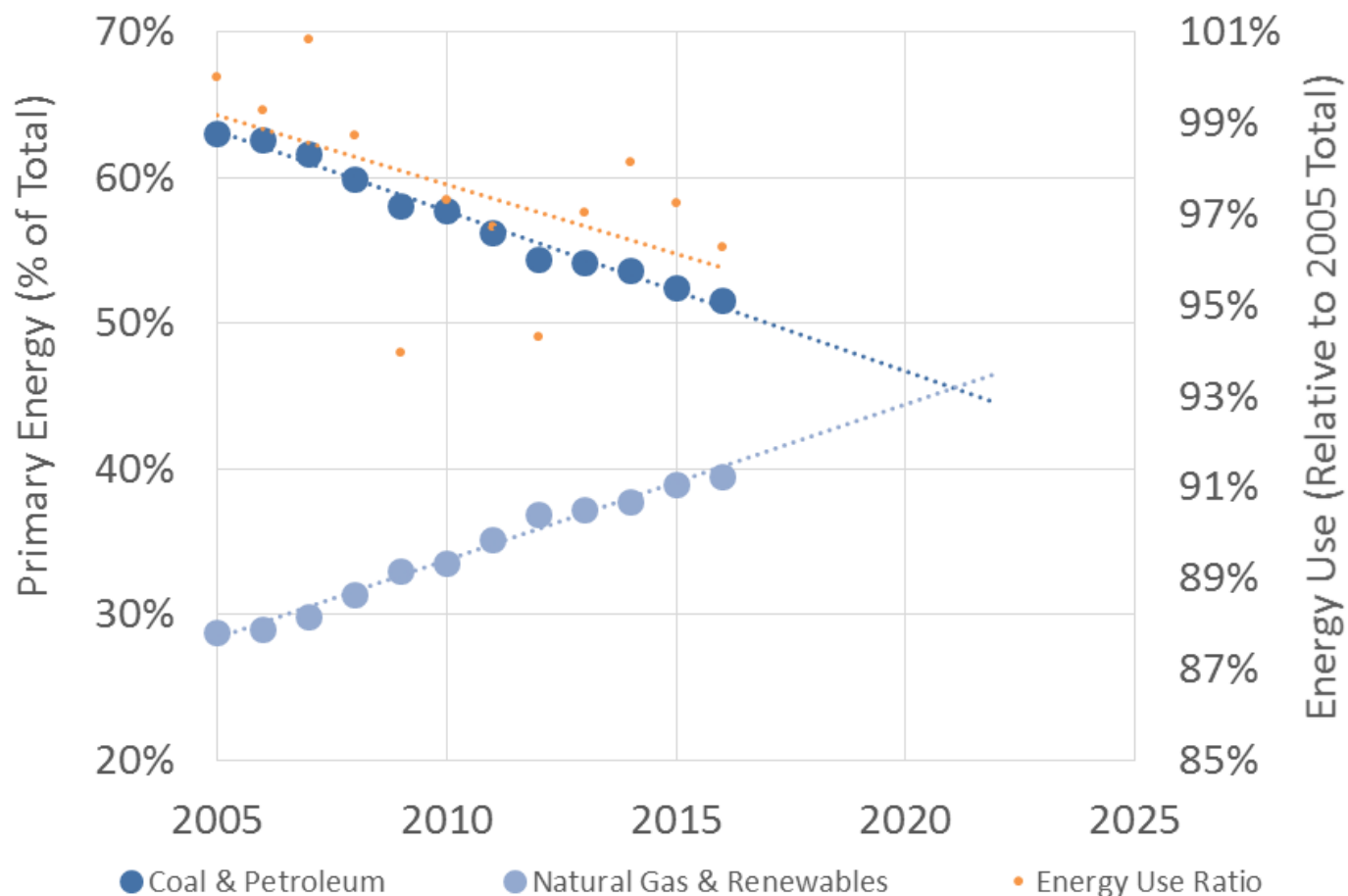
OECD gross electricity production by source, 1974-2016
Electricity Information 2017



Natural Gas Enables the Energy Transition

US Primary Energy

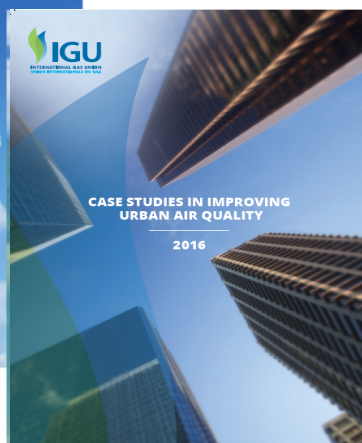
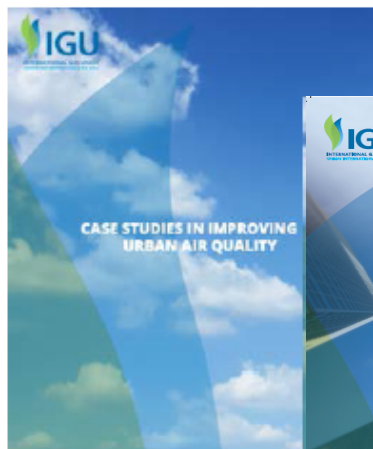
U.S. Primary Energy Consumption Trends



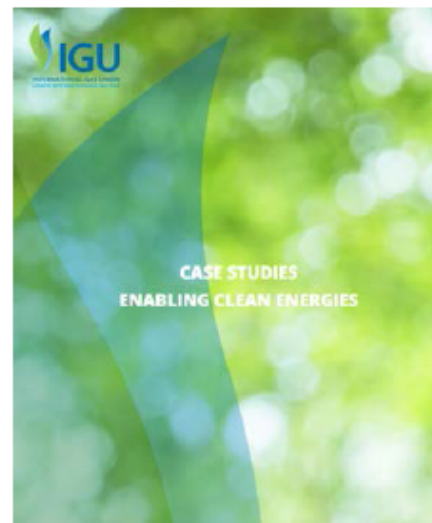
Natural gas in the energy transition

- Gas Markets moves to a globalized commodity model
- Competition and volume expand, while markets become more connected
- LNG import facilities went from 14 in 2004 to 38 in 2016
- LNG bringing flexibility on contract and facilities
- Production grows and new sources of supply emerged in other than traditional regions both for domestic markets needs (China, Brazil, Argentina) and for export purpose (Australia, USA).
- Long term opportunities and uncertainties (low prices to supply industry, switch from Coal, and addressing air quality issues should ensure its growth)

Gas working with renewable Energy transitions: Long term process



Case Studies
in Improving Urban Air Quality
2015 & 2016 Editions



Case Studies
Enabling Clean Energies

1. Support variable renewable production
2. Integrating systems CHP
3. Biogas and Biomethane
4. Power to Gas

Next appointment in Washington

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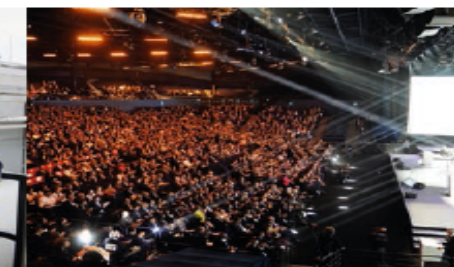


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Thank you for your attention!

