

U.S. Oil and Natural Gas:

Providing Energy
Security and Supporting
Our Quality of Life

IOGCC Annual Meeting
November 2020



Key Takeaways



Oil and natural gas support our lives in countless ways.



Technology advancements have driven dramatic growth over the past 20 years – improving recovery and increasing production.



The economic and security benefits of domestic energy supply growth are enormous.

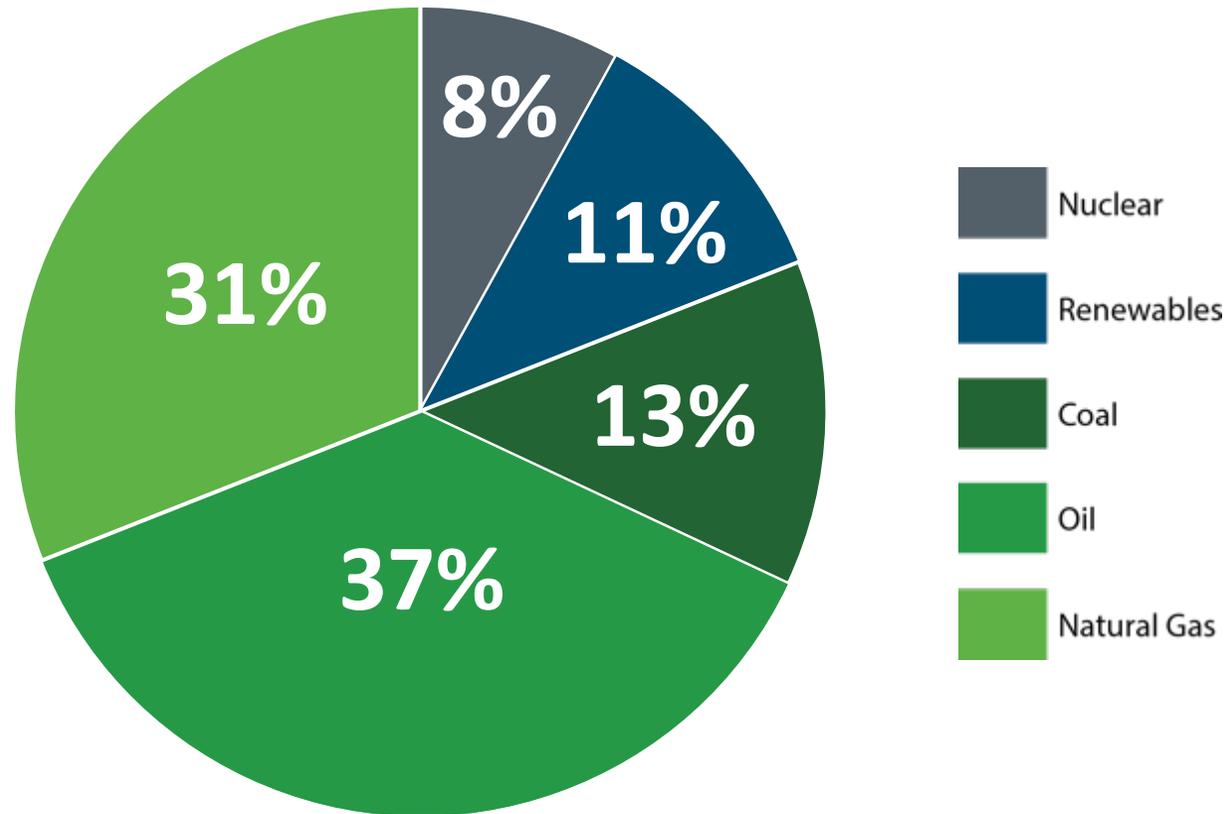


Innovation remains critical for the U.S. to maintain its leadership.

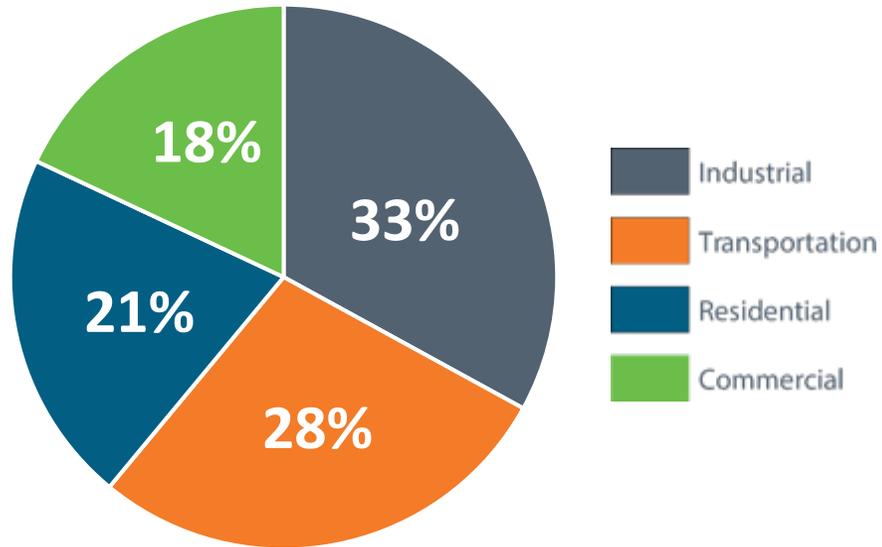
New DOE report on the benefits from an increased supply of domestic energy, the key advances that made it possible, and opportunities for the future.

Powers America's Economy

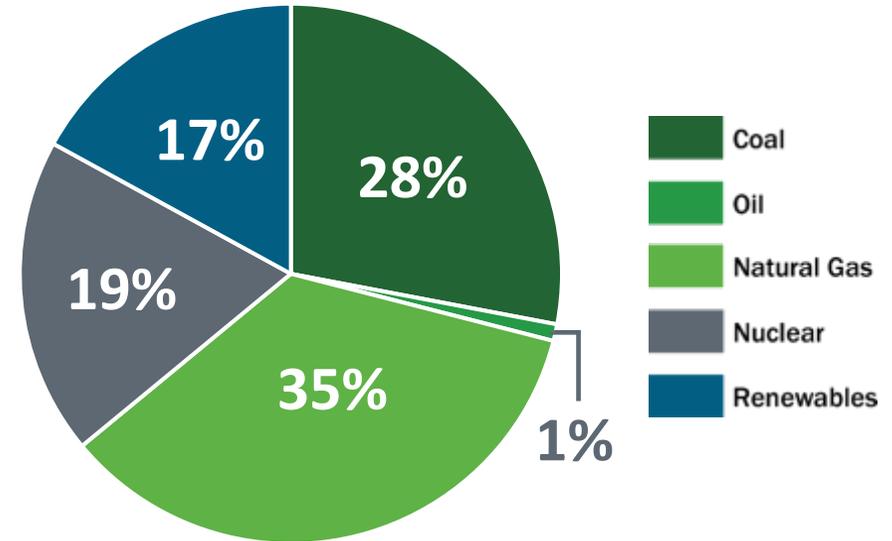
Nearly 70% of energy consumed in the U.S. comes from oil and natural gas products



Powers America's Economy



Four major economic sectors in the U.S. depend on energy from oil and natural gas relatively equally



More than a third of the nation's electricity is generated by burning natural gas

Powers America's Economy

Natural gas plays a critical role supporting increased use of wind and solar power



Flexible natural gas-fired power generation plants (left) help ensure that wind power remains reliable (right)

Benefits Beyond Energy

Many common items are made of compounds derived from oil and natural gas



Benefits Beyond Energy

Oil and natural gas support industries and our lives in ways that are not always obvious



Modern Healthcare



Agriculture



Automotive



Home Construction



Consumer Products

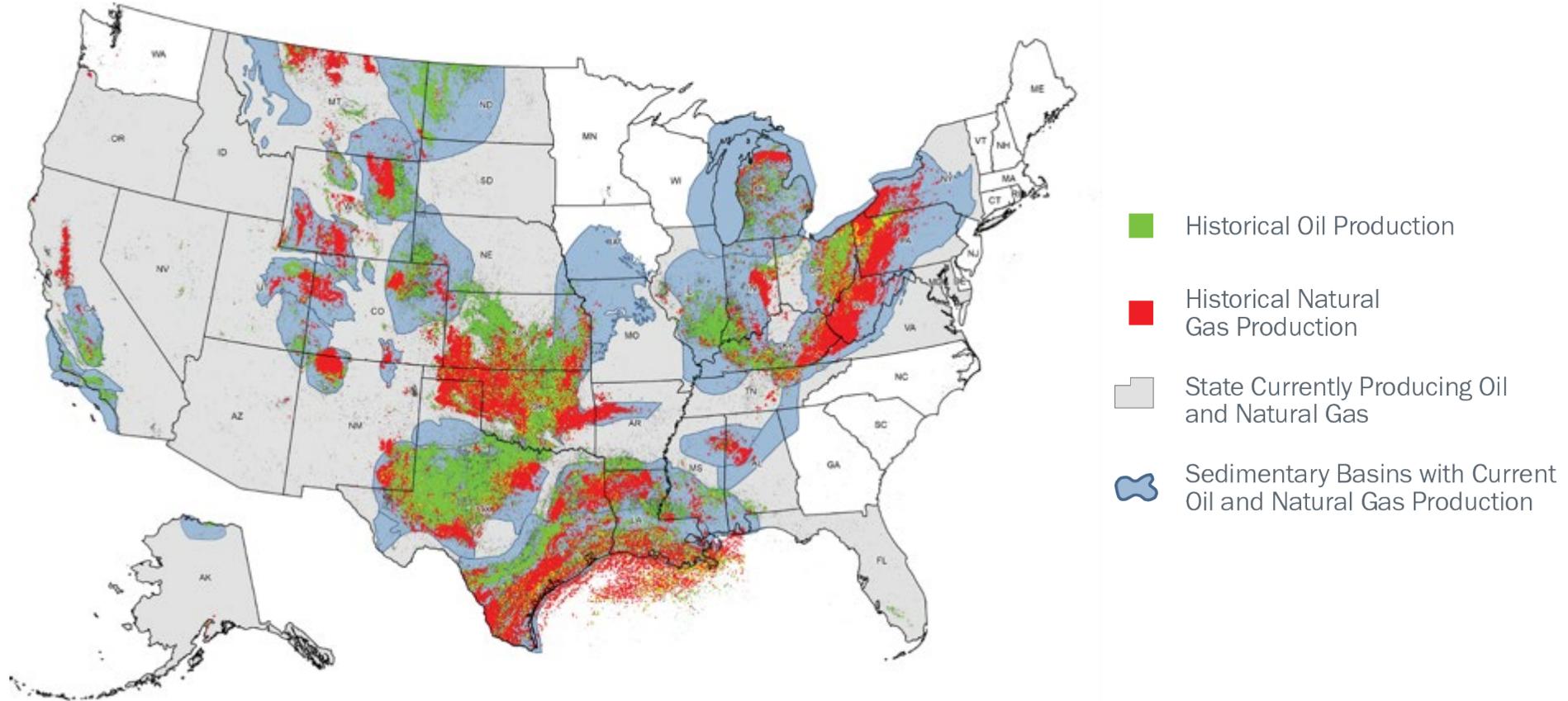


Renewable Energy



Future Domestic Supply

Energy from the 34 states that produce oil and natural gas benefits all Americans

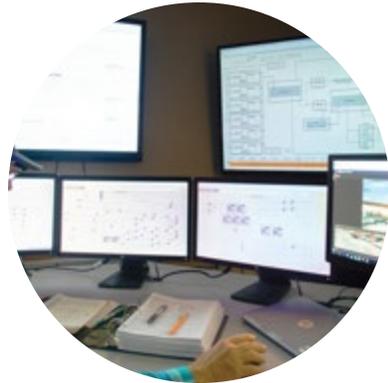


Technology Innovations

The U.S. has gone from fears of scarcity to a net exporter and world leader in oil and natural gas production



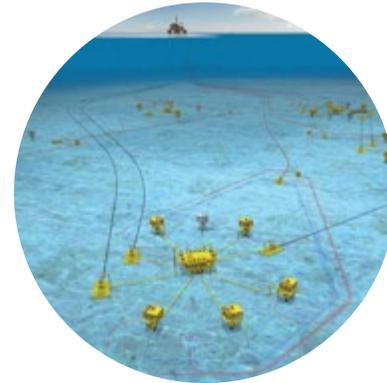
Shale oil and gas and new extraction methods foster development of unconventional resources



Artificial intelligence and machine learning for more efficient and cost-effective extraction and transportation



Floating platforms and subsea completions overcome the deepwater offshore barrier



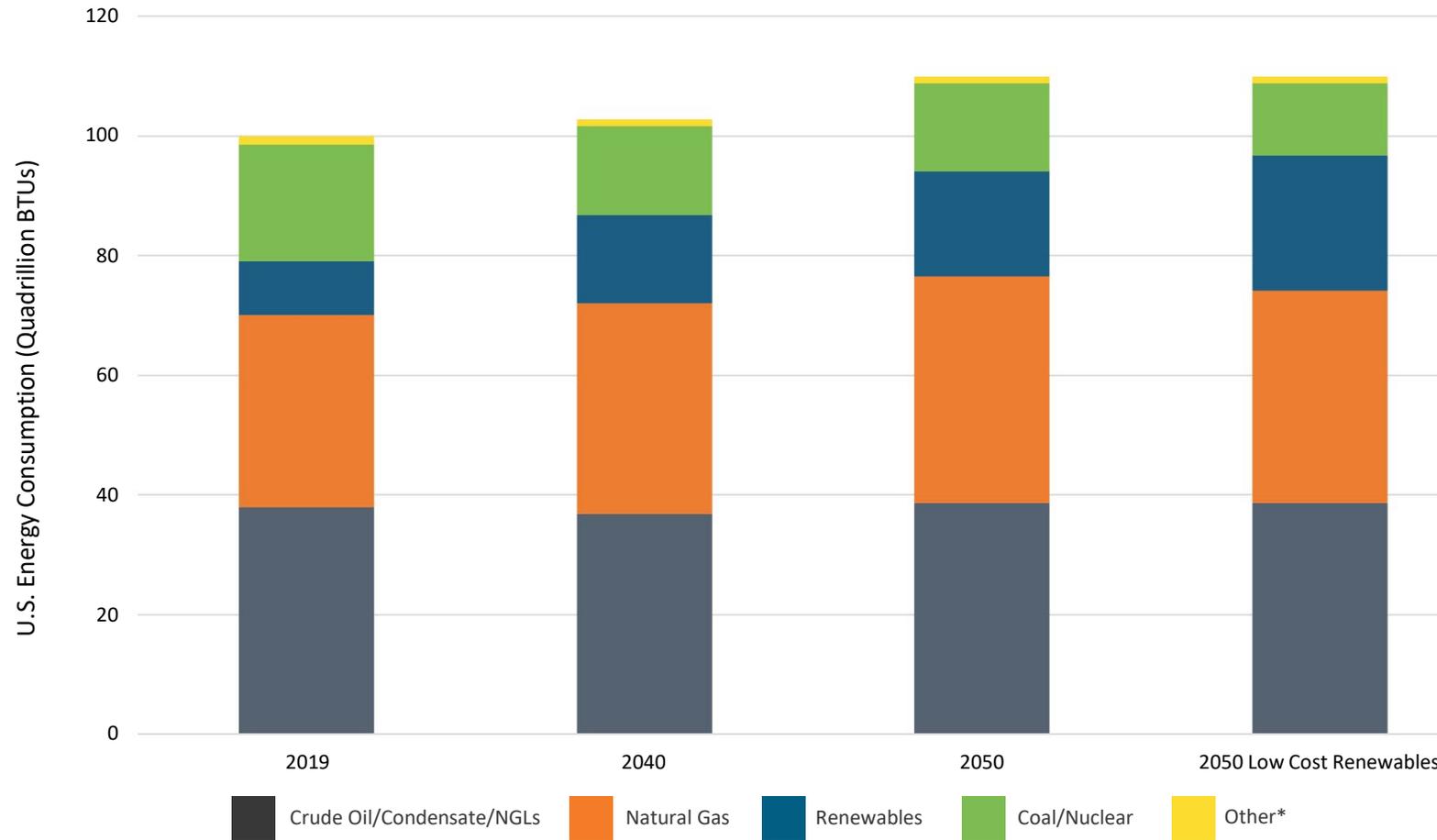
Expanded use of CO₂-EOR and carbon dioxide storage in new geologic settings



Mitigating environmental impacts and improving safety of production operations

Future Opportunities

Oil and natural gas will remain key elements of our energy mix for decades



*Other includes methanol, hydrogen, non-biogenic municipal waste.

Future Opportunities

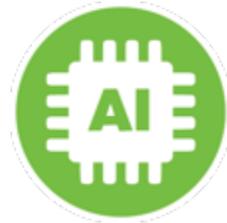
Technological innovation remains critical for our country to sustain the domestic energy supply that is so vital to our energy security and quality of life



Apply cost-effective novel drilling and completion approaches



Capture and utilize anthropogenic carbon dioxide for enhanced oil recovery



Lower onshore and offshore production costs through remote sensing, artificial intelligence and machine learning



Produce as-yet-undeveloped resources such as methane hydrates that could supply a lower-carbon energy source for generations

Domestic Production Benefits

Increased production of oil and natural gas benefits all Americans



- Energy security
- Consumer savings
- Revenues for state and local governments
- Well-paying jobs
- Net energy exporter
- Lower energy costs
- On demand power
- Revitalized U.S. manufacturing

Liquefied Natural Gas Exports

The strong growth of natural gas has led to a world-class domestic liquefied natural gas (LNG) export industry in the U.S.

Global Destinations of U.S. LNG Exports (2016-2019)



- LNG exports are expected to grow from 6 Bcfd at the end of 2019 to 12 Bcfd by the middle of this decade
- This would make the United States the largest global LNG exporter
- U.S. LNG export expand the global availability of natural gas, driving down gas prices around the world and diversifying supplies
- U.S. LNG will also help to relieve energy and economic poverty around the world

Conclusions



Our robust economy and our energy use are inextricably linked.

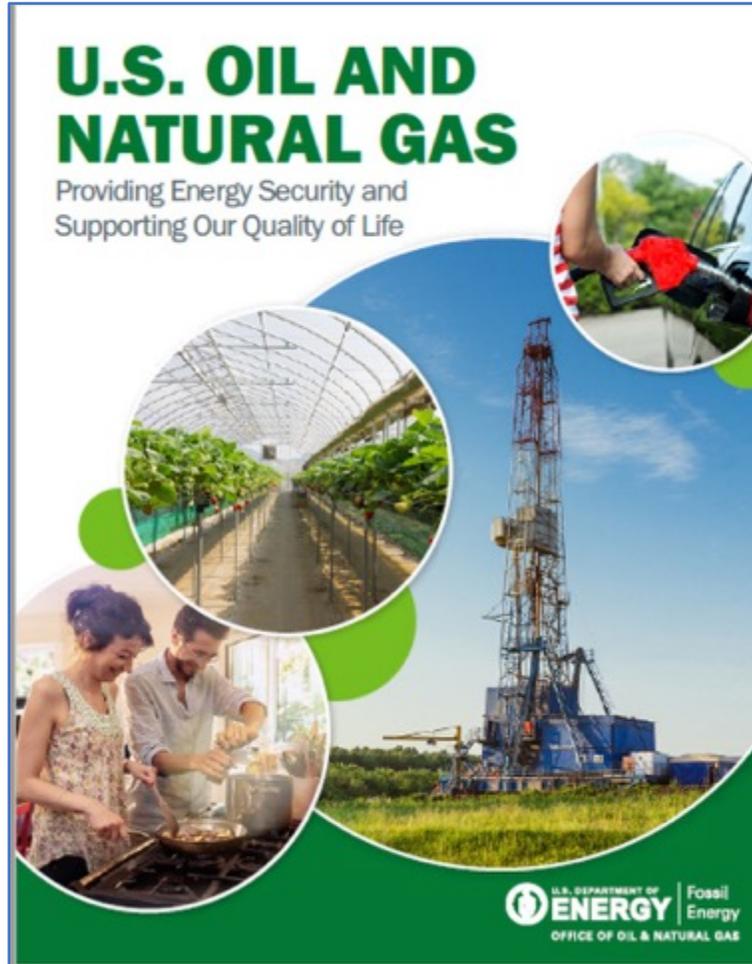


Oil and natural gas sustain our modern way of life and will continue to do so for the foreseeable future.



Continued production of affordable supplies of oil and natural gas is an essential element of future progress in our nation's economic health and living standards.

Questions?



- 70-page outreach document
- Graphically rich
- Designed for easy reading
- Illustrated glossary
- Companion 2-page summary