

Live Webinar  
**THE IMPACT OF COVID-19 PANDEMIC ON  
GLOBAL ENERGY MARKET**

**12<sup>th</sup> May 2020 (Tuesday)**

**1030 - 1130 (GMT + 8 KL)**

Supported by:



**Prof. Dr. Ken Koyama**

Chair in Energy Economics of Energy Commission at UNITEN

# **SPEAKER**

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**Chair in Energy Economics of Energy  
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# **The Impact of COVID-19 Pandemic on Global Energy Market**

**Energy Talk Webinar**

**May 12<sup>th</sup>, 2020**

**Prof. Dr. Ken Koyama**

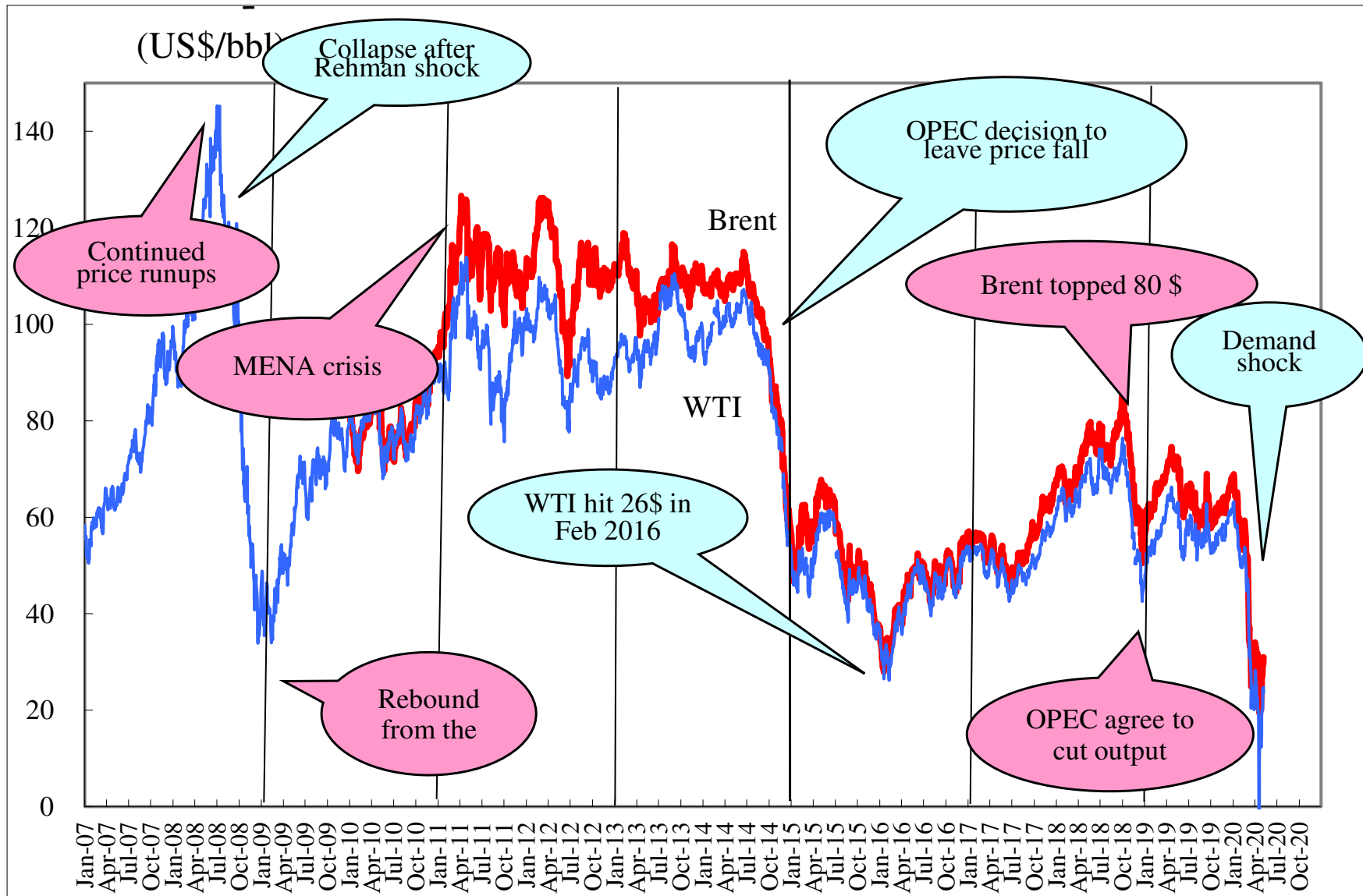
**Chair in Energy Economics of Energy Commission at UNITEN  
Chief Economist, Institute of Energy Economics, Japan**

## Energy market under demand and supply shock

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- **Even before pandemic, energy market sees over supply**
- **COVID-19 outbreak in China developed into pandemic**
- **World economy, the worst since the Great Depression**
- **Lockdown destruct oil demand: demand shock**
- **Supply shock added another pressure when joint production cut collapsed**
- **Unprecedented oversupply and extreme low price**
- **Pain and terror resulted in restoration of joint cut, but...**
- **Emerging inventory bottleneck gives downward pressure**
- **Supply glut and uncertainty will be the keyword**

# Oil price plummeted under COVID-19 pandemic



# IMF 「World Economic Outlook」

	2015	2016	2017	2018	2019	2020	2020
						January	April
World	3.2	3.2	3.8	3.6	2.9	3.3	-3.0
OECD	2.1	1.7	2.4	2.2	1.7	1.6	-6.1
US	2.6	1.5	2.2	2.9	2.3	2.0	-5.9
Euro zone	2.0	1.8	2.4	1.9	1.2	1.3	-7.5
Japan	1.2	0.9	1.9	0.3	1.0	0.7	-5.2
Non-OECD	4.1	4.4	4.7	4.5	3.7	4.4	-1.0
China	6.9	6.7	6.9	6.6	6.1	6.0	1.2
India	7.6	7.1	6.7	6.8	4.8	5.8	1.9

**Source: IMF “World Economic Outlook” (April 2020)**

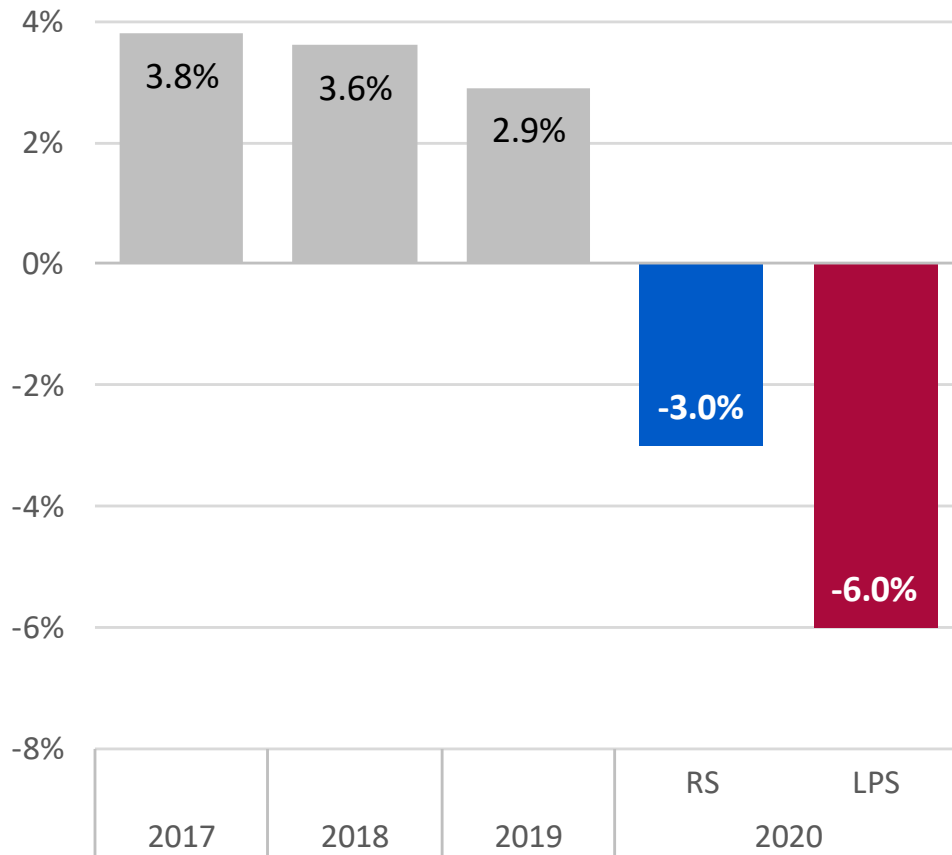
# Economic crisis: "people", "goods" and "money"



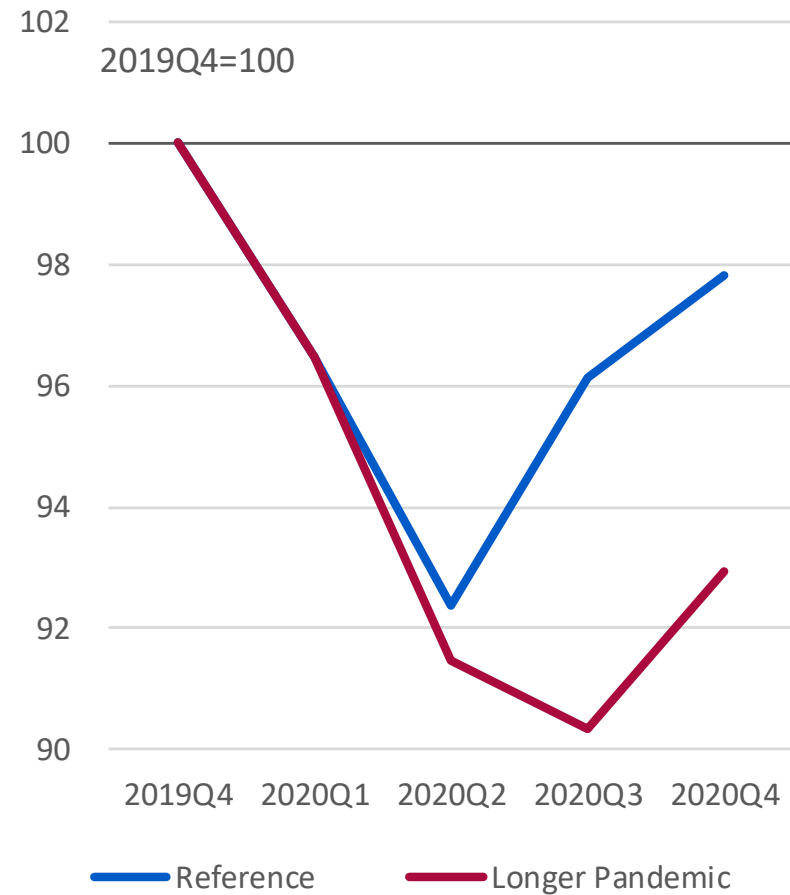
- **Well-functioning of "people", "goods" and "money" is essential for economic activities**
  
- **COVID-19 pandemic:**
  - ✓ Serious problems for "people" and "goods": damaged real economy
  - ✓ Then "money" problem hit the world, leading to vicious cycle
  
- **Rehman shock 2008-09 financial crisis:**
  - ✓ Lehman Brothers bankrupted: "money" caused financial crisis
  - ✓ Then real economy damaged worldwide
  
- **US-China trade war:**
  - ✓ Tariff war: "goods" problem caused reduction on world trade
  - ✓ Then "money" problem damaged the world economy

# World economy contracted by 3%

**World GDP growth**



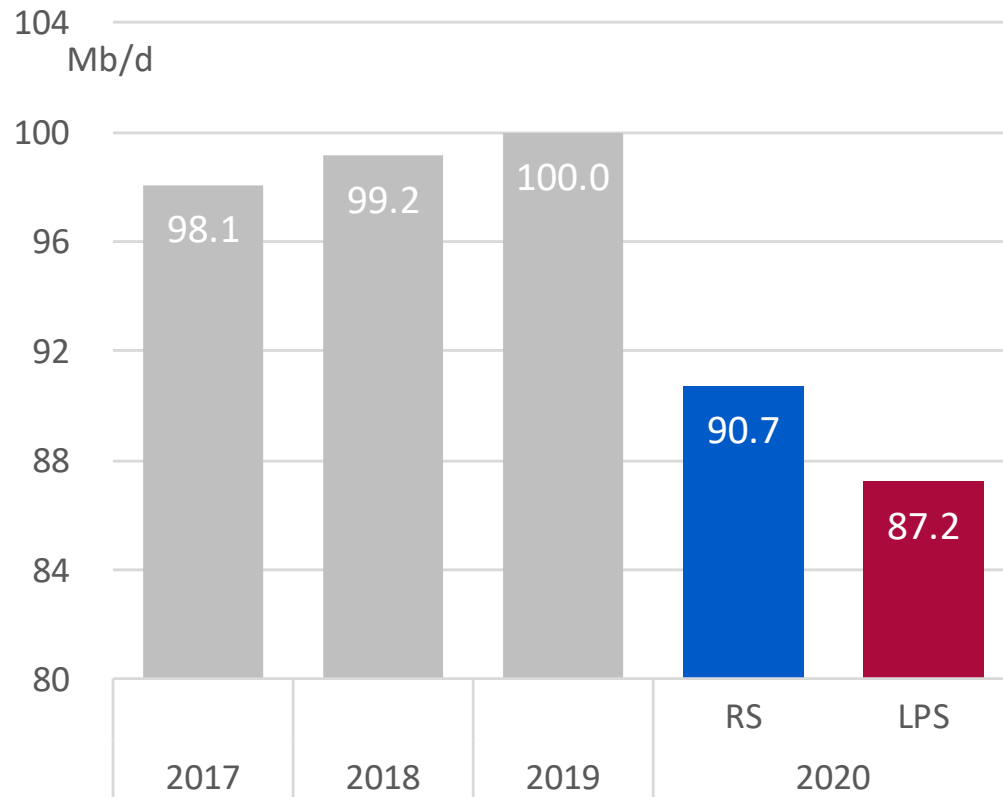
**GDP trend by quarter**



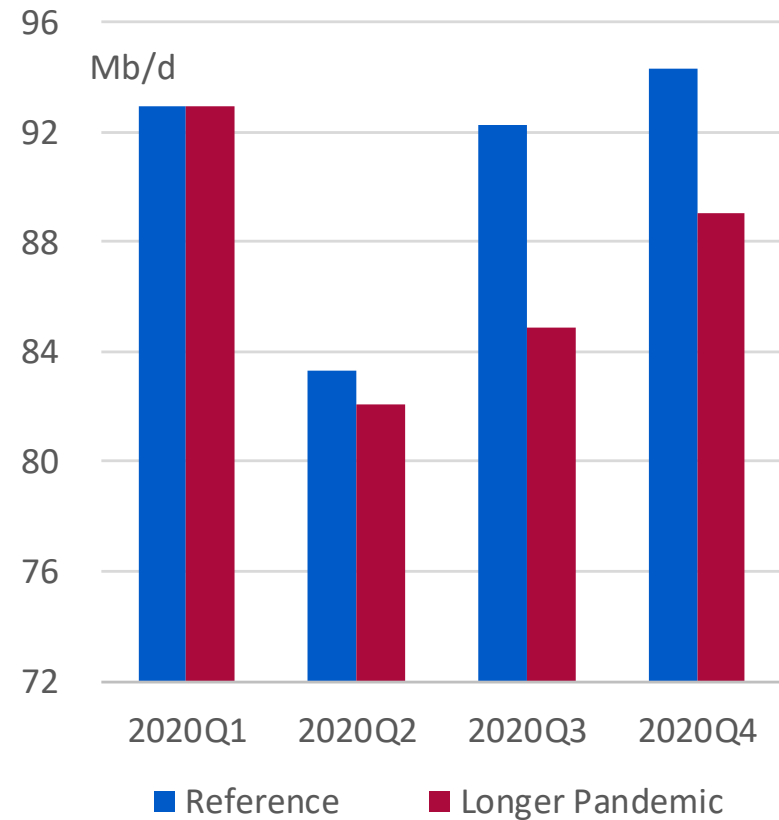


# Oil demand under COVID-19 pandemic

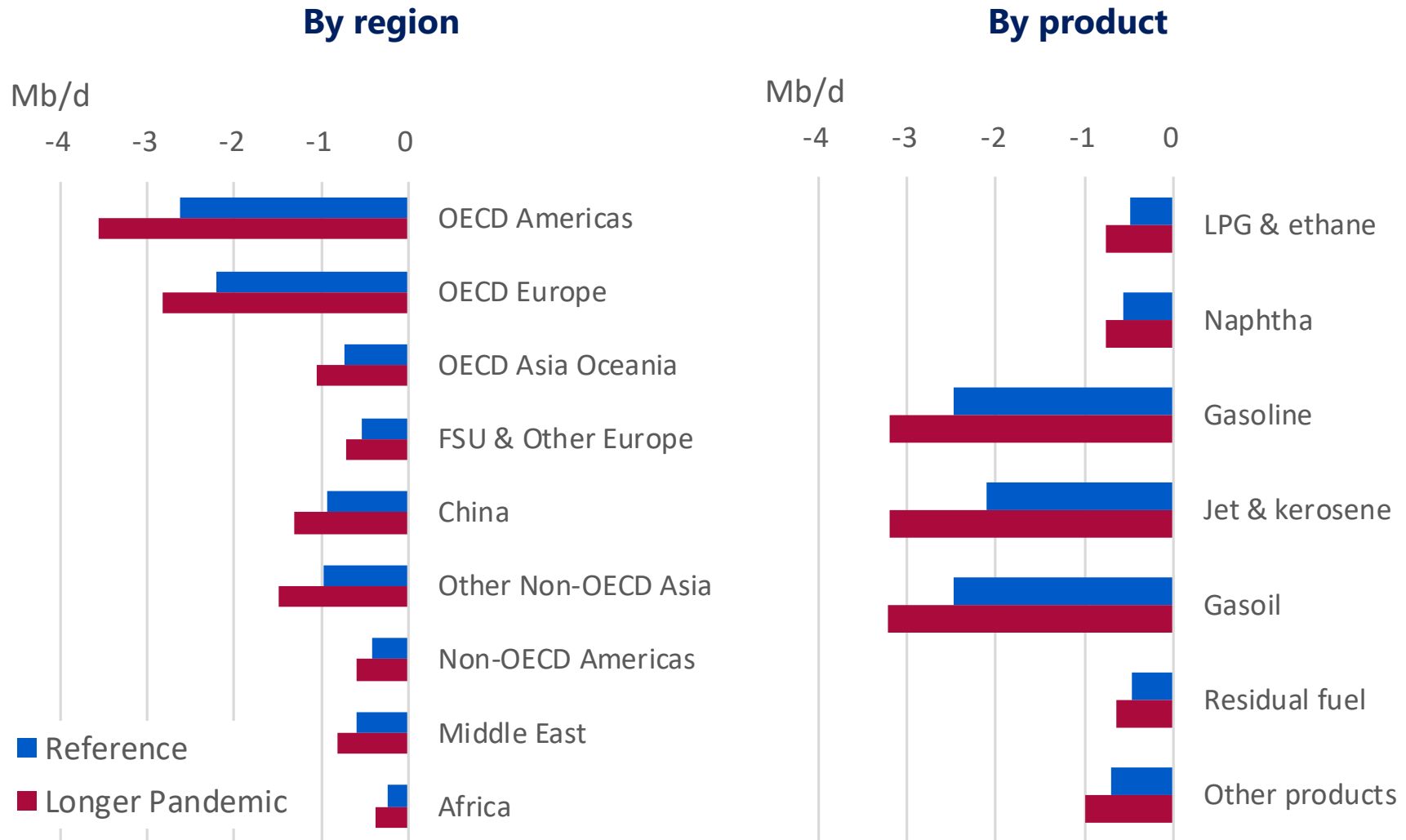
### World oil demand



### Oil demand by quarter

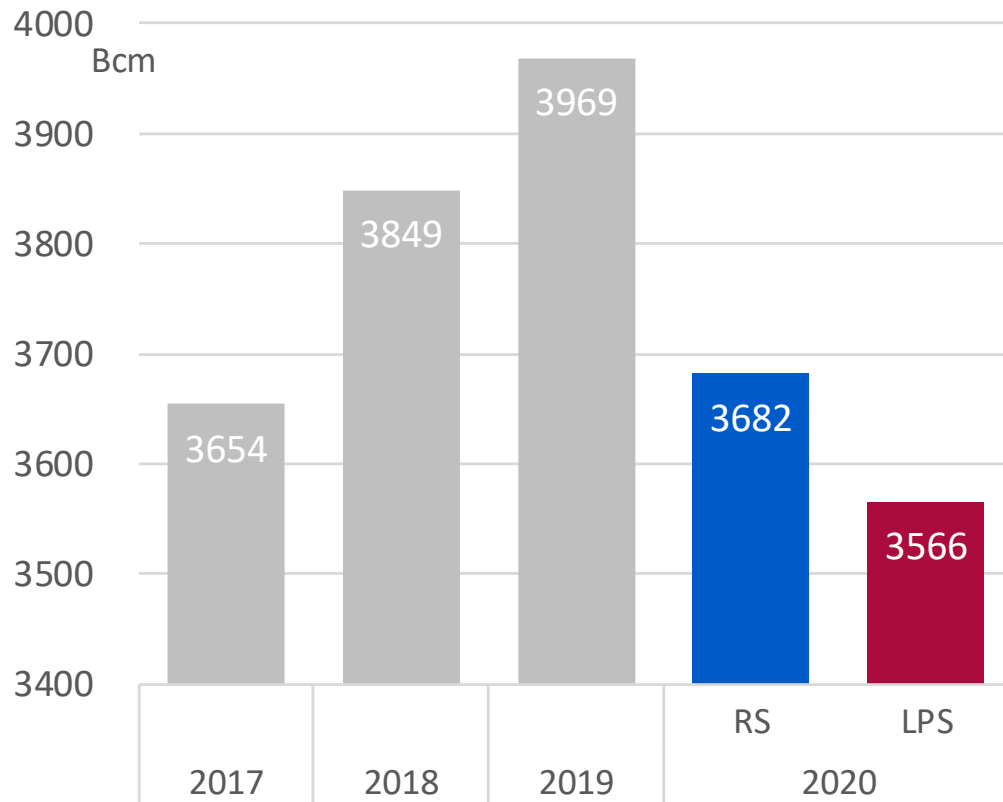


# Oil demand reduction versus 2020 level

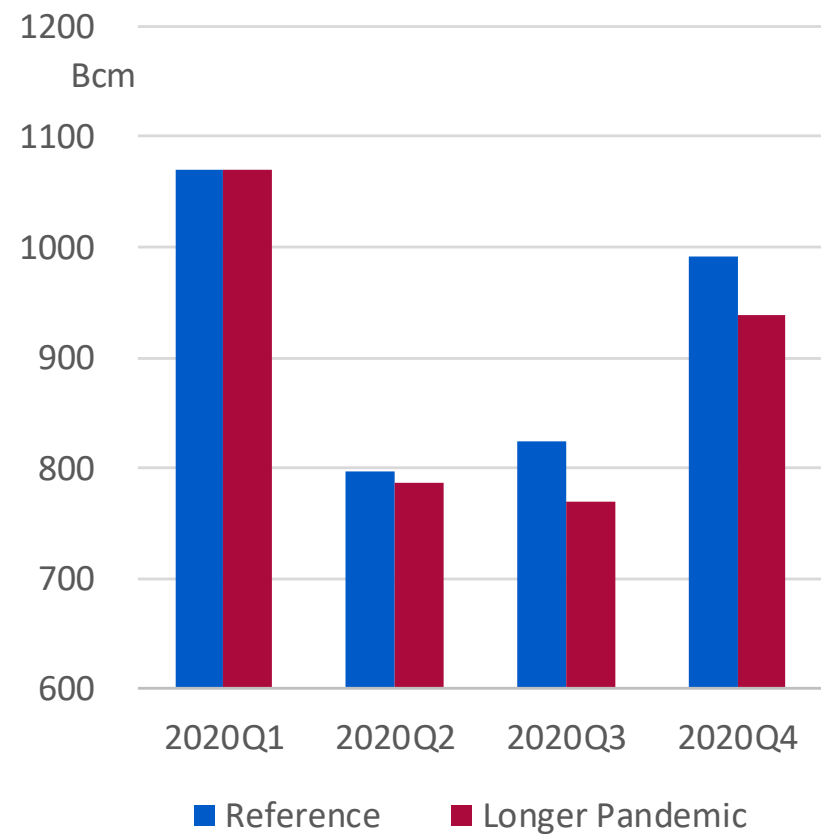


# Natural gas demand under COVID-19 pandemic

### Natural gas demand

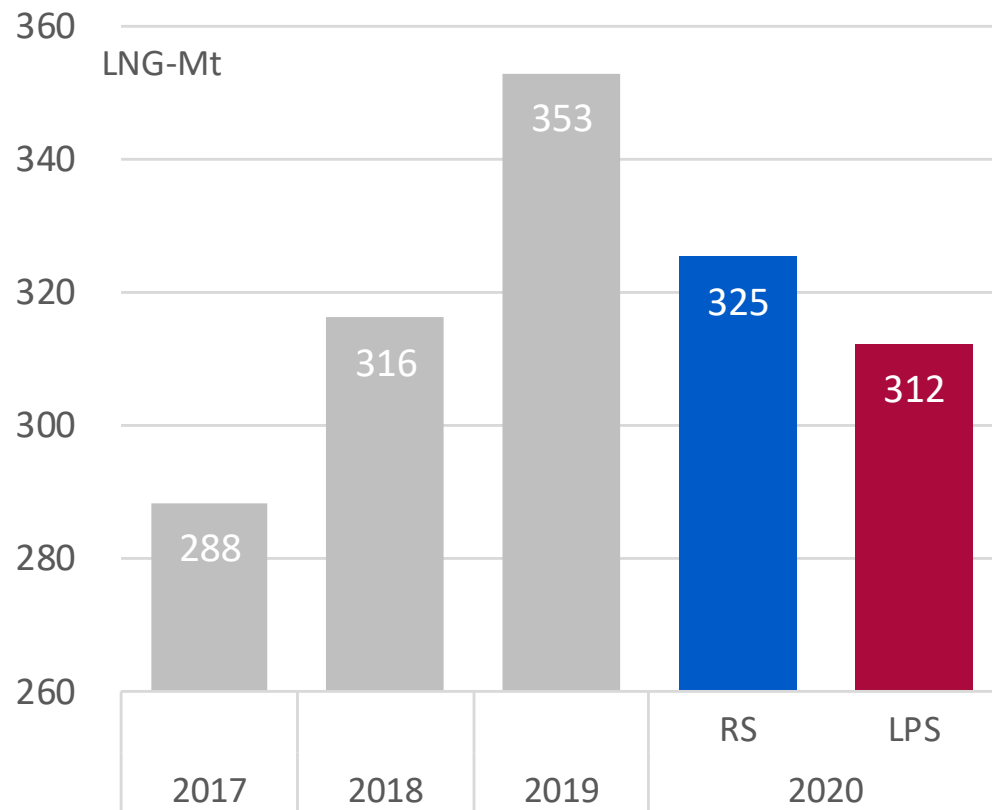


### Natural gas demand by quarter

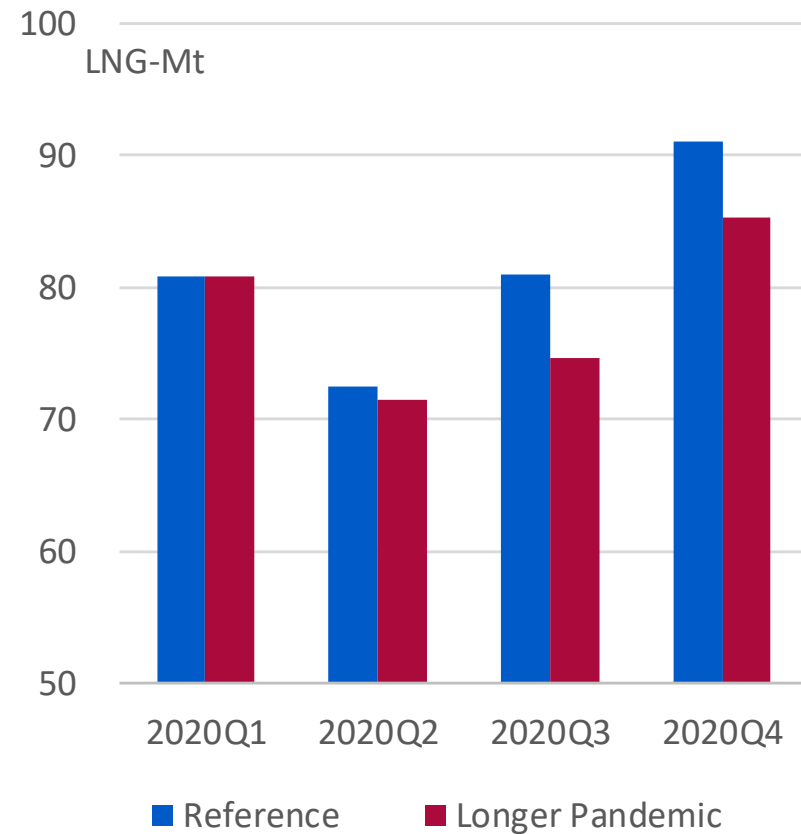


# LNG demand under COVID-19 pandemic

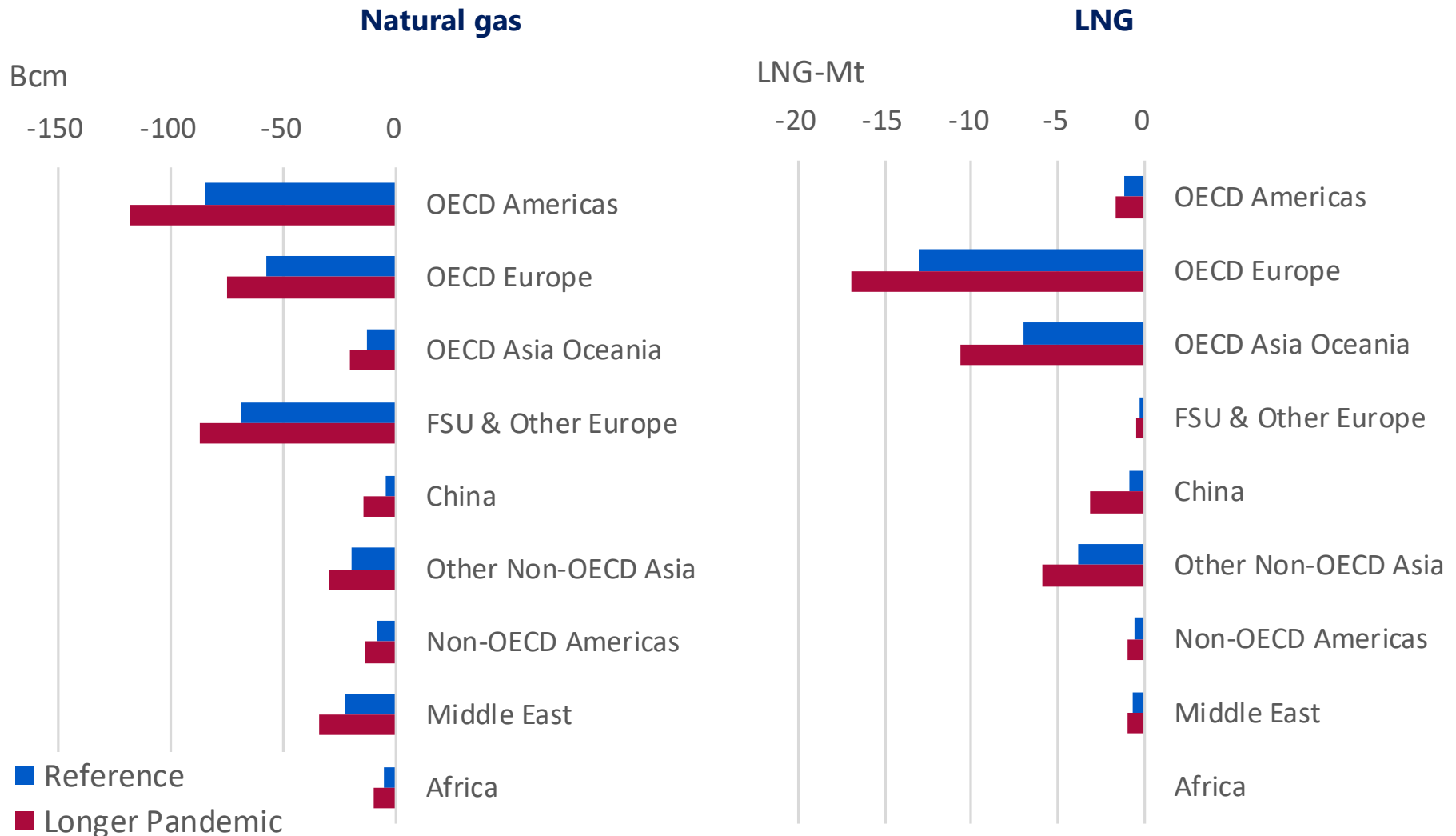
### LNG demand



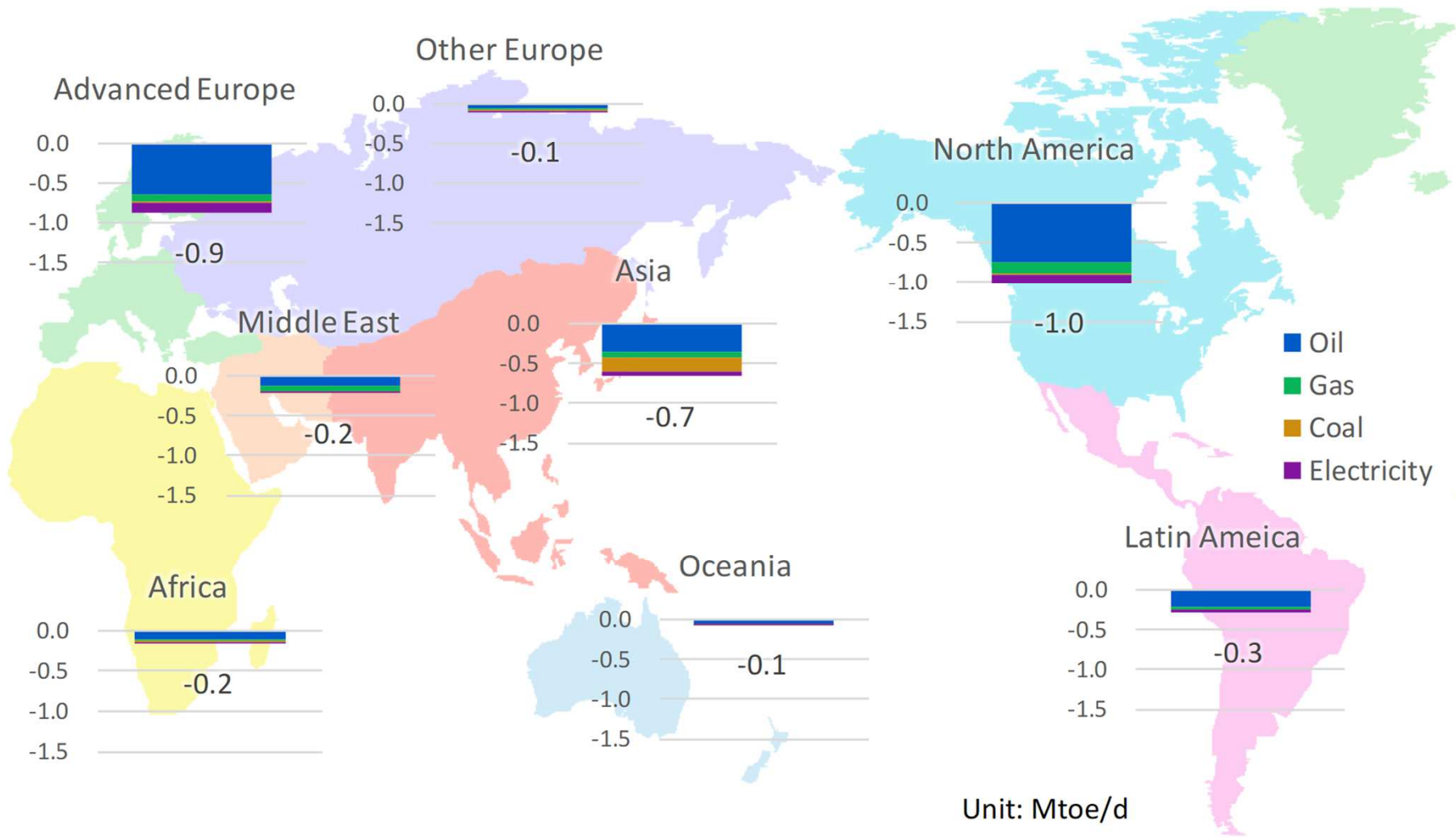
### LNG demand by quarter



# Gas/LNG demand reduction versus 2020 level

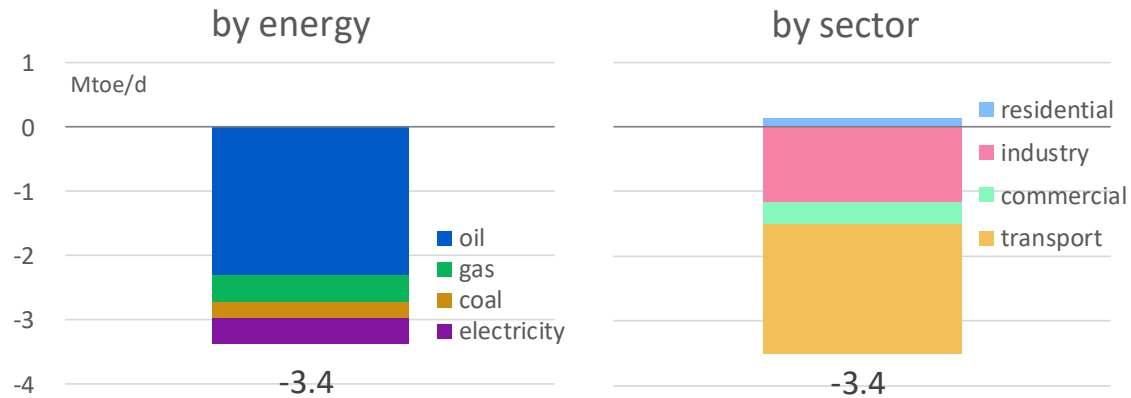


# Energy demand reduction by "Lockdown" (1)

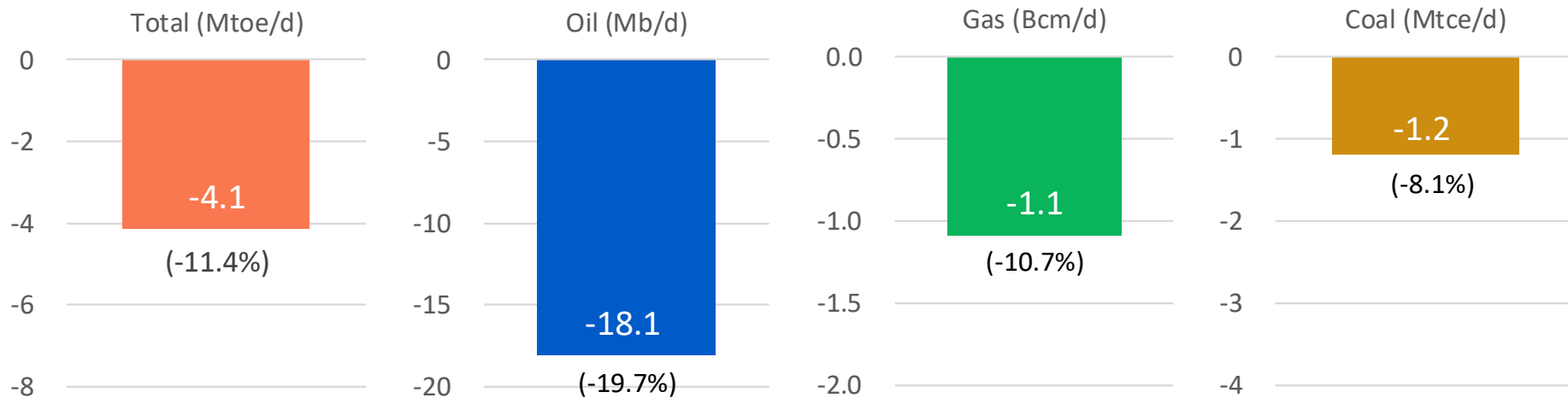


# Energy demand reduction by "Lockdown" (2)

## Final energy reduction



## Primary energy reduction



## **Supply shock:** **Collapse and restoration of joint production cut**

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- **March 6, Russia rejected the joint production cut**
- **Saudi reversed the oil policy to increase the production**
- **Price war broke out**
- **March 9, WTI declined by 10\$ to 31.13\$**
- **March 30, WTI further declined to 20.09\$ under demand shock**
- **April 2, Trump stated Russia and Saudi will cut production**
- **Saudi called for an emergency OPEC plus meeting**
- **April 9, OPEC plus agreed to restore joint production cut**
- **G20 discuss the measures for market stabilization**
- **April 12, OPEC plus decided 9.7 MB/D production cut from May**



# Russian situation

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- **OPEC plus cut benefits US shale oil (high cost producer)**
- **Benefit to US (shale) unacceptable for Russian national interest**
  
- **Russia argued Russia can bare low oil price longer than Saudi**
  
- **The impact of low price much bigger than anticipation**
- **Pandemic damaged European market, Russian main outlet**
- **The pain was too acute for Russia**

## Saudi situation

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- Various conditions suggest preference to higher price
- Emphasis on “joint production cut” (never be a swing producer)
- But joint production cut collapsed by Russian rejection
- This lead to Saudi reversal to market share strategy/price war
  
- “Lose a battle to win a war” strategy
- The pain of low price, a driver for restoration of joint cut
  
- But the pain was beyond anticipation
- The importance of the call from Trump
- Actually, joint cut was restored (as originally aimed at)

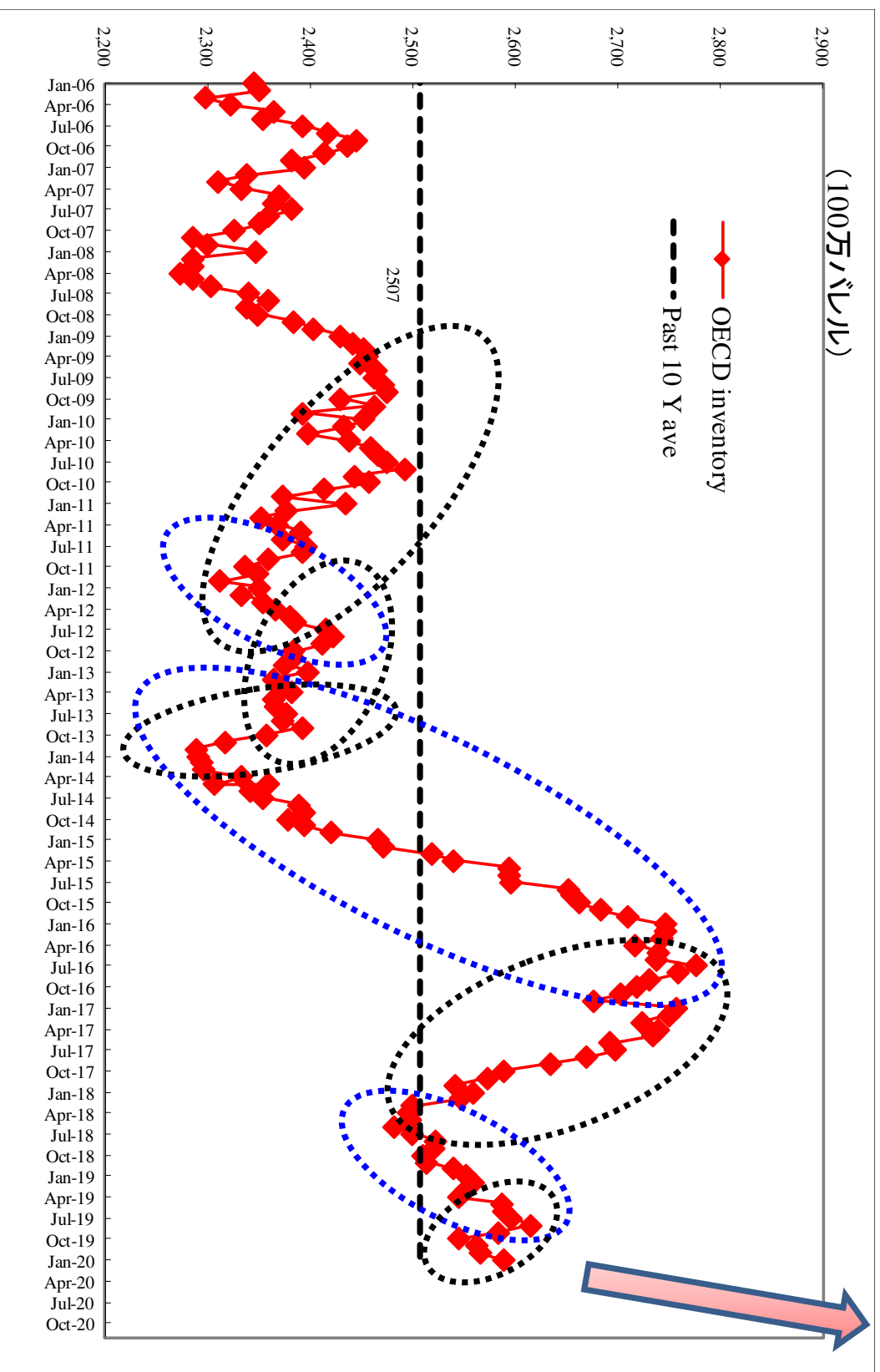
# US situation

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- **US shale oil, high production cost oil**
- **Oil price, not affecting US gov. budget deficit/surplus, but...**
  
- **Below 20\$ caused serious damages to shale revolution**
- **Destructive impact on US shale industry**
- **Low oil price caused lower NY stock price**
- **Economic pain was too strong for Trump**
  
- **Mediation for Russia/Saudi price war**
- **US production likely to be in the hand of “market mechanism”**

# OECD Company oil inventory

## Oil inventory build put strong downward pressure on oil price



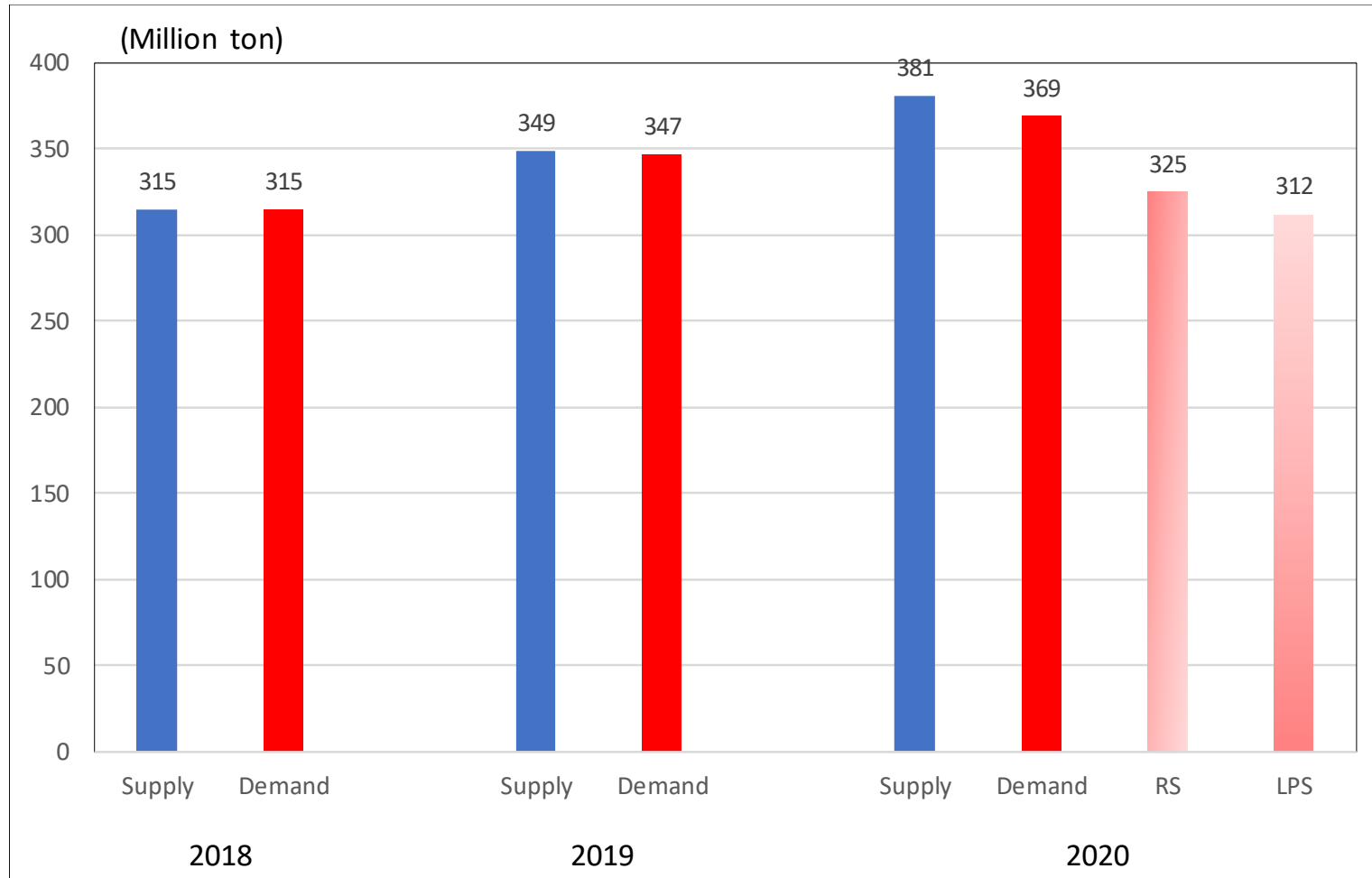
## Short-term outlook for oil market

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- **10 MB/D joint production cut is not enough**
- **Some uncertainty over the future of joint production cut**
- **Current oil demand may contract by more than 20 MB/D**
- **The shared “terror” contributed to restoration of joint cut**
- **Global inventory capacity may be filled up sometime in 2Q**
- **Thus oil price under strong downward pressure**
- **2 critical factors: future of demand destruction and joint cut**
- **If pandemic stabilizes and economic recovery in 2H this year with continued joint cut, oil price may head for 30\$**
- **If pandemic continues to destabilize the world with uncertainty over joint cut, oil price may go down to be below 10\$**

# Reduced LNG demand accelerates supply glut

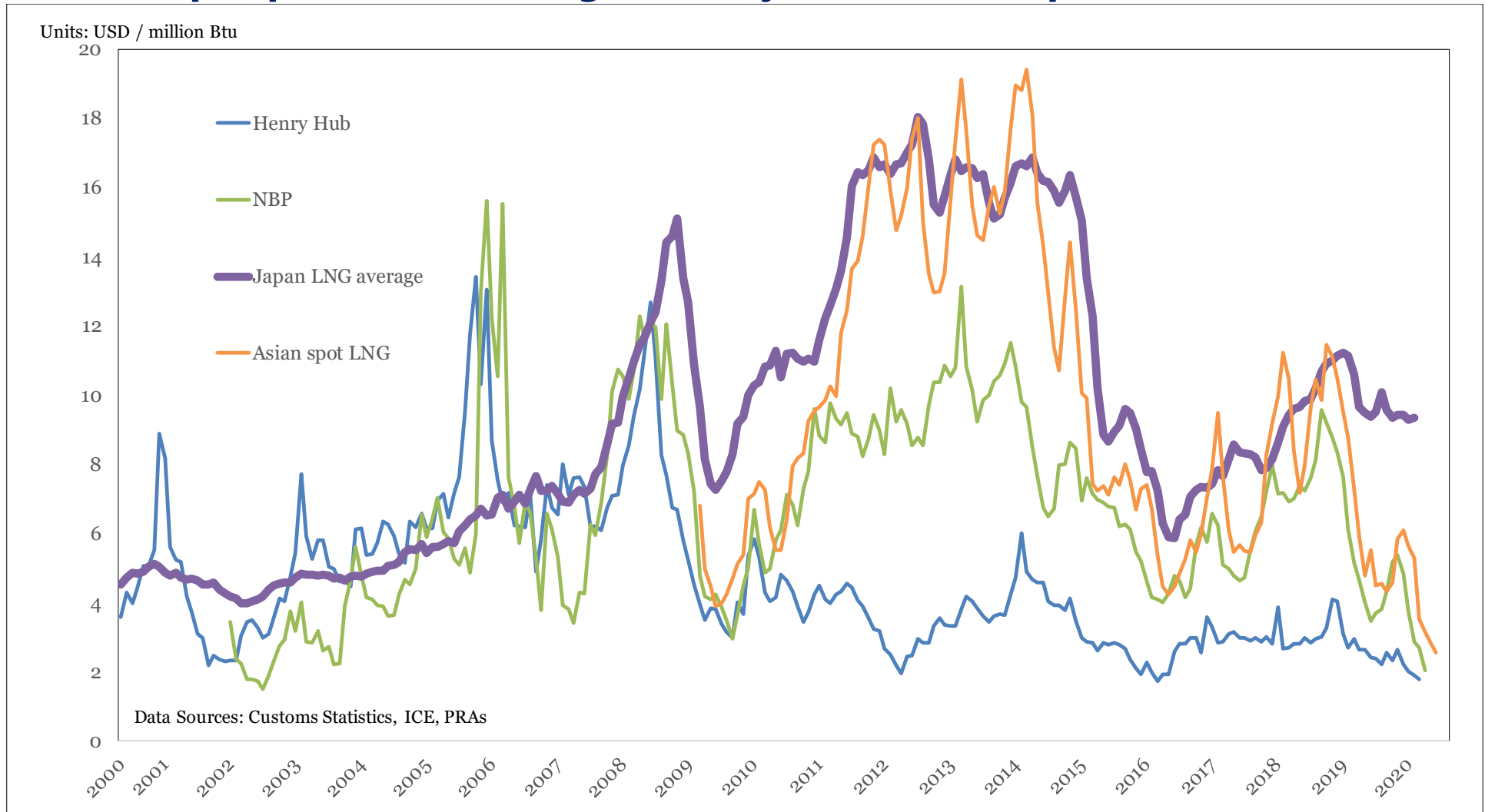
Even without pandemic, 2020 market sees supply surplus...



Note: 2020 RS assumes 3% minus for world GDP, while LPS assumes 6% minus

# Regional gas/LNG price in the world

Asia spot price declined significantly. JCC indexed price will follow



## Short-term outlook for LNG market

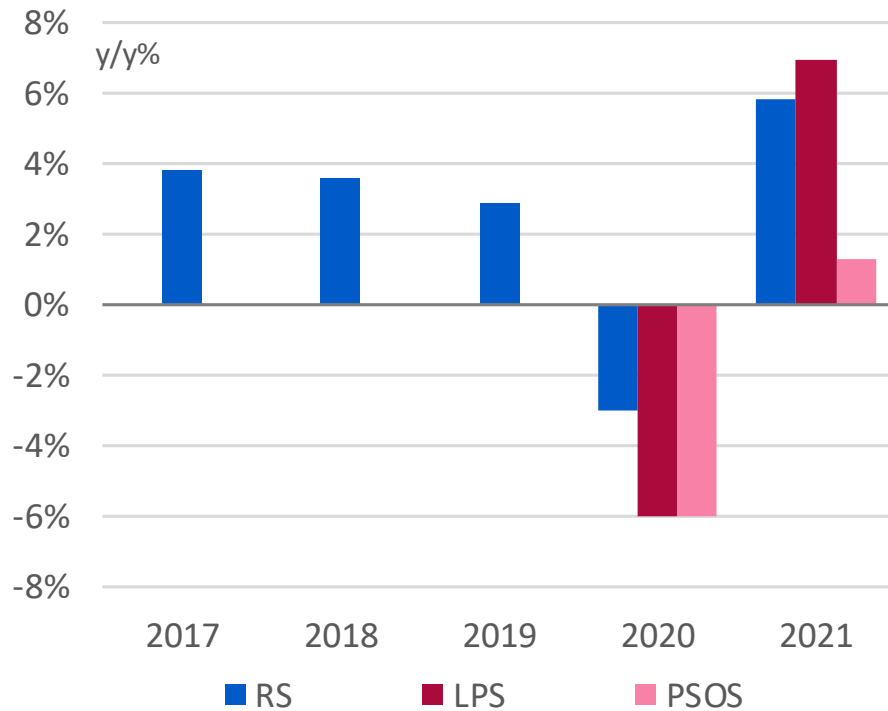
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- **LNG market sees supply surplus even before the demand shock**
- **Main reason was substantial increase in LNG supply**
- **Chinese LNG demand reduced after the COVID-19 outbreak**
- **Pandemic further reduced global LNG demand: Demand shock**
- **Large-scale supply glut and decline in LNG spot price**
- **Oil price collapsed and term LNG price decline with time-lag**
- **Asian LNG price will be lowered as a whole**
- **Price gap between term LNG price and spot price?**
- **Competitiveness of US LNG (HH price plus fixed costs)?**
- **There is no “OPEC plus” in LNG market**
- **Source for supply flexibility: US LNG supply?**
- **Over-supplied market remain longer than anticipated**

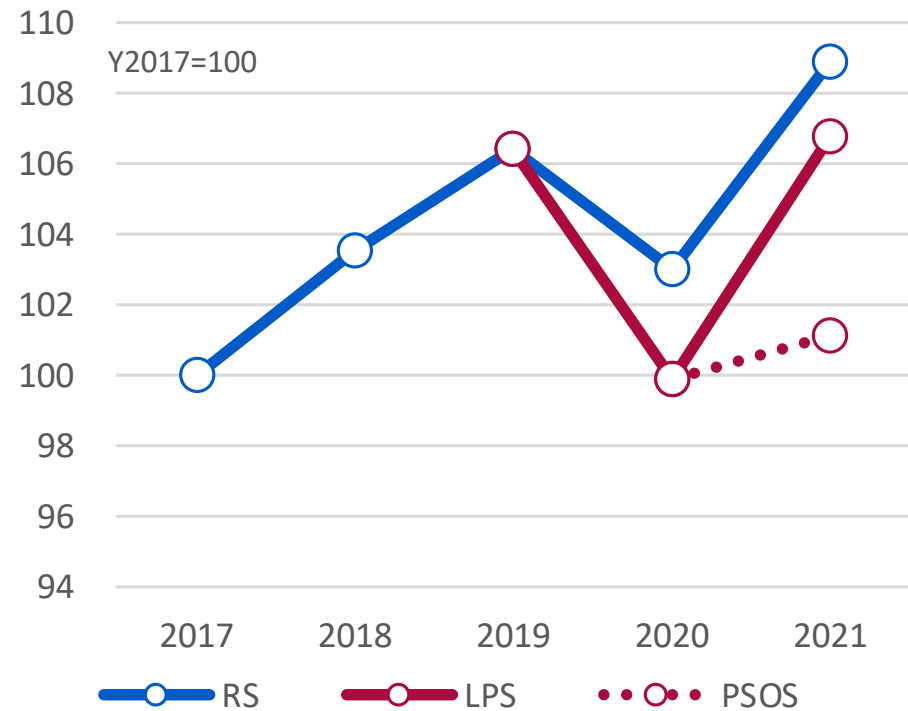


# World GDP up to 2021

### World GDP growth

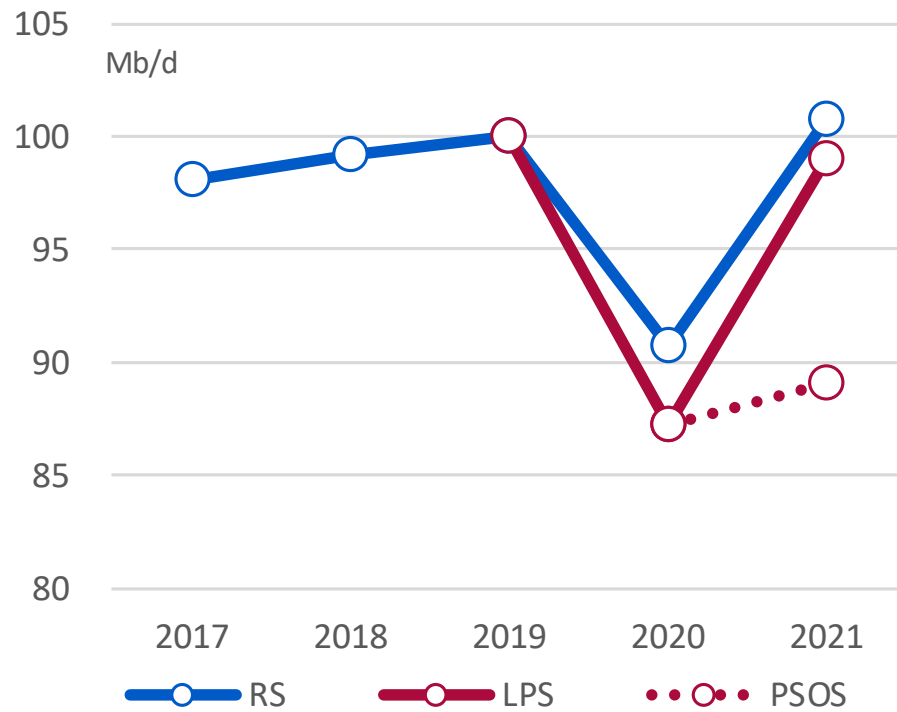


### GDP trend by quarter

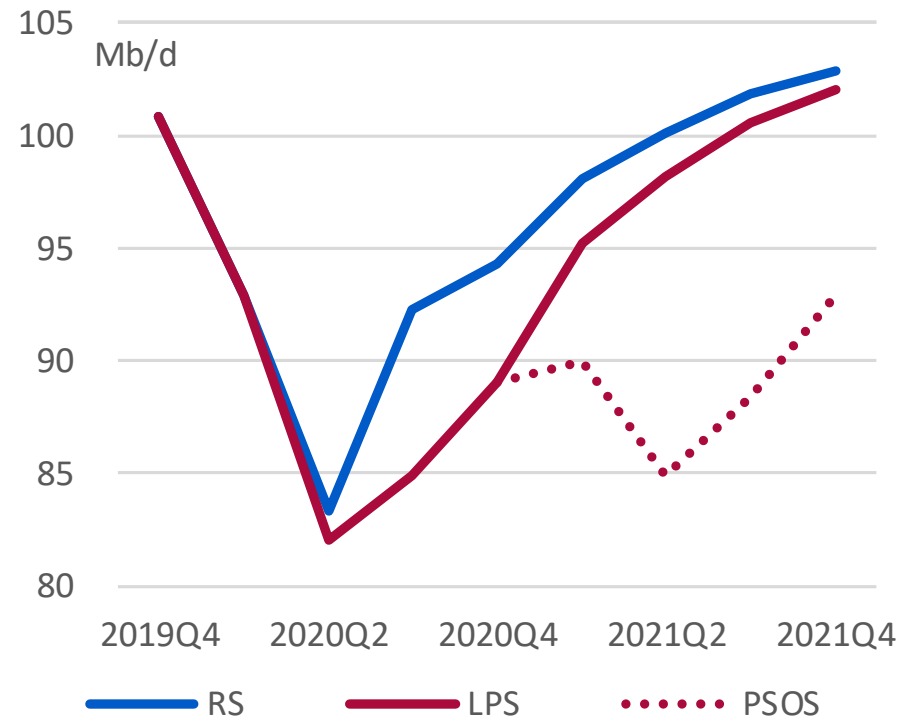


# Oil demand up to 2021

### World oil demand



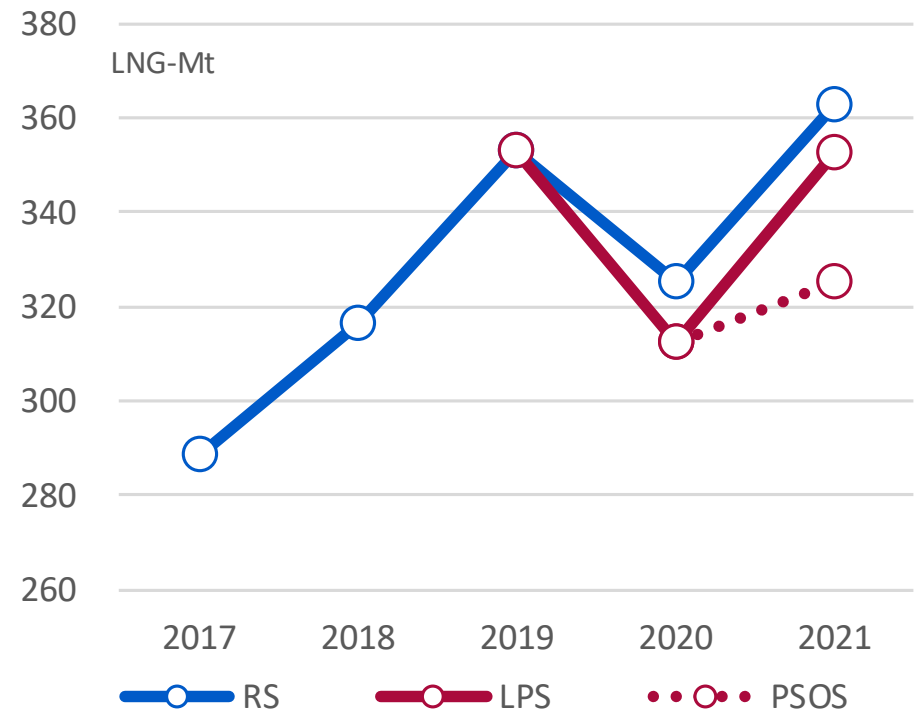
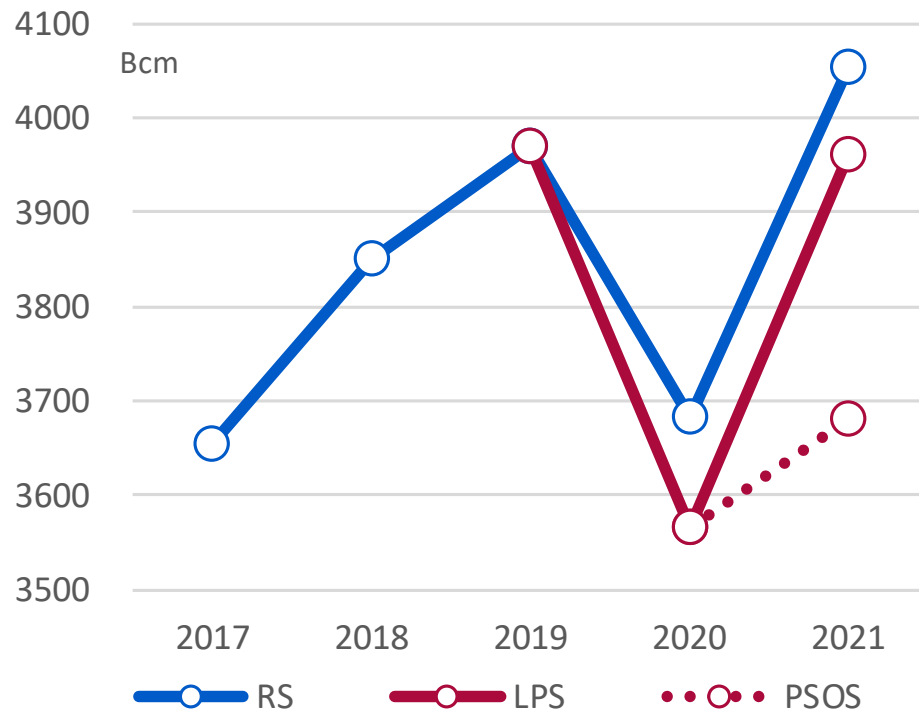
### Oil demand by quarter



# Gas/LNG demand up to 2021

### Natural gas

### LNG



## Long-term implication of COVID-19 pandemic

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- **Transportation demand may structurally restrained**
- **Digitalization may substitute transportation demand**
- **Oil demand restrained, acceleration of “electrification”**
- **Any shift in the priority of “3E”?**
- **Implication on decarbonization and energy security?**
- **Pandemic shed lights on the importance of “big government”**
- **The rise of “me-first” trend and its impact on geopolitics**
- **The meaning of priority to “self-sufficiency”**
- **Crisis management efficiency: Democracy vs authoritarian**

**Thank you very much  
for your kind attention.**



**SESSION**

# THANK YOU



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