



Norway Diplomatic Forum – Oslo

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Secretary General
International Gas Union



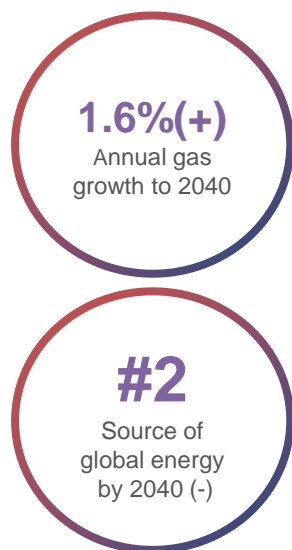
Looking back at 2017 Developments in Global Gas

Region	Consumption	Gas price	Production	Trade—Region average		Infrastructure
				Imports	Exports	
Africa	⬆️ 6.7%	-	⬆️ • 8.6%	⬇️ -5.0%	⬆️ 8.9%	⬆️ • LNG liquefaction (Mozambique FID)
Asia	⬆️ 5.3%	⬆️ +\$1.1/MMBtu (Japan spot)	⬆️ • 4.1%	⬆️ 10.0%	⬆️ 10.6%	⬆️ Regional LNG and regas; Chinese developments
CIS	⬆️ 6.3%	-	⬆️ • 6.8%	⬆️ 6.9%	⬆️ 7.8%	⬆️ • Russia LNG (Yamal)
Europe	⬆️ 6.1%	⬆️ +\$1.1/MMBtu (NBP)	⬆️ • 1.9%	⬆️ 12.0%	⬆️ 14.3%	⬆️ • Pipeline development (TANAP)
Latin America	⬆️ 0.4%	-	⬆️ • 0.1%	⬇️ -7.7%	⬇️ -7.7%	⬆️ • No key developments
Middle East	⬆️ 4.8%	-	⬆️ • 4.1%	⬇️ -3.7%	⬆️ -0.1%	⬆️ • No key developments
North America	⬇️ -0.8%	⬆️ +\$0.5/MMBtu (Henry Hub)	⬆️ • 0.5%	⬆️ 8.0%	⬆️ 16.5%	⬆️ • US liquefaction and cross-border pipelines

2017 Y-Y Demand Growth 3.7%

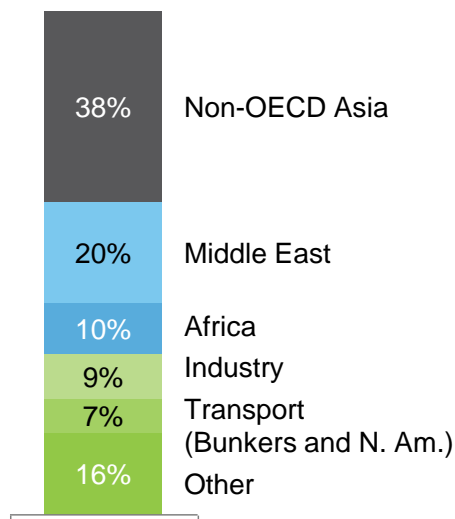
Rapid gas growth expected to continue

Gas is projected to be the fastest growing fossil fuel ...



... based on key growth regions and sectors ...

Share of growth by 2040



... enabled by key market Developments...



Economic development/growth



Increasing global gas supply



Supportive government policies

Key developments in 2018

Continued demand and supply growth



- Chinese demand has jumped 150 percent between 2017 and 2018, over half of the global gas demand increase
- China becomes the largest LNG importer surpassing Japan
- Asian LNG Spot prices spike to a 4-year high for the October 2018 delivery in Asia at \$11.40 per mmBt ; 2017 was at \$6.00 mmBt
- Henry Hub annual 2018 average price closed at \$3.16 mmBt, up from \$2.99 mmBt in 2017
- LNG Freight rates reached a record high above 170,000\$/day in November
- European Monthly Spot prices increased in 2018 and peaked at \$9.52 mmBt in September



- Australia becomes the largest LNG exporter surpassing Qatar
- World's largest floating LNG platform, Prelude, begun production in December, last of 8 LNG Australian projects
- In the first half of 2018, the US doubled its LNG exports, well on the way to reaching 60 Mt by the end of 2019
- Yamal LNG reached full capacity (16.5 mmtpa) in December, under budget and well ahead of schedule
- Major LNG FID was taken - Canadian LNG
- China placed a 10% tariff on US LNG in retaliation to ongoing tariff and trade disputes between the two countries



- Nord Stream 2 construction picks up speed while Germany accelerates plans to build its first LNG import terminal
- Progress to the Southern Gas Corridor made with the physical connection of Trans Adriatic Pipeline (TAP) and the Trans Anatolian Pipeline (TANAP) for scheduled gas deliveries to Europe in 2020
- Gazprom's Power of Siberia natural gas pipeline from Russia to China nearing completion

A new strategy for energy & sustainable development

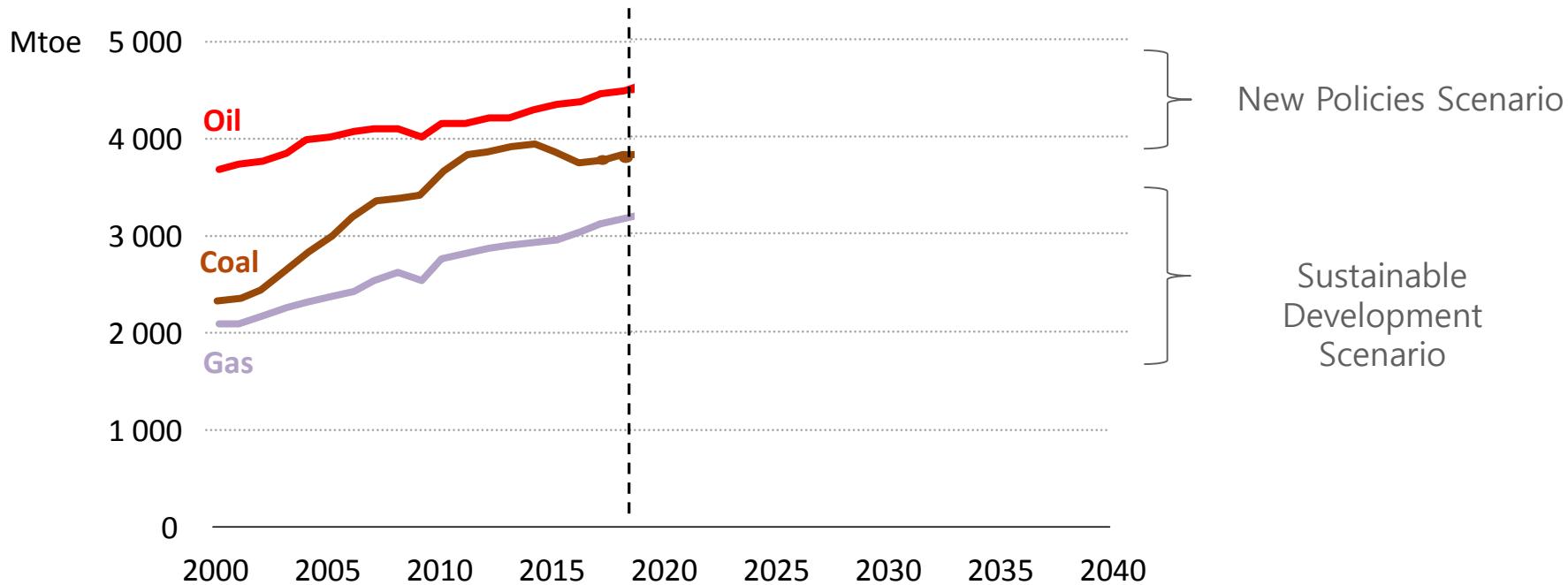


The Sustainable Development Scenario reduces CO₂ emissions to address climate change while also tackling air pollution and achieving universal energy access

Fossil fuels in the Sustainable Development Scenario



Fossil fuel demand in the New Policies Scenario & Sustainable Development Scenario



Coal & oil demand drop in the Sustainable Development Scenario. Gas is the largest fossil fuel in 2040 while low-carbon technologies & improvements in efficiency expand rapidly

Challenges to Overcome for Sustained Gas Growth

1. Cost competitiveness



1A. Reducing LNG costs through the supply chain



1B. Pricing environmental externalities



1C. Development of local gas production



2. Security of supply



2A. Expanding gas pipeline and storage infrastructure



2B. More flexible LNG contracting



2C. Development of new access-enabling technologies



3. Sustainability



3A. Adoption of local air pollution policies



3B. Development of low carbon technologies for gas



3C. Addressing the methane emissions challenge



Industry action required



Gov. action required



Thank you

