Get the Facts on Natural Gas for Electricity

Natural Gas Has the Smallest Land Footprint

Comparison of Acreage Requirements for Top Sources of Electricity



 Acres required per 1,000 households served
 0.2 acres

 Coal • 0.4 acres
 Biomass (Waste) • 0.8 acres

 Nuclear • 0.6 acres
 Nuclear • 0.6 acres

 Solar • 8 acres
 Wind • 6 acres

Source: Comparison of Fuels Used for Electric Generation in the U.S., November 2016 update and analysis by Leidos, Inc.

As policymakers and concerned citizens focus on protecting the environment through the use of cleaner energies, one important consideration is the size of the land "footprint" required for each of the major fuels that are used to generate electricity.

There is a wide variation in the amount of land needed for power generation, as shown in the chart above. The chart illustrates the land acreages required by each of these most commonly-used fuels in order to generate enough electricity to serve 1,000 U.S. households for one year. The acreage requirements range from over eight acres to about one-fifth of one acre depending on fuel choice.

Natural gas-fired power generation requires the least amount of land. And if the capacity factor (the amount that each generator type actually runs) is factored in, solar and wind use 50 to 100 times more land than natural gas. Furthermore, natural gas-fired generation also makes renewable technologies that are clean but intermittent, such as solar and wind, more reliable. With its small land footprint, low emissions, low operating costs, accessibility and reliability, it's easy to see why the market is increasingly choosing natural gas to make electricity.

Natural Gas

In fact, the use of natural gas has increased steadily in recent decades. In 2016, natural gas generated more electricity than any other source¹ and its increased use is credited with reducing U.S. carbon dioxide emissions from the energy sector to the level of 1992 emissions, a 25-year low.²

All of our fuels play an important role in meeting the nation's energy needs and there are many characteristics that make a fuel the right choice for generating electricity.

Its small footprint is one of the characteristics that makes natural gas a good choice for electricity generation and a vital component of our energy future.

"Today in Energy — Jan. 11, 2017," U.S. Energy Information Administration (EIA).

2 "Today in Energy — Oct. 12, 2016," U.S. EIA.