

NGVAMERICA

Natural Gas Vehicles for America

NGVs: Revolutionizing America's Transportation

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Annual Summit-Conference

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This is the point at each year's conference that I get to give you my view on the "state of the NGV industry." The theme of this year's conference is "NGVs: Revolutionizing America's Transportation". For more than a decade, each year we've talked about how the industry was just on the cusp of exponential growth. But each year, there has always been some critical piece of the puzzle that was missing.

In the last 80s, we had great gas prices relative to gasoline and diesel, and we had growing support from the gas utilities. But we didn't have the OEM products. By the time Ford, GM and Chrysler were offering NGVs, our price advantage over petroleum had been cut and there was concern about future gas supply, so the economics wasn't there. When we finally got federal government support to promote NGVs, the light-duty OEMs had left the market and gas utility support was on the wane. As they use to say on Saturday Night Live, "It was always something."

I'm here to tell you that, for the first time, everything seems to be in place, and that revolution is taking place.

Let's start with gas supply. One of the biggest barriers we historically faced was concern that we were "running out of natural gas." Policymakers heard our arguments about how NGVs reduce use of foreign oil, reduce urban pollution and reduce greenhouse gases. And they liked that part. But they were afraid that, if we had a growing NGV market, there wouldn't be enough gas for the traditional markets, and grandma would "freeze in the dark."

Potential customers heard those arguments, too. But most customers are driven by economics, not public policy benefits. They were concerned that gas “shortages” would mean sharp increases in natural gas prices.

Those supply concerns are being bulldozed away by the reality that America’s gas supply is more than anyone had imagined -- or even hoped for. The ability to produce gas from shale and other tight formations has doubled America’s estimated economically recoverable resource base. And when the next Potential Gas Committee’s report is issued next year, that number will have increased even more.

For policy makers, this means that they can have their cake and eat it, too. We have more than enough domestically available natural gas to serve all the traditional markets, a growing power gen market AND a growing NGV market. For potential customers, this means confidence that natural gas prices won’t be skyrocketing.

Even the US Energy Information Administration predicts that wellhead gas prices won’t reach \$8 per thousand until 2030. Meanwhile, most forecasters believe that, when the global economies start expanding again, petroleum supply won’t be able to keep pace with petroleum demand, and we’ll again see \$4 gasoline and \$5 diesel – or more. The price advantage we’re currently seeing should continue -- or even grow.

Then there’s product. We’ve never had the number of NGV options that we have today, and our product offerings continue to grow. In the heavy-duty engine market where we compete with diesel, Cummins-Westport has been the leader, and they have plans to make more engines available for more applications. Now Westport itself has entered the market with their 15-liter HPDI engine, and they’ve also announced a development agreement with Volvo. Emission Solutions has been steadily impressing Navistar dealers and customers with their NGV version of Navistar’s replacement engines. They’ve been so impressive that, last month, Navistar announced that they would be offering ESI’s engine as an OEM option. You can now go to Freightliner and Kenworth dealers and buy natural gas trucks.

Every transit bus manufacturer now offers an NGV option. Every street sweeper manufacturer now offers an NGV option. Two of the three leading school bus manufacturers now offer an NGV option – and the third and largest is Navistar (so keep a good thought there).

To date, we have not had any EPA-certified diesel engine conversion systems. By next year, I expect we will see one, two or more such systems certified -- thereby making the 8 million heavy-duty trucks already on the road a target for us.

The medium-duty market is just as exciting. We have dozens of NGV options for shuttle buses, work trucks and medium-duty vehicles of all kinds.

Then, there's the light-duty market. Since the OEMs left the NGV market, we've seen a growing number of companies providing EPA-certified conversion systems for light-duty Ford and GM cars, vans and pickups. There now are seven such companies. And we've about to have the first EPA-certified conversion systems for Chrysler products. By next year, there'll be even more conversion companies in the business providing more conversion options..

It's also exciting about the OEMs, too. Honda, of course, never left. But now, some others are coming back to the market. Ford has already announced that their E-Series vans are now available with CNG-ready engines with hardened valves and other changes to make them more durable when running on natural gas. Later this year, CNG-ready 6.8-liter F-450s and F-550s will be available. And, by next year, Ford will be offering CNG and LNG conversion-ready commercial strip chassis, motor home chassis, and Transit Connects.

GM has gone further. Beginning this fall, they'll be offering NGV versions of their Chevy Express and GMC Savana vans right through their dealer network. And hopefully, there'll be more announcements from GM in the near future. We're also hearing all the right words from Chrysler. Two years ago, a delegation from the US NGV industry met with Fiat's CEO, Sergio Marchionne in Turin. Fiat makes more NGVs than any other OEM. Last year, they reported selling more than 200,000 NGVs – over 100,000 in Italy alone.

When asked if Fiat would consider importing NGVs into the US market, he said that he would love to. But he said Fiat had not had a presence in the US market since 1983. No dealers. No service. No nothing. Well ... now, through Chrysler Fiat, they now do. Marchionne is a big supporter of NGVs, and at June's Mackinac Policy Conference, he said "Chrysler Powertrain is actively investigating applications for CNG and is exploring solutions that would drive people to the technology." It can't be long before we see Chrysler becoming a US NGV OEM, too.

There's also a new company called HK Motors. HK's financing and leadership comes out of China. Its goal is to begin producing light-duty natural gas hybrids at a plant in Alabama beginning in 2013. Starting a new light-duty OEM certainly has

many challenges, and 2013 is a ways off. But they see the combination of natural gas and hybrid technology as their entry into the US market. If successful, this could be a game changer for us in the light-duty fleet AND consumer market.

We'll have two panels later on in the program that will provide much more detail about light-, medium- and heavy-duty natural gas offerings, and what we might expect in the future.

We've got the natural gas supply AND we have a growing number of natural gas- using car, truck and bus options. How about government support? There's very good news here, too. With the gas supply concerns laid to rest, for the first time in history, we have a natural gas caucus in the House of Representatives, and the Senate. These caucuses will be playing an increasing role in shaping energy policy in Congress. The House caucus, which has 65 members and growing, has already played a role in some legislative discussions.

There were always two big arguments that have been successfully used to dampen NGV support with Congress and other policy-makers. Supply was one of them. The other was greenhouse gases. You'd hear it all the time: "Natural gas is just a fossil fuel." They'd say it as if that alone should end the discussion. Well ... there are now piles of evidence that this argument is bogus, too.

For example, a recent California Air Resource Board-sponsored study showed that, on a well-to-wheels basis, NGVs produce 22 percent less greenhouse gases than diesel and 29 percent less than gasoline. This is as good as or better than a number of renewable options. Report after report point to NGVs' greenhouse benefits. Are we the sole answer to climate change? No. Are we an excellent part of the answer? You bet.

We've now blown away the policy arguments used against NGVs. The time when natural gas was a second-class energy citizen on Capitol Hill is over. We now have strong support for using more natural gas for all uses – including for transportation.

Meanwhile, policy makers are getting tired of empty promises. Whether on the left and the right or at the federal, state and local level, they're getting tired of waiting for so-called silver-bullet technologies to actually get to the market – and get to the market at a price anyone would be willing to pay. They want action now, and our message that NGVs as a here-and-how, proven option that is economically available today is increasingly getting through. That's why we have 146 House cosponsors for the NAT GAS Act, and why we have senior Senators from both parties as Senate co-

sponsors. In fact, NAT GAS Act provisions -- or some variation of them-- have been included in most House and Senate energy-related bills introduced this year.

We're also hearing favorable statements from the Obama Administration. Now ... don't misunderstand this. This Administration still primarily espouses electric vehicles as the "wave of the future." But our here-and-now message is getting through to the Administration, too – as is the fact that you can't run bigger vehicles on electricity alone. When the President proposed his stimulus bill, the focus was on "shovel-ready projects. I'm sure it must have been eye opening to DOE and the White House that 19 out of 23 projects funded under the \$300 million alt fuel program included NGVs.

At the state level, we're also seeing more government support than we've ever seen. Obviously, California and Utah continue to have very pro-NGV government programs in place. But those states have been joined by Oklahoma, Louisiana, Colorado and others. And we're hearing rumblings that states such as Florida and North Carolina are considering NGV incentives, too.

At the local level, city governments all across the country are now embracing NGVs. In fact, in June, the U.S. Conference of Mayors unanimously passed a resolution urging Congress to enact the NAT GAS Act and other legislative efforts to expand the use of NGVs.

So ... we have the supply. We have the NGVs. And we have more government support. What else is lining up in our favor?

Well ... the natural gas industry. As I mentioned, back in the 1980s, almost all gas utilities were behind NGVs. In fact, the NGV Coalition – our predecessor name – was created by the gas utilities. But demand didn't grow as fast as expected, and the regulatory climate changed for many of them. So, while some – like Southern California Gas, National Grid and Questar -- stayed with the market all this time, many utilities backed away from NGVs in the 1990s. Now, a growing number of them are embracing NGVs again.

In many parts of the country, residential, commercial and industrial demand is flat or declining – driven by conservation and a weak economy. NGVs, on the other hand, offer the promise of growth. That's why, in the last three years, the number of gas utility members of NGVAmerica have almost tripled.

At the other end of the pipeline are the producers. Historically, gas producers didn't play a big role in growing demand for natural gas. And, in fact, many of the oil

and gas majors were actually hostile to NGVs. WSPA – the Western States Petroleum Association – has been one of the most active voices in opposition to many of California’s NGV programs. Well ... the rise of gas shale and the growth of independent producers have changed all that.

First, the independent producers have formed America’s Natural Gas Alliance to promote the use of natural gas. ANGA already has had a big impact in Congress, and their national advertising has been effective in raising awareness of the benefits of natural gas. Fortunately for us, NGVs are one of their market priorities. Through ANGA, these producer companies are now members of NGVAmerica, and are playing a major role in establishing our policy positions.

Meanwhile, a number of producers themselves are now playing a big role locally in expanding the NGV fueling infrastructure AND in adding NGVs to their own fleet. Later today, you’ll be hearing a panel on how local coalitions and alliances are expanding NGV fueling infrastructure. Gas producers are playing a key role in all of them. Further, the America Gas Association and ANGA have established a transportation collaborative, and they have a number of projects underway that will help grow the NGV market.

Keep in mind, it’s not like we’re breaking new ground here. The rest of the world is way ahead of us. While we have less than 150,000 NGVs in the U.S., there are over eleven and a half million NGVs on the world’s roads. There are seven countries that have over a half a million NGVs each. Pakistan alone has over two and a half million. Around the world every major light-duty OEM makes NGVs. GM makes nine NGV models somewhere. And counting the new US vans, it’s up to 10.

You’ll be hearing more about the international market and the associated policy drivers later in the program. But my point here is that -- what this shows is that, with proper government policies and proper economics, it certainly can be done.

Finally ... what’s the alternative? If the national goal is to displace foreign petroleum while reducing greenhouse gases and reducing urban pollution, NGVs are the best option. Not the only option, for sure. But the one that can make the biggest difference the fastest. There are plenty of alt fuel and advanced technology options available now or over the horizon. None of those are perfect. They all face some mix of economic barriers or technology barriers or infrastructure barriers or natural resource barriers.

NGVs certainly have ours. But our barriers are mere speed bumps compared to the mountains that many of these other fuels and technologies need to overcome.

For 100 years, our transportation sector has been dependent on one fuel – petroleum. The future will be different. Petroleum will clearly dominate for a very long time – although, through hybridization, plug-hybrids and other technologies they’ll be using petroleum more efficiently. But we’ll be seeing a very rapid growth of nonpetroleum vehicles, too – including vehicle powered by electricity, ethanol, biodiesel, propane and others. But, for all the reasons I just covered, leading the pack will be NGVs – especially, but not exclusively, in the bigger vehicle markets.

As I said at the start, for the first time, everything seems to be in place for the NGV revolution to actually take place. This is the largest NGV conference we’ve had in more than a decade, and I believe that reflects the excitement we’re all feeling about what’s happening – and what will be happening.

Natural gas demand is about 23 trillion cubic feet a year. The entire on-road transportation market is about the same size. Which means that, if natural gas captured the entire on-road transportation market, natural gas demand would double. That’s *probably* an unreasonable near-term goal. But I think that what IS reasonable is to grow the market to one or one-and-a-quarter trillion cubic feet by 2020. And, by 2030, possibly tripling that to 3.5 trillion cubic feet. It’s not only reasonable it’s doable – and I may be conservative.

We have a huge natural gas supply. We have a growing selection of clean, economic light-, medium- and heavy-duty natural gas vehicles. We have policy makers at all levels of government embracing the NGV option. We have the industry united in growing the market, and more.

If we work together as an industry, and take full advantages of all our opportunities, NGVs truly will be “revolutionizing America’s transportation.”