ENERGY TRANSFER

POWERING RENEWABLES

NATURAL GAS: EMPOWERING A RENEWABLE ENERGY FUTURE

Natural Gas is a critical partner in the development and operation of renewable energy sources. Its abundance will continue to support our energy needs into the future as our nation's mix of energy resources continue to evolve. From powering manufacturing and transporting renewable energy materials, to addressing climate progress through environmental benefits, natural gas empowers a renewable energy future.

According to most recent data from the U.S. Energy Information Administration (EIA), 38% of our energy consumption in 2019 came from natural gas, less than 1% came from petroleum, and only 17% came from renewable energy including wind, solar and hydroelectric power. While the use of renewable energy begins to rise, natural gas will continue to be needed to generate supplemental electricity and fulfill the country's growing demand for additional energy.

*Natural gas is a **low cost**, **reliable**, and **low-emitting** source of energy that plays a critical role in meeting the rising demand for a **cleaner** energy future.*

BUILDING RENEWABLE ENERGY

All energy-producing machinery, including renewable energy machinery, is fabricated with the help of oil and gas.

- Natural gas and oil are used in the production of concrete, steel, glass, plastics, and purified minerals that are used to build renewable energy machines such as wind blades and solar panels, products and facilities
- State-of-the-art wind turbine blades are made of carbon fiber, which consists of layers of plastics and plastic resin, both of which are derived from oil and natural gas feedstocks.

- Most renewable energy machinery, such as wind blades, are required to be replaced every 10 years. When it comes time to replace, oil and gas will continue to support the construction and transportation of these materials.
- Renewable energy machine parts entail, on average, 10 times the amount of materials extracted and processed to produce the same amount of energy as hydrocarbon infrastructure.

SUPPORTING OUR POWER GRID

Natural gas and renewable energy work together to responsibly meet our global energy needs.

- Renewable energy sources are intermittent at best. Natural gas provides flexible and reliable power when wind and solar are unavailable and when renewable energy storage capacity is full.
- Natural gas power plants can be ramped up or down to meet power grid demands, while wind and solar are less controllable sources.

- Power grid infrastructure for natural gas is largely in place, whereas transitioning to an all-renewable system is decades away and will require a big increase in wind, solar and storage construction projects along with the need for more large interstate transmission lines.[3]
- Increased production of batteries used for renewable energy storage requires high volumes of natural minerals. Since America is now 100% dependent on imports for some 17 key minerals, additional renewable energy infrastructure will cause a spike in global mining, dramatically increasing U.S. imports and the vulnerability of America's energy supply chain.[1]

PROMOTING A CLEANER ENVIRONMENT

Building new and modern natural gas infrastructure will continue to support reliable energy sources while also providing greater access to cleaner, cost-effective energy.

- Expanded use of natural gas can help improve air quality across the country, especially when it is used to replace less environmentally friendly sources.
- Natural gas emits 50 to 60 percent less carbon dioxide (CO_2) when combusted in a new, efficient natural gas power plant compared with emissions from a typical new coal plant.

*Natural gas is a **natural partner with renewables**, enabling a cleaner energy future.*

- Renewable energy sources are supported by clean-burning natural gas in order to provide reliable energy and environmental benefits.
- Increased use of natural gas helps reduce greenhouse gas emissions because it burns cleaner than all other fossil fuels. Since 2005, displacing coal with natural gas has prevented over 2 billion metric tons of carbon dioxide from being emitted into the atmosphere.[4]
- In order to build a cleaner energy future that is affordable and accessible for all, we must take advantage of the abundant supply of natural gas here in the U.S.

Sources

1. Mills, M. P. (2020). Mines, Minerals, and "Green" Energy: A Reality Check. Manhattan Institute.
2. James, R., Zoelle, A., Keairns, D., Turner, M., Woods, M., Kuehn, N. (2019). Cost and performance baseline for fossil energy plants, Volume 1: Bituminous coal and natural gas to electricity (Report No. NETL-PUB-22638). United States Department of Energy National Energy Technology Laboratory.
3. Samsel, H. (2021, January 11). Texans now embracing clean energy policy. The Dallas Morning News.
4. THE CLIMATE BENEFITS OF NATURAL GAS. (2019). Energy in Depth.