

EPA NEMC Conference 2021

# Shale Oil and Gas Industry – Pandemic Effects



Kesavalu M. Bagawandoss, Ph.D., J.D., General Manager Gulf Coast, August 2, 2021



# Agenda

Introduction

Pandemic

Production of Crude Oil

Production of Natural Gas

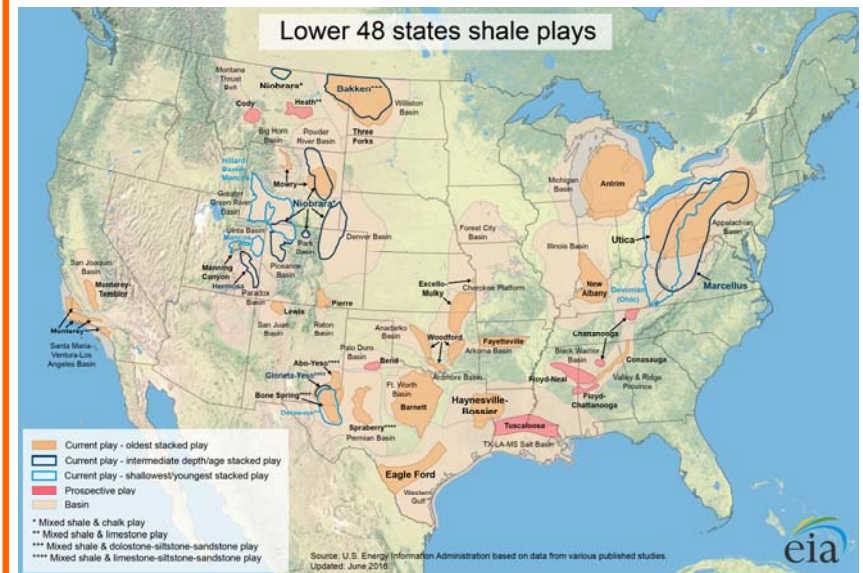
Infrastructure

Market Conditions

GHG Emissions

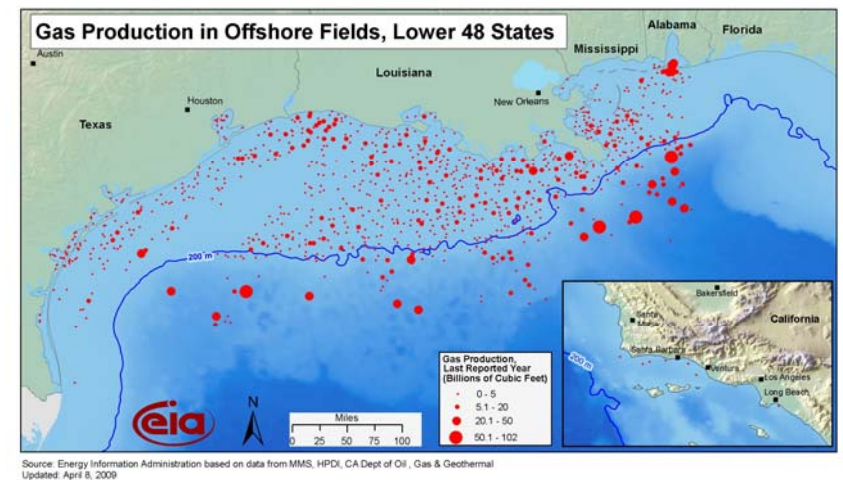
Sustainability

Summary



# Introduction

- United States is a strong contender in the world oil market
- Pandemic effects
- Emissions control
- Carbon capture
- Sustainability
- Pipeline infrastructure
- Jobs are on the forefront once again
- Geopolitical issues persist
- Oil and Gas prices
- Per- and polyfluoroalkyl substances (PFAS) concerns exist due to use and regulations

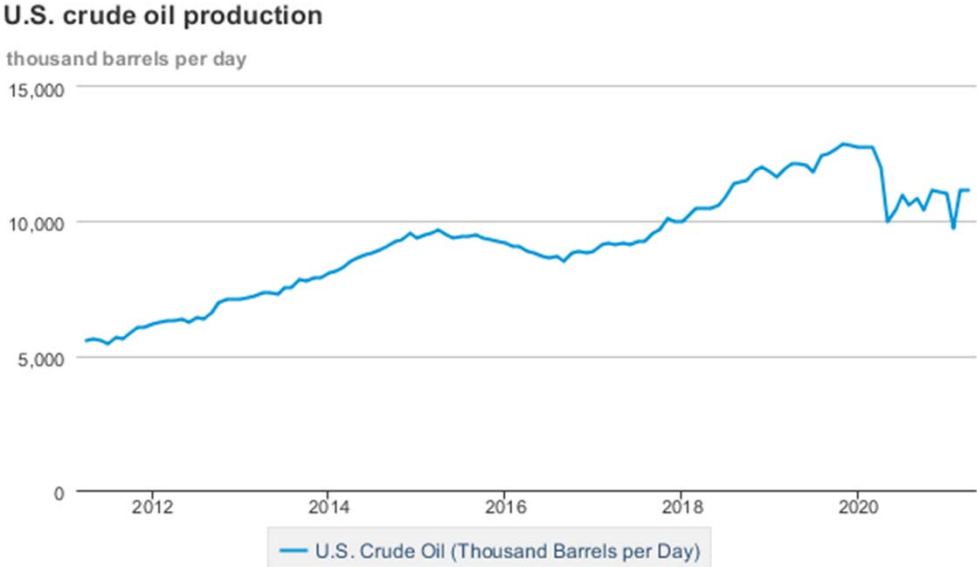


# Pandemic

- Global oil demand fell by as much as 30 million barrels per day due to Pandemic
- International Energy Agency (IEA) has said that it expects that the 2020 fall in oil demand could be the largest in history
- Jobs lost due to crash of oil prices (~160K)
- Industry consolidations
- Production dropped (13 MBPD to 8.3 MBPD)
- Shale plays are staffing due to rise in oil prices (post Pandemic)
- API confident that industry can return to 2019 levels



# Production of Crude Oil

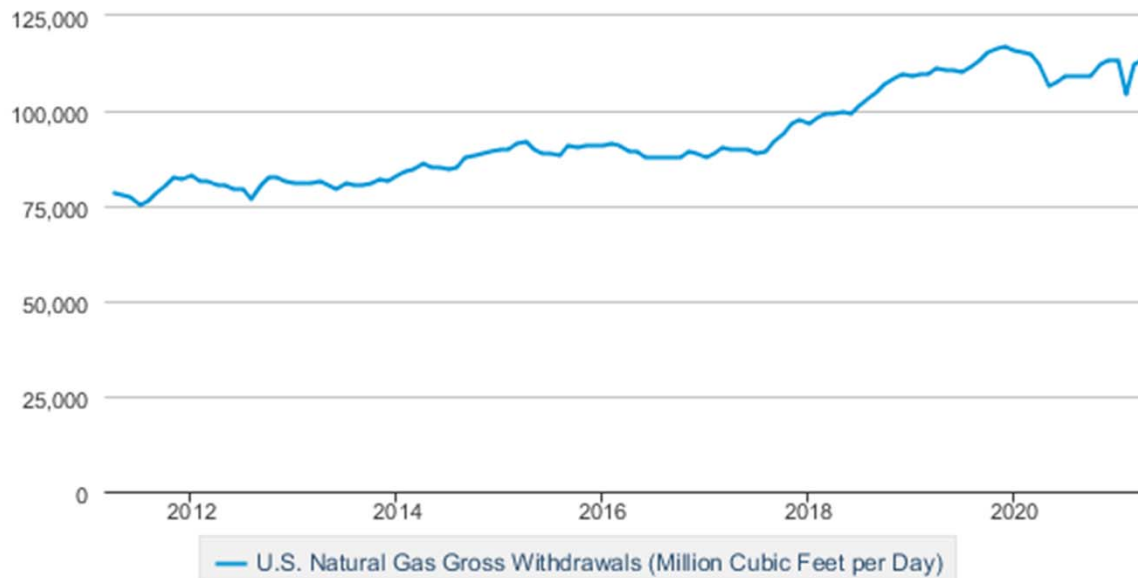


 Source: U.S. Energy Information Administration

# Production of Natural Gas

U.S. natural gas production (gross withdrawals)

million cubic feet per day



eia Source: U.S. Energy Information Administration

## Infrastructure

Pipeline infrastructure added (Dakota Pipeline – ND)

Less rail transport of crude oil from ND

TX pipeline infrastructure to ports are adequate for demand

LNG terminals along the Gulf Coast

Keystone Pipeline has been cancelled and withdrawn

Exports of Crude Oil and LNG

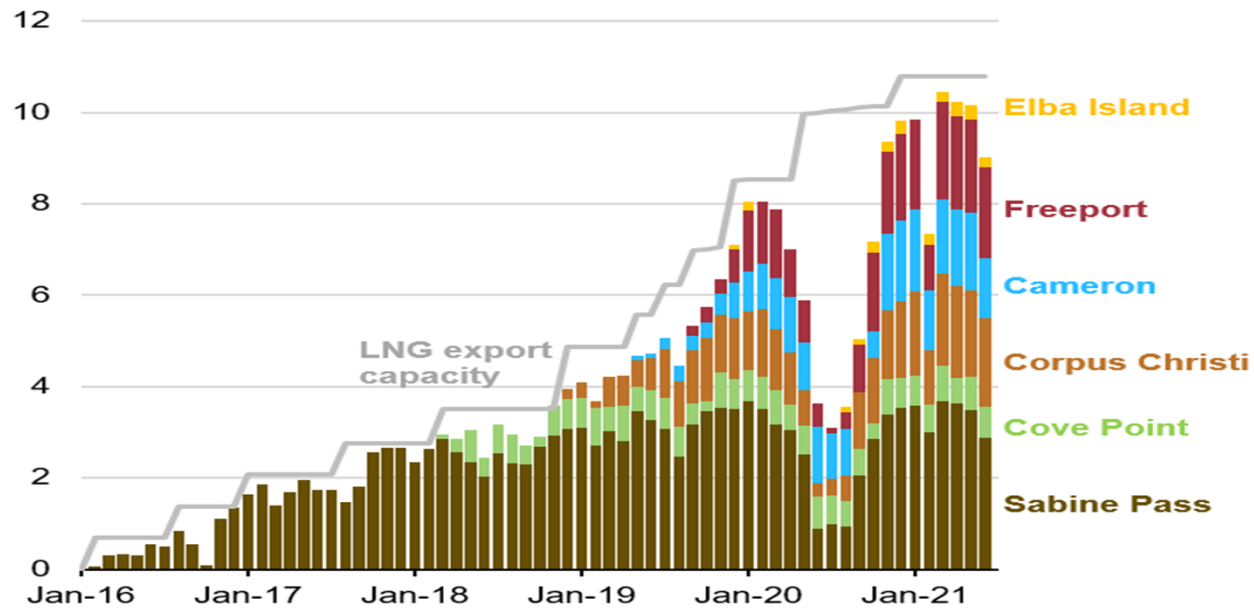


# Market Conditions

## LNG Exports increasing

**Monthly U.S. liquefied natural gas (LNG) exports  
(Jan 2016–Jun 2021)**

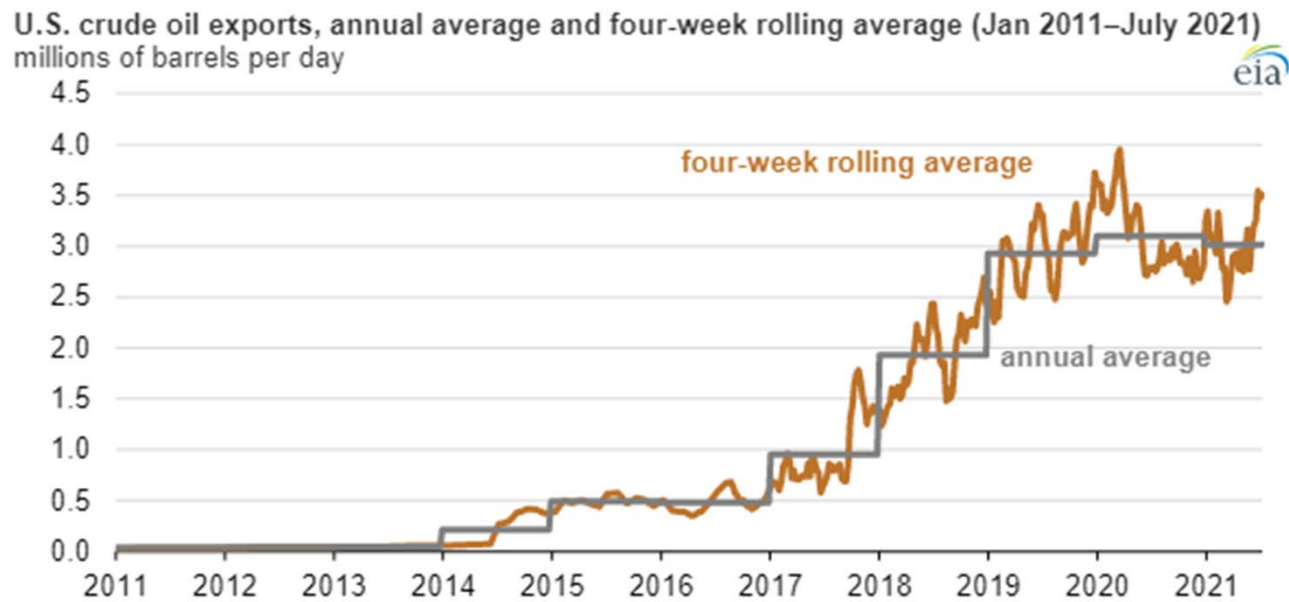
billion cubic feet per day





# Market Conditions

## Crude Oil Exports remain strong

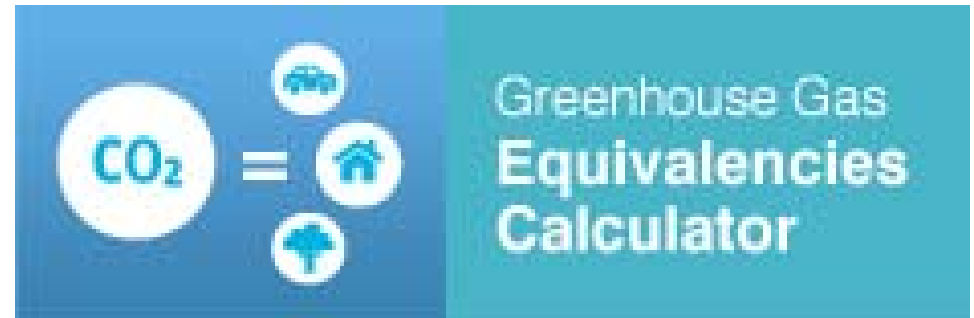


**Source:** U.S. Energy Information Administration, [Weekly Petroleum Status Report](#)

**Note:** 2021 annual average based on year-to-date data as of July 9, 2021.

## GHG Emissions

Emissions continue to improve  
Still ways to go in certain shale plays



[Greenhouse Gas Equivalencies Calculator | US EPA](#)

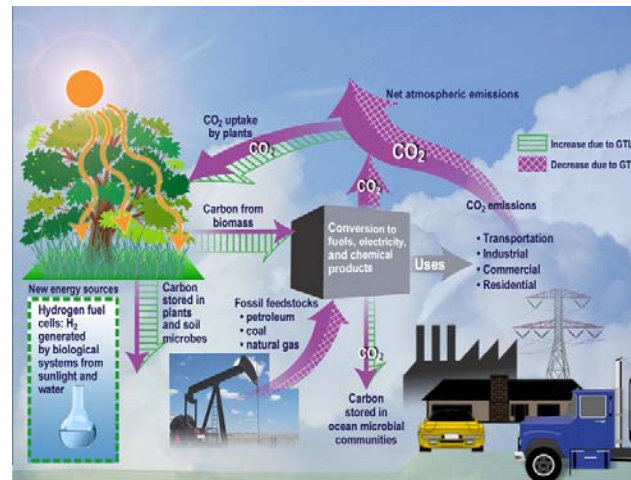
# Sustainability

Carbon neutral (CN) by 2050

Major oil companies and industries committed to CN

Investments in Solar Power and Wind Energy

<http://genomics.energy.gov/>



---

## Summary

Oil and gas sector is strong

Export of crude oil and LNG continue to grow

Pandemic did not affect the export of crude oil and natural gas

Production levels fell during the pandemic

Emissions from O&G operations continue to improve

Job market is strong in the O&G sector

---

# References

[Natural Gas Weekly Update \(eia.gov\)](#)

[How the pandemic is harming the oil and gas industry \(phys.org\)](#)

[Homepage - U.S. Energy Information Administration \(EIA\)](#)

[Will all the oil and gas jobs lost during the pandemic ever return? \(houstonchronicle.com\)](#)

[COVID-19 Research | US EPA](#)

---

## Contact Information:

Kesavalu M. Bagawandoss, Ph.D., J.D.  
[dr.doss@sgs.com](mailto:dr.doss@sgs.com)  
713-271-4700 x14467

