

STATEMENT OF T. BOONE PICKENS

Chairman,  
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United States House of Representatives  
Committee on Ways and Means  
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*Energy Tax Incentives Driving the Green Job Economy*

EXECUTIVE SUMMARY:

1. A key to producing environmentally responsible jobs is to:
  - a. Create jobs which cannot be “off-shored.”
  - b. Create jobs which utilize domestic resources.
  - c. Create jobs which are high quality, long-term, and well-paying.
2. There are eight million heavy trucks on America’s highways.
  - a. These trucks use approximately one-third of all oil used for transportation.
  - b. We import about two-thirds of our oil needs.
  - c. Moving a significant percentage of America’s heavy truck fleet from imported diesel to domestic natural gas is the most effective way to reduce our dependence on OPEC oil starting today.
3. Passing the NAT GAS Act will create more than 600,000 new, high quality, long-term, well-paying jobs by jump-starting a natural gas vehicle (NGV) industry in the United States.
4. Natural gas is the only fuel we have that can fuel heavy trucks and make an immediate and significant impact on foreign oil.
  - a. Natural gas is an enormous opportunity to substitute our risky dependence on OPEC oil for a cleaner, cheaper, and abundant domestic alternative.

The *Wall Street Journal's* analysis of employment in America shows that we have shed 6.9 million jobs since the recession began in 2007. The most commonly quoted unemployment figure of 9.7 percent tells only a portion of the story – the U3 index. If we look at what many economists believe to be a more complete number – the U6 – then we see the unemployment rate is at about 16.9 percent; about the level at which it has stubbornly remained since May 2009.

The unacceptably high unemployment rate is not news to any Member of this Committee, nor of this Congress. Neither is the fact that these indices are likely to remain at historically high levels for the foreseeable future. What we are attempting to do is to find ways to put people who have lost their jobs back to work, and find ways for new entrants into the job market to find work.

I am here today, representing the 1.6 million Americans who are members of the Pickens Plan, to urge the Committee to consider the value of the bi-partisan NAT GAS Act (H.R. 1835) as a significant mechanism to increase job opportunities in the United States.

In the period leading up to the recession we deluded ourselves into believing that the manufacturing jobs which were being moved to China, and the IT jobs which were being moved to India, would somehow be replaced by a vague and undefined range of service jobs to augment the retail sector. While there has been some growth, this hope hasn't yet been fully realized. And, ultimately, many of these jobs don't pay as well as the ones that are being lost.

In January 2010 our trade deficit for the month was \$37.3 billion; \$27.5 billion of that was money we sent overseas to import oil. Put another way, three-quarters of our trade deficit is foreign oil. When the recession hit, and consumers withdrew from the marketplace, our naiveté in believing we could continue to churn dollars by handling and moving goods which were created elsewhere became painfully exposed.

We now understand that we need to protect every job in every sector from moving off shore, because it is quite likely that job will never come back, and another American will move to the U3 then the U6 index for an extended period of time.

The challenge facing us now, is to help develop new industries and new sectors which will produce jobs which cannot be, as the current phrase puts it, "off-shored." I believe, as do many, that the environmental and energy sectors are places where new long-term jobs, which cannot be

“off-shored,” can be created relatively quickly and for the long-term benefit of the nation – environmentally *and* economically.

Robert F. Kennedy, Jr. (with whom I co-hosted a briefing for House staff on energy imports last year) has been a leading voice in this area for many years. He has distilled the argument to its basic premise: “Good economic policy is identical to good environmental policy.”

China and other countries have followed Mr. Kennedy’s words closely and have made major investments in renewable energy and a workforce and infrastructure to support it. Sadly, we’re the ones falling behind.

As Kennedy has said on many occasions, jobs created to design, construct, and maintain a 21<sup>st</sup> century electric transmission grid cannot be off-shored. Those jobs will be created here and will remain here, because a transmission line in Michigan cannot be maintained by an offshore worker at a phone center thousands of miles away.

Similarly, jobs created to upgrade Americas natural gas pipeline system will be American jobs that stay in America. Jobs created to design, build, and maintain natural gas vehicles (NGVs) in America will not only stay in America, but may well *move to* America – a concept and goal we do not discuss nearly often enough.

We must be careful to avoid picking winners and losers in the fuels sector. As I have been saying since I introduced The Pickens Plan, “I’m for anything American” whether it be wind, coal, solar, hydro, nuclear, geo-thermal, ethanol, propane, or natural gas. Last year, Congress took an important step by extending and expanding tax credits for wind and solar as part of the stimulus package.

The recent announcement by President Obama to open certain off-shore areas to drilling is a welcomed sign to many; but in the grand sweep of transportation, even if the estimates of the amount of recoverable oil are correct, the American Petroleum Institute estimated it would “power 2.4 million cars for 60 years.” However, we have 250 million cars, light trucks and SUVs in America’s fleet, plus another eight million heavy trucks, so we will be adding only about five years to our national gasoline and diesel supplies. It is also useful to remember that

the five-year extension would not begin until about 10 years *after* exploration begins, so this is no quick fix.

Secretary of Energy, Dr. Stephen Chu has been promoting the growth of nuclear power plants to provide the electricity necessary to fuel the tens of millions of electric cars he expects on U.S. highways in the next 15-20 years. Nuclear provides approximately 20 percent of our current electric needs and, as we are all aware, produces no greenhouse gases when operating. However the issue of spent fuel disposal remains unresolved and the cost of dismantling a nuclear plant that has been taken out of service can be an order of magnitude more expensive than what it cost to build it in the first place.

Wind and solar energy are largely priced against natural gas because in the production of power, natural gas has traditionally been a “peaking” fuel. That is, when a coal, or nuclear powered plant cannot produce enough electricity on a hot August afternoon, natural gas powered plants can be fired up very quickly to handle the peak load; then simply turned off when the crisis has passed. Overall natural gas produces about the same percentage of electricity in the United States as nuclear.

Because natural gas has traditionally been the most expensive of the major electricity fuels, it has been used sparingly and is the basis for pricing electricity from wind or solar. This equation is changing because of the enormous amounts of natural gas that are now economically recoverable from the shale formations in North America due to the technological advances in drilling techniques.

In the recent past, natural gas was considered to be a declining resource which needed to be protected so that there was sufficient material to be a peaking fuel for power generation, a heating and cooking fuel, and as feed stock for the chemical and pharmaceutical industries.

Eighteen months ago the Potential Gas Committee, in conjunction with the Colorado School of Mines, issued its biennial report suggesting that including shale, America’s natural gas reserves were now sufficient to serve our needs for the next 100 years which took a great deal of pressure off the need to husband its use.

Then, more recently, a J.P. Morgan study (including Canada) projected reserves of 8,000 trillion cubic feet (Tcf). Even if only half of that in-place gas is commercially viable for recovery, that more than doubles the reserve life of our domestic natural gas to over 200 years' supply.

Natural gas is an environmentally friendly fuel – certainly the most environmentally friendly of the fossil fuels. One of the reasons is, the molecular composition of methane is four hydrogen atoms and one carbon atom. When burned as a transportation fuel, the 4-1 hydrogen-to-carbon ratio creates a fraction of the greenhouse gases of gasoline and, unlike diesel exhaust particulate, natural gas particulate is not listed as a known toxic air contaminant.

Natural gas is one of the most widely distributed resources in America. Natural gas lines run up every street and down every alley of nearly every city and town in our nation. Natural gas is safe. Few people would cook over a stove in the kitchen of their home fueled by gasoline, but tens of millions of natural gas ranges are used to safely cook our meals every day indoors.

#### NATURAL GAS AS A TRANSPORTATION FUEL

Using natural gas as a transportation fuel would make a major impact on the job market at home well into the future.

As background, in 2009 the United States imported 4.3 billion barrels of oil at a cost of about a quarter of a trillion dollars. Keep in mind that this was in the depths of the recession. That represented about two-thirds of our oil needs. What was that oil used for? About 70 percent of it was refined into gasoline to power the 250 million-vehicle fleet of cars, light trucks and SUVs which I mentioned above, and diesel fuel was produced to power our heavy-duty trucks, from refuse and delivery trucks to 18-wheelers.

I have been urging – at some significant personal cost – that America take firm steps to reduce our dependence on foreign oil from an economic, environmental, and national security standpoint. For the purposes of the discussion before this Committee today, I would like to focus on the economic issues.

Prior to the availability of the natural gas reserves noted above, it was a complex calculus to figure out how to free up enough natural gas that would otherwise be used as a power-generation fuel, to be made readily available as a transportation fuel.

That is no longer a problem.

Natural gas is the perfect fuel to immediately reduce our dependence on foreign oil and – to the point of this hearing – jumpstart a natural gas vehicle industry in the United States. There are more than 12 million NGVs on the world’s roadways. Only about 130,000 of them are here in the United States for a variety of reasons. Previously discussed availability of natural gas was a principle reason. Traditionally low oil prices were another. A lack of sensitivity to the environmental impact of petroleum-based fuels was a third. And a typical American feeling that “if a crisis emerges we’ll figure out how to fix it; but in the meantime the status quo is working just fine.”

Each of those issues has changed. With the automotive industry growing only in terms of year-over-year figures from the worst year in its history, this is the time to develop a completely new paradigm for our national fleets.

Heavy-duty trucks use approximately one-third of the oil we import as a transportation fuel. And, because heavy-duty trucks either go home to the barn every night or, if they are over-the-road 18-wheelers, they tend to run the same routes on a regular basis. Therefore, the often-cited argument against NGVs: “we don’t have the refueling infrastructure” doesn’t apply.

If Henry Ford had decided not to build the Model-T based upon the availability of gas stations, where would be today?

The number and placement of natural gas refueling facilities – either compressed natural gas or liquefied natural gas – is manageable by the private sector and would be part of the job-creation equation.

Moreover, the construction of factories in the United States to build natural gas engines by U.S. workers, using parts manufactured in the United States, designed by engineers working in the United States, and maintained by mechanics in the United States would have a potentially huge impact on the job situation.

Upgrading America’s natural gas pipeline system would have an impact similar to upgrading the electricity transmission grid: Thousands of skilled workers employed on projects which will provide decades of benefits and which cannot be off-shored.

At the wellhead and at the refueling station, employees will be needed to produce the natural gas, and help get it into the vehicles that will be using it.

Some of these jobs will be replacement positions. But, we are already beginning to see a recovery in truck manufacturing. According to one manufacturer, the prediction for Class 8 truck sales in March 2010 was 8,000 but there were 10,000 sold – a 25 percent increase over projections. If that trend continues, then this is the perfect time to begin building replacement trucks to run on natural gas.

Many communities and installations are offering incentives to owners who replace diesel-powered vehicles with those running on natural gas. The ports of Los Angeles and Long Beach have hundreds of semi-tractors moving trailers from shipside to staging areas before they are moved around the country. In an effort to reduce air pollution, truckers who have invested in NGVs receive priority access in moving loads through the process.

In the San Diego area, refuse and recycling trucks are being transitioned to NGVs. These vehicles are among the least efficient on the roads because they spend most of their day idling, or traveling at walking-speed as they move from house-to-house, but they are both economically practical and remove harmful diesel emissions from their service areas.

More and more municipal transportation authorities are replacing buses that run on diesel to those running on natural gas. The transportation authority in Fort Worth, Texas just celebrated its 20<sup>th</sup> year of its natural gas-power bus fleet.

AT&T, which has one of the largest private fleets in the nation, announced that it is transitioning 15,000 vehicles away from gasoline and diesel to alternative fuels including 8,000 vehicles that will run on natural gas.

Natural gas vehicles are cheaper to operate than their gasoline or diesel-powered counterparts, but because the manufacturing infrastructure is not in place and sales of vehicles are low, the up-front costs are significantly higher. The up-front costs can be addressed by increased sales and achieving economies of scale in manufacturing – which have been done in other areas of the world. Transit buses running on natural gas can cost \$40,000 to \$50,000 more than a comparable diesel bus. An 18-wheeler can cost \$80,000 more. However, because natural gas is

significantly cheaper than gasoline or diesel, and because the maintenance costs are lower, these costs can be recouped over time. For a market in its infancy though, grants and incentives to offset the initial high differential cost are critical to speed market penetration, achieve greater sales to achieve economies of scale in manufacturing, and lead eventually a sustainable market.

A trash truck that uses some 10,000 gallons of fuel per year can recover its up-front additional cost in about four years and its owners can realize a life-cycle savings of up to \$80,000. This in itself is a good value proposition for fleet operators. But with incentives, payback can be shortened to less than a year making the technology and fuel even more attractive – and greatly increasing market penetration.

With the proper incentives, school districts can recoup the cost of school buses in about three years, and step-vans (such as those used for in-town deliveries) can see a payback in under a year-and-a-half and a life-cycle savings of up to \$66,000 per vehicle.

Keep in mind, that for each of those examples, refueling facilities are not an issue because they all return to a central location where they can be refueled and maintained overnight, if necessary.

The technology for NGVs is proven and is off-the-shelf. The fuel for NGVs is now abundant, available, and affordable. The only piece missing is the manufacturing infrastructure to build sufficient numbers of NGVs so the price comes down as efficiencies go up. But we've never let the challenge of infrastructure slow us down before and we shouldn't this time either.

The NAT GAS Act will provide the incentives for fleet owners to begin placing orders for NGVs in large enough numbers so manufactures will be able to ramp up; meaning they will hire the skilled workers to produce the vehicles.

Specifically, over the next five years the NAT GAS Act can help get approximately 236,000 clean natural gas trucks (heavy, medium and light-duty) on America's roads and augment the existing natural gas fueling infrastructure. This alone would help displace approximately 5 percent, or nearly 2 billion gallons, of diesel every year. Equally important, this program can create more than 600,000 direct and indirect jobs. This job count is based on manufacturing the natural gas fuel system hardware for vehicles, manufacturing and installing hardware at fueling stations, and manufacturing and constructing production facilities for liquefied natural gas

(LNG). The numbers are conservative in that they don't count expansion of natural gas infrastructure (wells and pipelines) nor service and maintenance jobs for maintaining fueling infrastructure or vehicles after they are built. The 600,000 jobs is about the same as the number of temporary jobs being created for the 2010 census – so this is the equivalent of hiring enough people for a decennial census every year.

Thinking about it another way, these jobs can be calculated simply:

- 141,000 Heavy Duty vehicles displace 2.035 billion gallons per year of foreign petroleum
- Each Class 8 truck put on the road creates 6 jobs
- Each Class 7 truck put on the road creates 3 jobs
- Each Class 5 & 6 truck put on the road creates 1.5 jobs
- In terms of foreign petroleum reduction, that translates to 3,328 gallons displaced per job

Development of fueling infrastructure is critical to having vehicles on the road. There are currently more than 1,100 natural gas fueling stations throughout the U.S. In California, there are more than 400 natural gas fuel stations with about 170 of those allowing public access for fleets and consumers – principally located in southern California and the San Francisco Bay area. The NAT GAS Act assumes market development and expansion in areas that already have natural gas fueling stations as well as expansion of station networks in new metropolitan areas. The planning cycle to design and construct natural gas fueling stations is about as long as the planning cycle to purchase and deploy fleet vehicles. The NGV industry envisions that fleet planning for both vehicles and fueling will take place simultaneously. The NGV industry also envisions deployment of critical masses of vehicles in areas where existing and new fueling stations can accommodate the vehicles. California's model for NGV deployment has shown that 30-50 strategically located stations in large metropolitan areas can sufficiently fuel more vehicles than contemplated under the five year scenario. These 30-50 stations are only the initial phase of developing the more extensive fueling infrastructure needed for broad expansion of NGVs and expansion of the market to consumers. The California model can easily be replicated in other metropolitan areas.

There is a similar deployment model for the trucking industry that will allow the growth of natural gas for the trucking good movement sector and eventually allow coast-to-coast transport

of goods from ports and manufacturing centers to markets. Under this model, stations can be built every 250-300 miles along significant trucking corridors. These stations will dispense both liquefied natural gas (LNG) for “18 wheelers” and compressed natural gas (CNG) for region-to-region of smaller trucks and consumer vehicles.

Among the most important data points for the NAT GAS Act is that its support is wide, deep and bipartisan. With more than 140 cosponsors in the House of Representatives, and Senate Majority Leader Harry Reid cosponsoring the Senate version, the NAT GAS Act is the kind of bill that every Member of Congress can get behind.

Recently the Western Governors’ Association (WGA), one of the most influential organizations on the American political landscape, wrote to Congress urging it to legislate incentives for development and use of natural gas vehicles (NGVs) as well as the requisite infrastructure NGVs require. Writing on behalf of the governors of 19 states and 3 US-Flag Pacific Islands, the WGA’s chairman and vice chairman, Montana Governor Brian Schweitzer and Idaho Governor C.L. “Butch” Otter, urged swift action on pending legislation, saying “The Western Governors’ Association supports the important goals of putting Americans back to work, improving the economy, protecting the environment, and helping our nation reduce its dependence on foreign oil. As a result, we ask that you include provisions to incentivize the use and development of natural gas vehicles (NGVs) and NGV infrastructure in legislation to be considered by Congress this session.”

Other businesses of all sizes have thrown in their support, too. I can provide copies of letters from a variety of fleet and vehicle companies and municipalities, including engine manufacturer Cummins Westport, the Pepsi Bottling Group, Swift Trucking and the Metropolitan Atlanta Rapid Transit Authority (MARTA) that all support the passage of the NAT GAS Act.

Natural gas is an excellent example of how we can create green jobs – not just as a public works effort – but as a commercially viable, long-term enterprise which will reduce our dependence on foreign oil, add permanent high-paying jobs to the American roster, and which will allow the United States to claim its rightful place in doing the right thing to improve the global environment.

As Americans we have to look at green jobs and a green economy, not as a “feel-good” effort but as a global war to protect American jobs. Without going on a war footing and utilizing our enormous domestic energy resources we are effectively trying to fight a war without using any guns. That is an unsustainable position. We have the troops to win this war. If we could, we would use the United States Marines; but we have the next best force: America’s truckers.

As a nation, we’ve always risen to the challenge to do what’s best for America. Investing in our own infrastructure, curbing our addiction to foreign oil and supercharging our workforce will benefit every American for generations to come.

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# Calculation of Jobs for NAT GAS Act

