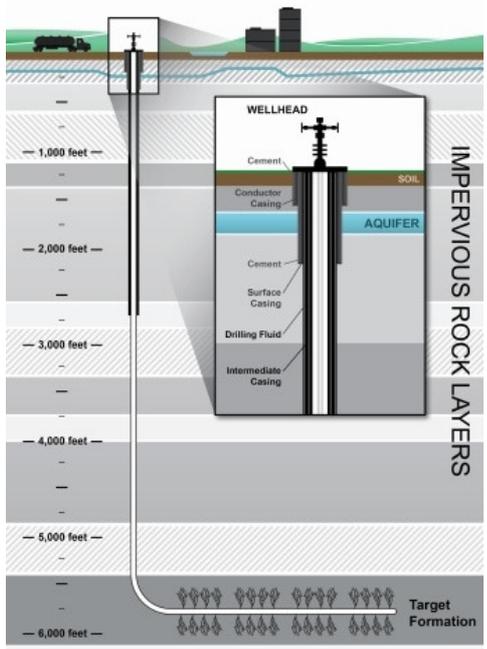


FAST FACTS: WHAT YOU SHOULD KNOW ABOUT NATURAL GAS AND RENEWABLE ENERGY

HYDRAULIC FRACTURING

- A controlled process that uses fluid under pressure to create small fractures in the rock formation where gas/oil is located, that then allows gas/oil to flow from the rock into the well.
- First used in the 1940s and has been used on over 1 million wells since.
- It is estimated that up to 80% of gas produced from shale formations would not be possible without hydraulic fracturing.
- The chemicals used in the process are no different than the chemicals many people use to clean their house or wash their dishes and they only account for 2 percent of overall fluids. Chemicals used in the process are disclosed on fracfocus.org.



Source: Energy In Depth

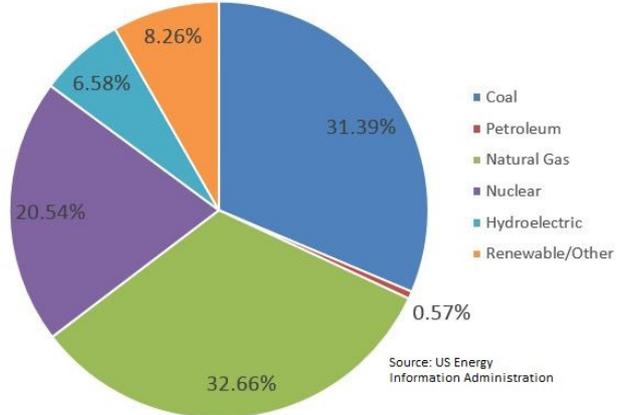
WATER USAGE

- In oil & gas production accounts for ~1% of all water consumption in the U.S.
- Recycling is a focus of the industry. Seneca Resources is a leader in this effort, using ~75% recycled water for drilling and hydraulic fracturing in 2016.

Hydraulically Fractured Horizontal Well

EMISSIONS & NATURAL GAS

2016 US Electrical Power Generation



- Since 1986, natural gas fired power plants' share of the electricity market has increased more than 300%.
- Since the start of the drilling boom in 2008, total CO2 emissions have fallen by nearly 15% due to clean-burning and abundant natural gas.
- Methane emissions from oil & gas production have declined by 74% since 1990, and now only account for 1.07% of Total U.S. Greenhouse Gas Emissions.

Source: INGAA



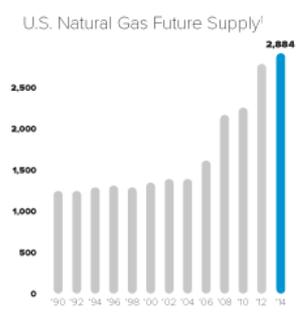
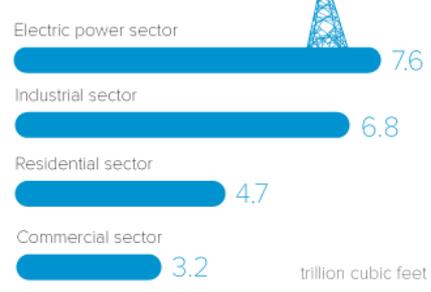
In addition to fueling your furnace, stove and clothes dryer, natural gas is used to produce...

- Clothing
- Glass
- Steel
- Paper
- Electricity

Products that use raw natural gas...

- Paints
- Plastics
- Film
- Medicines
- Fertilizer

Top natural gas consumers...

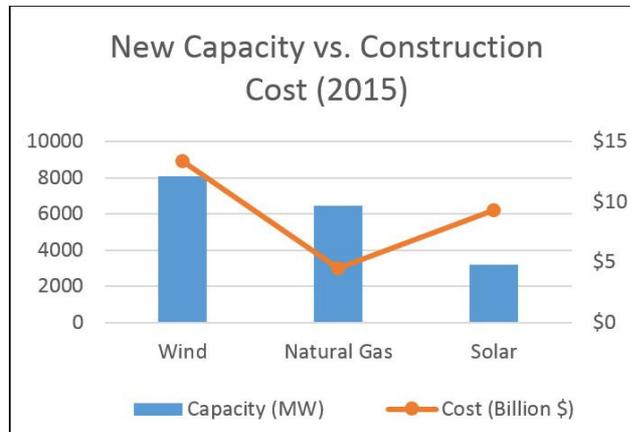


\$840/year²
Average household savings thanks to abundant, affordable natural gas.

RENEWABLES FOR ELECTRICITY

- The average cost of an installed 2MW wind turbine is \$3.5 million. Each turbine can supply about 350 homes.
- It would take nearly 583,000 turbines to power the entire U.S. (\$2.1 Trillion), plus transmission lines and other new infrastructure.
- The U.S. invested \$14.5 billion in wind project installations in 2016, but wind produces less than 5% of the nation's energy.
- Assuming the sun shined all the time, and that battery storage technology was affordable, the solar footprint to power the US would be about twice the size of the state of New Hampshire.

The graphs below depict the costs and capacities of renewable energy resources compared to that of Natural Gas for the 2015 construction year.



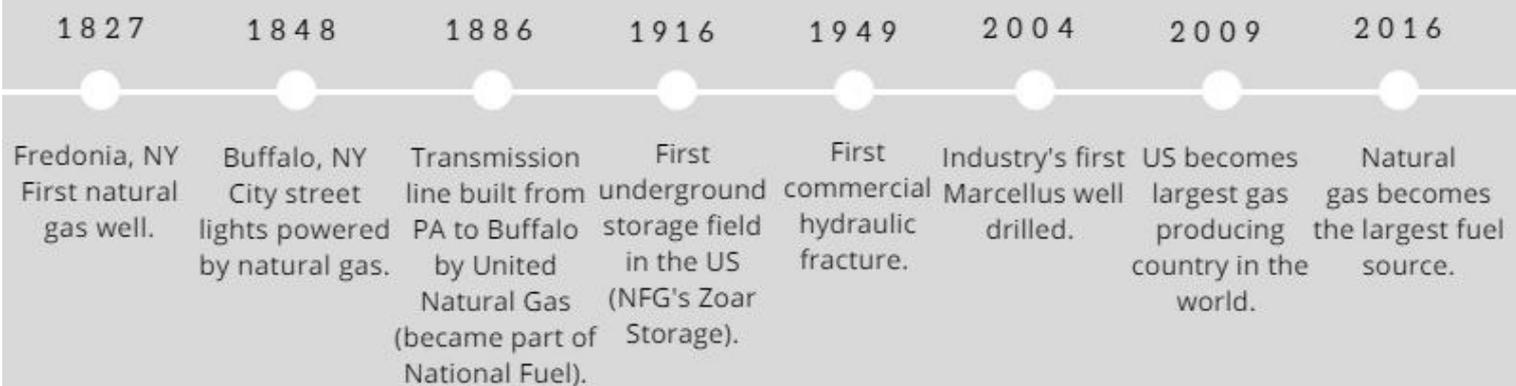
Source: US Energy Information Administration

SOLAR FOR THE HOME

- An average residential solar system (between 4kW and 8kW) costs between \$15,000-\$29,000.
- The currently available New York State tax credit is equal to 25% of the solar equipment cost and is capped at \$5,000.
- Pennsylvania currently has no tax credits for solar panel equipment or installation.
- The Federal Government allows homeowners to deduct 30% of their solar system installation costs through an investment tax credit (ITC). These credits are scheduled to end on January 1, 2022.
- The average monthly electricity bill in NY and PA are \$111 and \$116, respectively.
- Solar panel life is estimated to be 20-25 years.
- Since the sun doesn't shine all day or night, and battery storage is expensive, a lack of future solar subsidies could make widespread installation of residential solar panels financially impractical.

INDUSTRY HISTORY

FIRST AND NOTABLE EVENTS



For more information, visit:

- www.energyindepth.org
- www.api.org
- www.marcelluscoalition.org
- www.fracfocus.org
- www.tax.ny.gov
- www.ingaa.org
- www.aga.org
- www.businessinsider.com
- www.eia.gov
- www.instituteforenergyresearch.org