

# NATURAL GAS: A PLENTIFUL AND CLEANER WAY TO BREAK AMERICA'S ADDICTION TO OIL

Global oil and food systems are both operating near full capacity, and demand is on the rise. As a result, rising prices are hurting Americans today, and the United States is at risk of food and fuel shortages in the future. To help head off an impending food and fuel crisis, it is necessary to lower the demand for oil. As fully 70% of our oil usage comes from transportation, Sustainable America has chosen to focus on decreasing the amount of oil Americans use each day for transportation by 50% by 2030. Several solutions to reducing our oil usage are within reach.

Natural gas represents one of the most immediately available means of reducing oil usage with a plentiful domestic supply. In the realm of transportation, the United States has barely scratched the surface (only about 1% of our current natural gas usage is related to transportation).<sup>1</sup> We view natural gas as one important component in a wider effort to diversify American energy supplies.

***The Benefits of Natural Gas.*** The majority of our crude oil usage (70%) is used for transportation. A shift toward natural gas in the transportation sector could be one of the most impactful ways to reduce oil usage.

- With 45% of our oil coming from overseas, switching to domestically produced natural gas the United States would effectively increase our energy security, making us less reliant on oil from vulnerable global hotspots or from suppliers that may be hostile to us.
- Several recent studies suggest that expanded domestic natural gas production will contribute strongly to job creation at a time when our nation's manufacturing base has declined and the service sector on which our economy now relies remains sluggish. For example, a recent study from PricewaterhouseCoopers finds that natural gas production may contribute an additional 1 million jobs by 2025 to the 2.8 million jobs it already creates.<sup>2</sup>
- There are tangible environmental benefits of using more natural gas as well. Natural gas has 25% less CO<sub>2</sub> per million Btu than gasoline, and natural gas causes less particulate matter to be released into the environment than either oil or coal (92% less than oil and 99% less than coal), as well as less sulfur dioxide, a cause of acid rain.<sup>3</sup>

***The Challenges of Natural Gas & Proposed Solutions.*** Natural gas is not without challenges. First of all, it is not a renewable fuel, and it has a carbon footprint associated with it. However, until alternative fuels and advanced transportation technologies are widely available and an economically competitive option for our economy, Sustainable America believes that natural gas represents a strong near-term option to reducing our nation's more damaging reliance on oil.



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Alternative Farming  
Precision Agriculture  
Natural Gas Vehicles  
Electric Vehicles  
Fuel Efficiency  
Advanced Biofuels

<sup>1</sup> EIA Statistics

<sup>2</sup> PricewaterhouseCoopers study for the National Associations of Manufacturers.

<sup>3</sup> EIA Statistics

One current challenge to natural gas vehicles is “range anxiety,” where a would-be driver fears that he will be stuck on the road without the ability to refill the tank. While the number of natural gas fueling stations is growing, many existing stations are designed for short-haul delivery fleets (e.g., U.S. Postal Service, UPS and FedEx) and not for general public use. Sustainable America sees a market-driven build-out of a natural gas filling network as one of the most obvious and effective means of increasing overall NGV use.

TRADITIONAL GAS STATIONS VS. NATURAL GAS STATIONS			
	TOTAL STATIONS	GEOGRAPHIC DENSITY	STATIONS PER DRIVER
TRADITIONAL GAS	121,446	1 STATION FOR EVERY 33 MILES OF ROAD	1 STATION FOR 1,700 DRIVERS
NATURAL GAS	574	1 STATION FOR EVERY 7,000 MILES OF ROAD	1 STATION FOR 367,600 DRIVERS

Another major challenge centers around uncertainty of “fracking,” the process of extracting gas from unconventional rock. Fracking is not new, and to date, more than one million wells have been completed using the technique. However, natural gas operations are now expanding to parts of the country that are less familiar with resource extraction, and several citizen and environmental groups have raised concerns about surface contamination from these operations. Several major studies from the U.S. Department of Energy, the University of Texas, Stanford University, and Great Britain’s Royal Society and Royal Academy of Engineering all point to the fact that contamination of ground water is related to shoddy surface operations and not the fracking itself.

Sustainable America holds the position that more natural gas extraction will provide a high benefit to our nation and people, as long as it is done safely, is more closely monitored and regulations carry serious consequences for rule-breakers.

*Our Proposed Solutions Include:*

- **Supporting entrepreneurs** seeking to make natural gas vehicle technology more efficient, affordable and available.
- **Educating consumers** about the need for and benefits of wider natural gas vehicle adoption.

*Sustainable America has set out an ambitious goal for the reduction of oil usage in the American economy and targets a 50% reduction from today’s levels by 2035. Our organization strongly believes in the power of change through action. We aim to help Americans achieve this reduction through both education and the funding of entrepreneurs who seek to solve some of the problems enumerated in this paper. We believe that market-based solutions, when combined with motivated citizens, work best to bring about change, and that together we can make a difference.*