

Update on OIL AND GAS SECURITY

Mexico

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Ministry of Energy

SENER
SECRETARÍA DE ENERGÍA



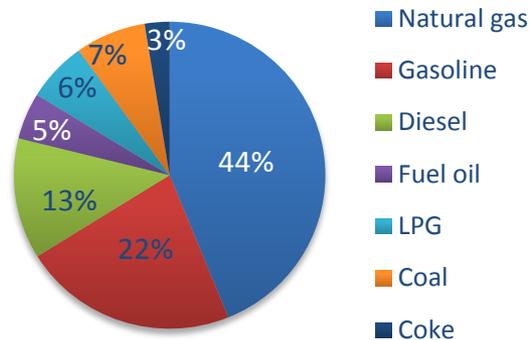
Oil and Gas Supply and Demand Situation

○ Natural gas historical supply and demand

Country's total demand for fuel:

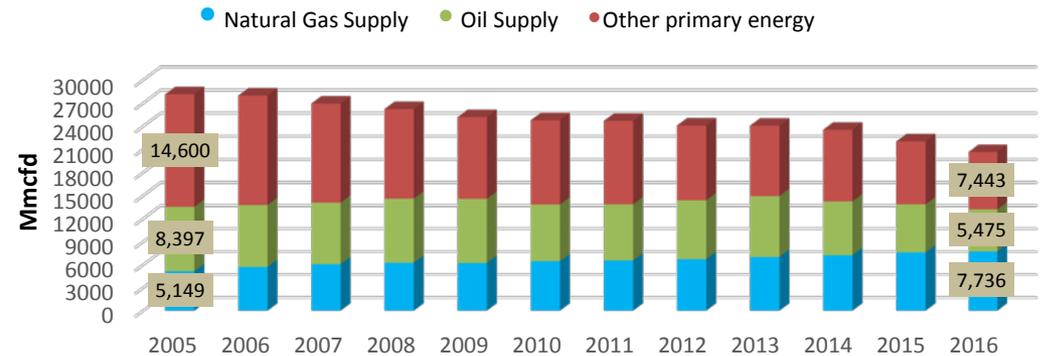
Oil products: 46%

Natural gas: 44%



Due to the transition to a clean energy matrix, **primary supply** including **crude oil** is decreasing, while **NG increases** its share

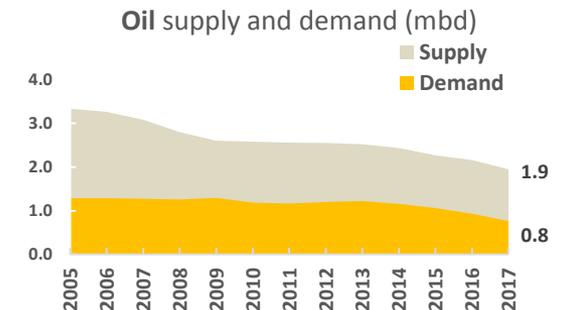
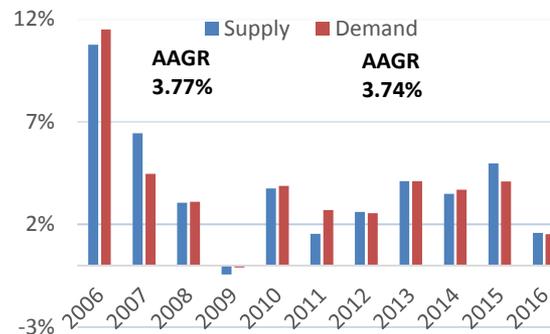
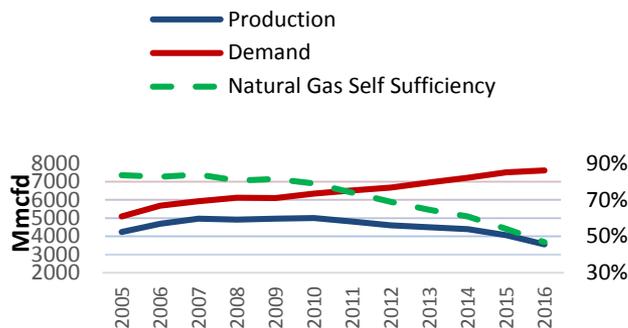
Share Oil & Gas Natural Supply - Total Primary Supply



↓ Production / ↑ imports cause downward trend in NG self-sufficiency

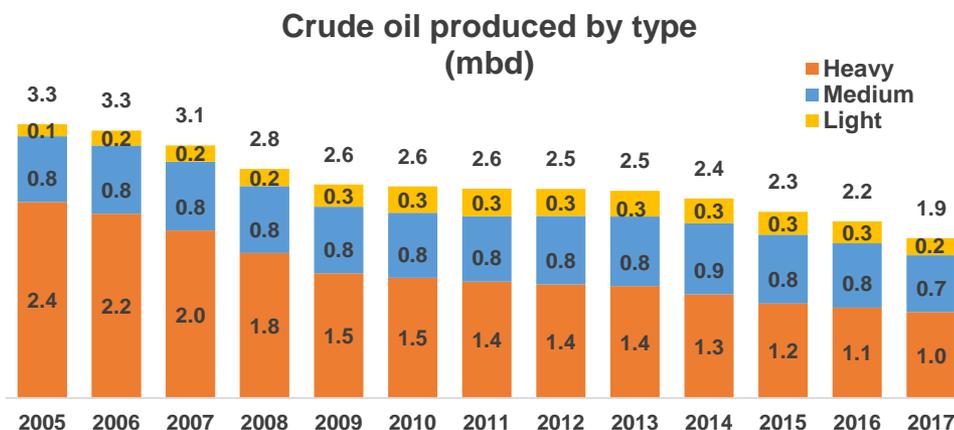
NG Supply and demand growth rates respond to market conditions

Supply and demand oil growth rates are negative

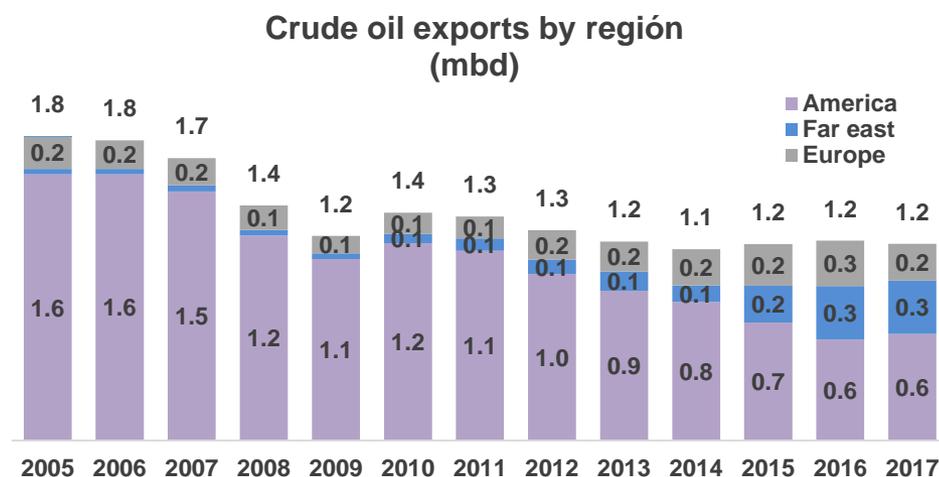


Oil and Gas Supply and Demand Situation

○ Crude oil supply and demand



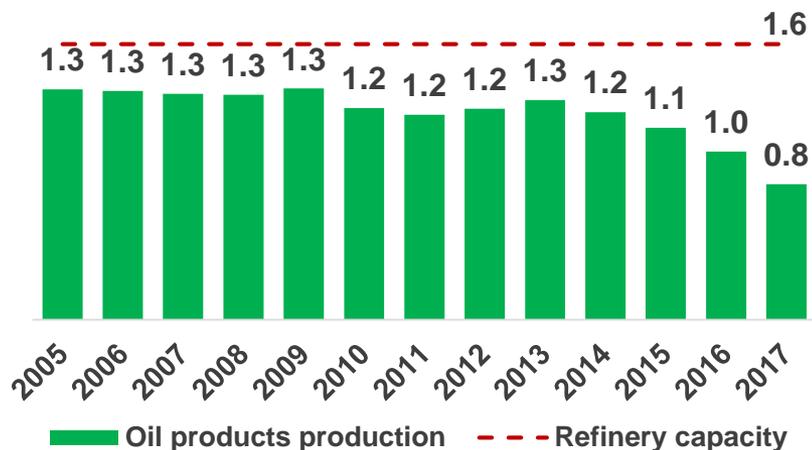
- **Mexico is the eleventh-largest oil producer** in the world.
- In 2017, total crude oil output stood at **1.9 million of barrels** per day and exports reached **1.2 million of barrels per day**.



Oil and Gas Supply and Demand Situation

○ Refinery capacity / Oil products foreign trade

Refinery production and capacity (mbd)

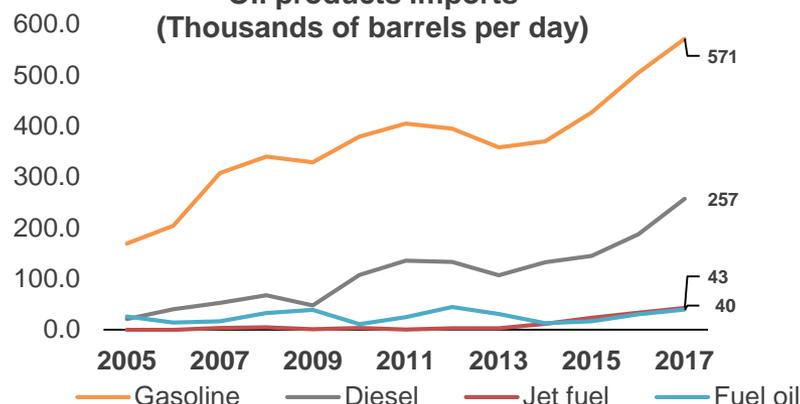


■ **6** refineries

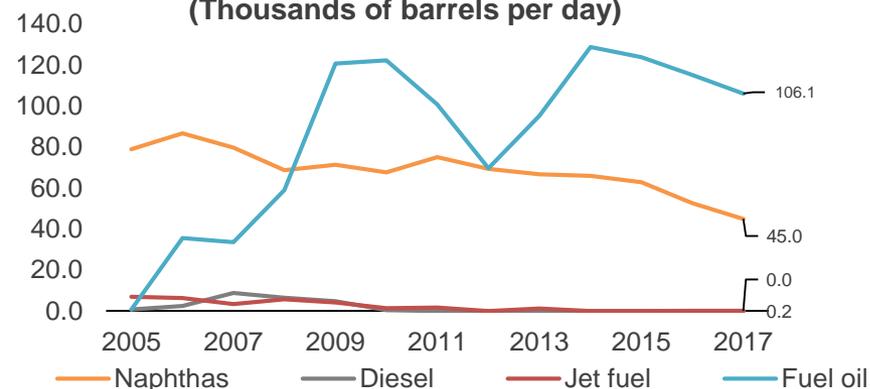
■ **1.6** million of barrels per day

■ Main **import** sources are **US** and **Europe**. While most important **export** destinations are **Singapore** and **US**.

Oil products imports
(Thousands of barrels per day)



Oil products exports
(Thousands of barrels per day)



Oil and Gas Security Policy

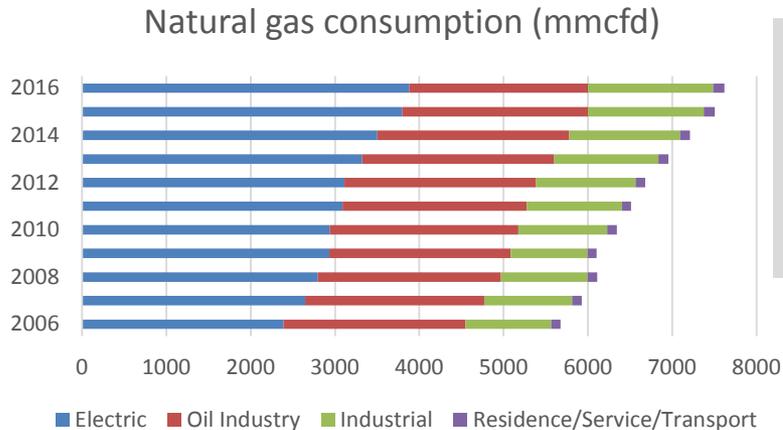
- On December 2017, the Ministry of Energy issued the **Public policy for mandatory minimum stocks of oil products** (gasoline, diesel & jet fuel) in the Mexican Official Gazette.
 - The minimum inventory policy is **applicable to traders and distributors** with sales to service stations or end-users.
 - The mandatory minimum stocks are **additional** to the operational and commercial inventories.
 - These inventories could be used **only under supply emergencies**, prior authorization by the Energy Sector Coordination Council.
 - The obligation is regional (**8 areas**) and considers the use of tickets.



Region	2020	2022		2025	
	Minimum inventory	Minimum inventory	Quarterly avg.	Minimum inventory	Quarterly avg.
Northwest	5	8	9	11	13
North	5	8	9	11	12
Northeast	5	8	9	10	12
Gulf	5	8	9	10	12
Center	5	8	9	10	12
West	5	8	9	11	13
South	5	9	10	13	15
Southeast	5	9	10	13	14

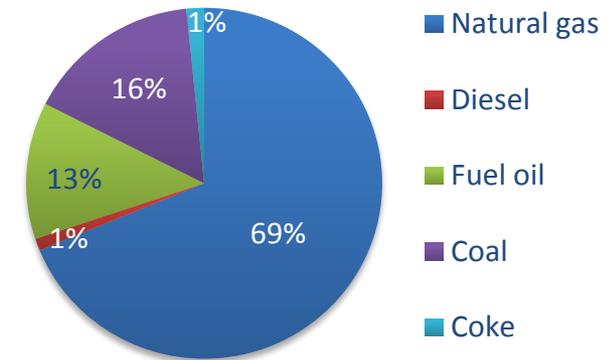
Oil and Gas Supply and Demand Situation

○ Natural gas share on energy matrix



Electric power is the biggest demander for natural gas >>
69% share in electric generation

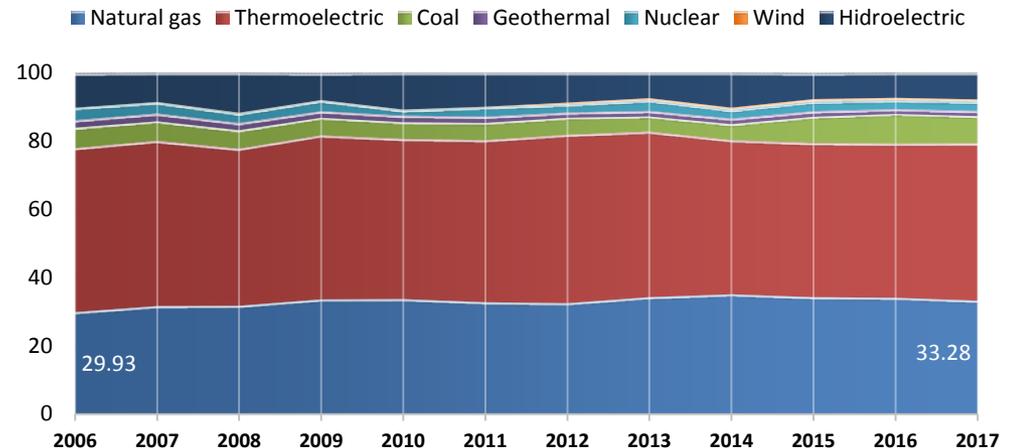
Fuel Demand – Electric sector



NG in electric sector has increased from 2006, then remained stable from 2013 to the day

Expected natural gas demand on electric sector 2031: **6 bcf**

Generation (Megawatts/hr)

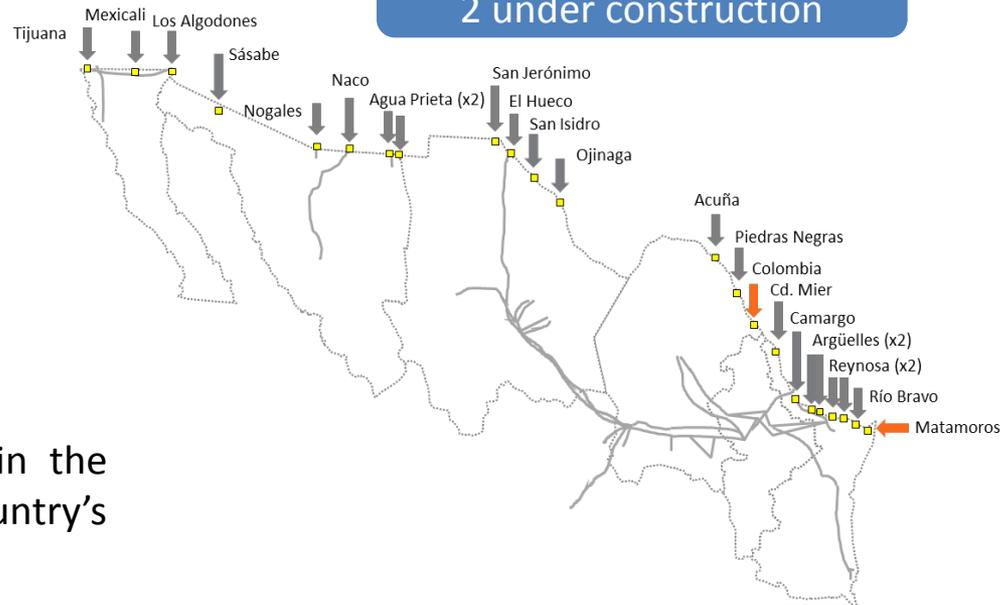


Oil and Gas Supply and Demand Situation

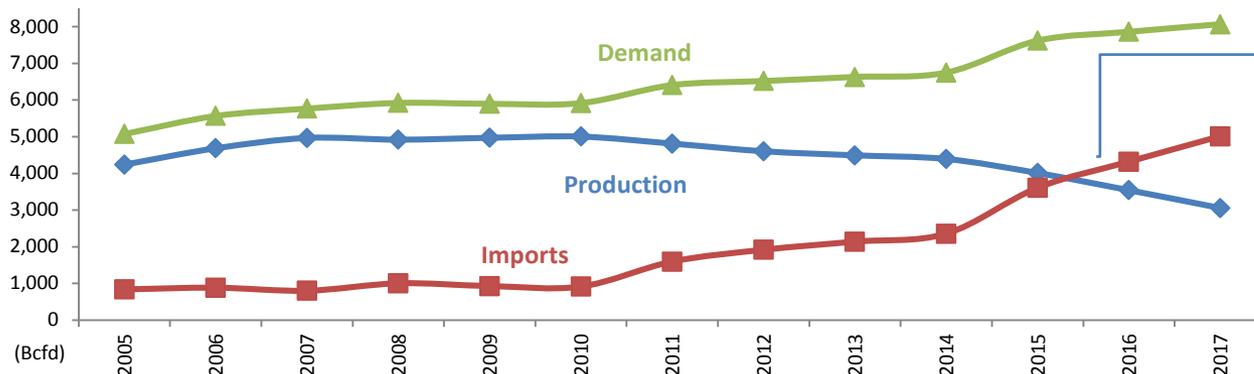
Foreign Trade - Pipelines

22 import pipelines
2 under construction

In 2017, 87% of total imports came from gas pipelines of which 99% was from the United States



Domestic production has decreased in the last years, increasing the country's dependence on imports



2016 – Mexico becomes a net importer

NG exports are minimal, mainly driven from pricing and technical conditions

Oil and Gas Supply and Demand Situation

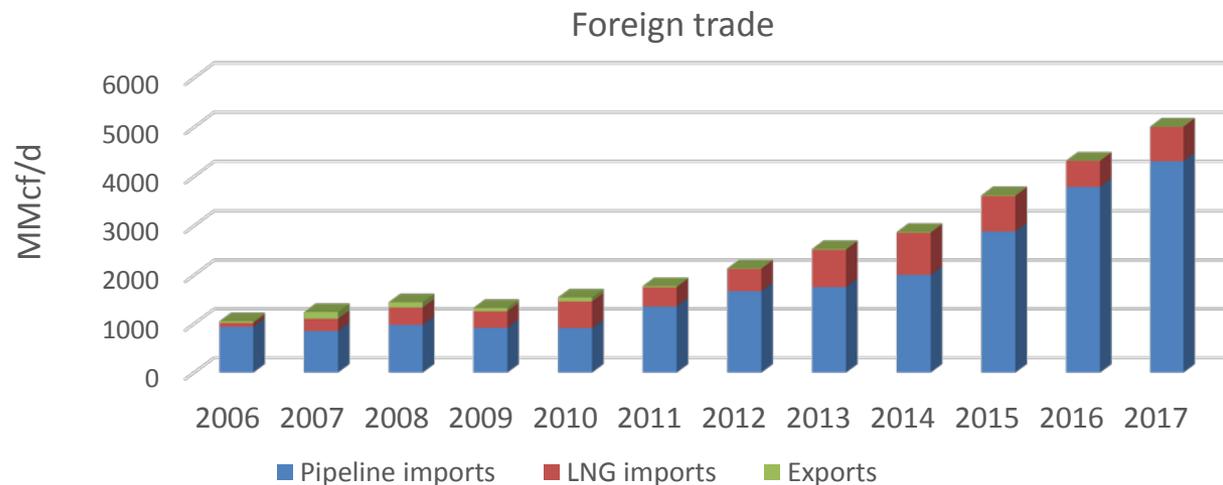
Foreign Trade - LNG



There are 3 LNG facilities in Mexico with 930,000 m³ capacity

LNG imports are increasing due to decreasing national production and lack of redundancy in the national pipeline system – In case of supply disruptions, these imports are used to balance the system

LNG represents 23% of the total imports with an increase of 578% in comparison to 2006



Oil and Gas Security Policy

o Gas Supply Security Policy

Public Policy

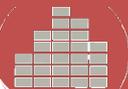
Strategic storage >> 45 bcf equivalent to 5 days of national demand

Promotes the use of existing infrastructure and promotes new developments

The associated costs for the implementation will be distributed among the market

Implementation

To create strategic stocks



To maintain operative inventories



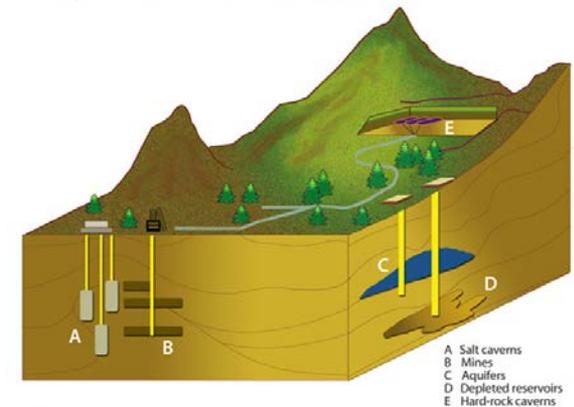
To inform: produced, transported, stored and distributed gas



The national TSO will bid the development of storage projects

In order to balance the national system

Permit holders must report periodically



Technologies:

Depleted reservoir

Salt formations

Depleted aquifers

LNG Facilities

Bilateral/Regional Agreements

○ International agreements

Mexico has several instruments for cooperation with APEC members in terms of oil, gas and security initiatives

Ministry of Energy of Alberta, Canada

- Declaration of Cooperation (2007) and MoU (2016) to exchange regulatory **best practices** and promote human resource **training**.

Natural Resources Canada and the U.S. Department of Energy

- MoU for cooperation on **energy information** (2014). It derived on the development of the North American Cooperation on Energy Information platform.

United States of America

- Agreement to establish a legal framework for safe, efficient and environmentally responsible exploitation of **transboundary hydrocarbon reservoirs** (2014).

U.S. Department of the Interior

- MoU (2016) for **cooperation** on exploration, industrial safety, environment, onshore and offshore - aligned with the **Extractive Industries Transparency Initiative**.

National Development and Reform Commission of the People's Republic of China

- MoU in 2013 to exchange **best practices**, collaborate on technological development on exploration and production, and facilitate public and private relations.

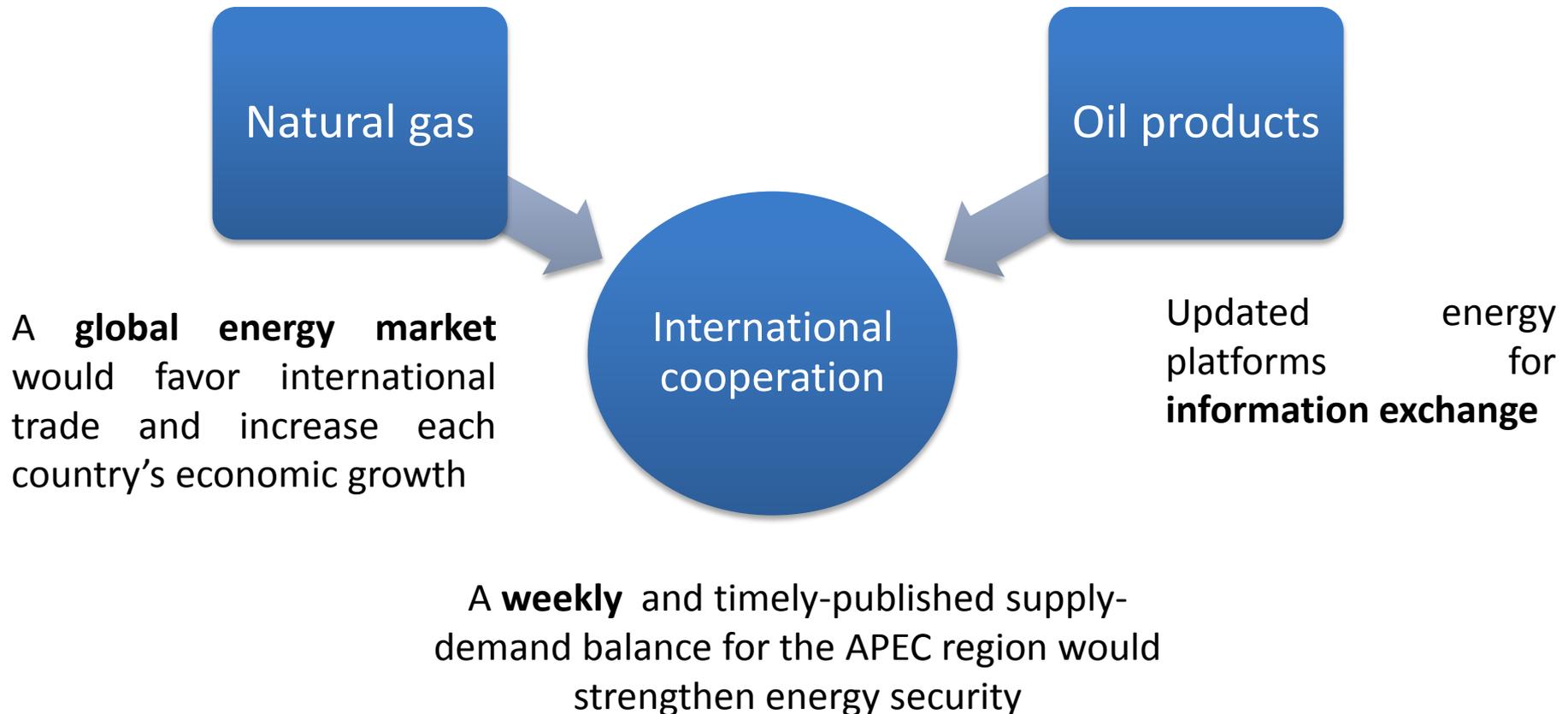
Ministry of Trade, Industry and Energy of the Republic of Korea

- MoU to promote **trade and investment** and cooperation on industrial transformation of hydrocarbons.

Oil and Gas Security Policy Gaps

- Gaps for APEC regional cooperation

The constant market evolution, highlights the need to strength **international cooperation** aimed at best international practice sharing and implementation.



Thank you very much...

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<https://www.gob.mx/sener/articulos/transformacion-industrial?idiom=es>

