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## Ford Fusion Hybrid

Ford's new Fusion Hybrid and the same-chassis Mercury Milan Hybrid will be able to run at up to 47 mph in pure electric mode with new NiMH batteries by Sanyo-Delphi.



The two Ford hybrid models for 2010 go on sale this spring. **Page 5**

## Lucky 44?

*A New President of the United States Means New Opportunity As the Nation Finally Gets Serious About Energy Independence*

Clean vehicle advocates are optimistic as America gets ready to inaugurate a new president — at noon a week from tomorrow.

The financial crisis and foreign affairs will take precedence (as, likely, will U.S. health care reform), but energy independence is high on the list for incoming President Barack Obama. That means a raft of opportunities for alternative fuels and for alt fuel and alt fuel vehicle equipment suppliers, and for electric vehicles and the battery and related equipment companies that represent the key to their success.



*The man who will end dependence on foreign oil? Barack Obama is to be sworn in as the 44th President of the United States on January 20.*

## Tax Policy Will Be Key

"I am very optimistic," says Todd Campbell, director of public policy at Clean Energy Fuels.

"You're going to see alternative fuels take hold in a very different way than they have in the past."

2009 priorities for NGV America, the natural gas vehicle trade association of which Clean Energy is the lead member, include making the 50¢-per-gallon excise tax credit on natural gas for vehicles permanent (it will otherwise expire on **December 31**) and an extension of the credit to individuals with home fueling units. NGV America would also like to see an increase in vehicle tax credits to 100% of the incremental cost

*more on page 2*

## Impco's Back In

*Unit of Prospering FSSI Sets North America Gaseous Fuels Unit*

Fuel Systems Solutions, Inc. logged record sales for the first three quarters of 2008, with the bulk of its road vehicle revenues coming from its gaseous fuel systems-supplying BRC unit, which is based in Italy. Now FSSI's Impco Technologies unit, which has focused on industrial markets in recent years, says it will detail its new North American Automotive Alternative

Fuel Division early next month.

"We will bring our technology to the U.S.," vowed FSSI CEO Mariano Costamagna.

Separately, FSSI is buying Tomasetto Achille of Argentina for \$22 million.

**More on Page 8**



Fuel Systems Solutions

## AFS Trinity's Audacious Plug-In Plan

Start-up says the U.S. government should invest \$2.5 billion to commercialize its 150-mph Extreme Hybrid in an OEM plant that would otherwise be closed down. **Page 6**



## Government

### Welcome, Mr. President *(continued)*

of the NGV — with a provision that *the credit be doubled* for fleets buying more than 100 NGVs in a year. NGVAmerica is seeking a new partial credit for bi-fuel vehicles with limited conventional fuel range, broadening of the alt fuel tax credit scheme so that



NGVAmerica would like to see vehicles like these Ford F-150s built as NGVs

public agencies may receive an equivalent incentive, a mandate that the U.S. EPA “give higher priority to the replacement or repower of diesel vehicles with natural gas,” and a mandate that the Department of Transportation

designate \$100 million per year in highway funds to pay for natural gas school buses and infrastructure.

Rahm Emanuel, the new White House chief of staff, as a congressman introduced aggressive legislation in support of NGVs (*F&F*, July 21).

### The Electric Drive Agenda

NGVAmerica is further asking for tax credits to the OEMs for NGV production, and \$10 billion for OEMs and their suppliers for the re-tooling of manufacturing facilities in the U.S. to produce NGVs. The association would like to see a more relaxed regulatory environment for vehicle conversions too.

On the electric vehicle side, the Electric Drive Transportation Association is pushing for federal

research funding to the tune of nearly \$600 million over two years, tax credits for both EV manufacturers and the EVs themselves, and half a billion dollars, again over two years, to accelerate the near term deployment of electric drive vehicles and infrastructure.

“The production and proliferation of electric drive vehicles will increase the green technology workforce, redirect funds spent on foreign oil to domestic priorities and reduce greenhouse gas emissions,” EDTA president Brian Wynne told Congressional leaders in December. “Congress has the opportunity to build a 21st century economy that creates green jobs, a stronger economy, and cleaner, more secure nation,” he said.

NGVs and EVs both fare better when fuel prices are high. Might President Obama institute a new tax regime to set an effective high floor?

Not likely, says Patrick O’Connor, legislative counsel for the National Association of Fleet Administrators. He expects, however, prompt reauthorization of federal highway legislation this year, and “one of the options on the table,” he says, “is to increase the gasoline and diesel excise tax.”

Enough to keep the price of gasoline at the level of \$4? “It’s a great idea that’s getting much more support,” says NGVAmerica president Rich Kolodziej.

Critics who say high gasoline taxes hurt poorer Americans favor a system of vouchers or rationing that would penalize only big users. It’s all possible.

### ‘From Shock to Trance’

Obama pledged this past summer, as fuel prices soared, to help create 5 million new jobs “by strategically investing \$150 billion over the next ten years,” and to put 1 million plug-in hybrid cars that can get up to 150 miles per gallon on the road by 2015 — “cars that we will work to make sure are built here in America”). The Obama-Biden campaign also pledged to implement “an economy-wide” cap-and-trade carbon emissions program to reduce greenhouse gas emissions 80% by 2050.

Oil prices, and consequently the prices of diesel and gasoline, dropped precipitously as the economy tanked this past autumn. Interest in natural gas vehicles waned and sales of hybrid vehicles dropped.

“This has been our pattern,” Obama said in a broadcast interview following his election victory.

“We go from shock to trance.”

Why worry about energy independence when oil is cheap again? “It’s *more* important,” the president-elect said. “It may be a little harder politically, but it’s *more* important.”



Might 100-mpg cars become commonplace?

# FLEETS & FUELS

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## International Policy

### EU Energy & Climate

*Mixed Bag of Six Clean Fuel Vehicle Directives: It's Disjointed, But Moving in the Right Direction*

The wide-ranging Climate and Energy package adopted by the European Parliament in Strasbourg on December 17 represents an ambitious attempt to lay out a comprehensive, long-term plan to reduce greenhouse gas emissions from 1990 levels by 20%.

Authorities want to have 20% of the European Union's total consumption satisfied via renewable energy while achieving 20% savings through energy efficiency by 2020. The "package," a collection of six Directives, affects all energy sectors.

#### No Standout Alt Fuels Opportunity

For the transportation sector and alt fuels the package is a somewhat disjointed compilation of mandates and incentives that will have varying impacts – both positive and negative – on the different fuel groups and technologies.

Liquid biofuels receive the most attention and support. Electric vehicles are on-going favorites and hydrogen fuel cells still represent the long-term vision.

The other gaseous fuels – natural gas, and liquefied petroleum gas (LPG/propane), are highlighted and included primarily by definition only.

Renewable biomethane, included under the banner of biofuels, is recognized for its low carbon dioxide contribution but is seen as more likely to generate electricity than to fuel natural gas vehicles.

#### Loopholes and Pitfalls

Companies hoping to help implement the transportation elements of this amorphous Energy and Climate Package will have to contend with pitfalls, loopholes, and derogations. Nevertheless, there are many European policy makers who are committed to developing various petroleum alternatives so even incremental steps that can be achieved will be in the right direction.

Energy and Climate Package directives include

- **Carbon Dioxide and Cars**, which requires CO2 reductions to 120 gram per kilometer by 2015 and 95 g/km by 2020, with financial incentives for E85 in EU member states where 30% of fuel stations sell E85. Vehicle manufacturers can receive a "supercredit" equal to 3.5 cars for each registered flex-fuel vehicle emitting less than 50 g/km CO2. The incentive drops to 1.5 cars by 2014 and ends after 2015. To date, only electric vehicles can reach such low CO2 limits.

*This report was prepared by Dr. Jeff Seisler, CEO of Clean Fuels Consulting in cooperation with Kevin Leydon, CEO, Kevin Leydon Associates (both of Brussels)*

- **Fuel Quality** tightens environmental quality of fuels and introduces a phase-in of 10% ethanol in gasoline;
- **Promotion and Use of Energy from Renewable Sources** includes a mandatory target of a 20% share of renewable energies in overall EU energy consumption by 2020 and a mandatory 10% minimum target for the share of biofuels in transport petrol and diesel consumption by 2020. After a long debate to define "sustainable" biofuels due to concerns over food-chain and other impacts, limits were set on CO2 savings required



Jeff Seisler

- for each biofuel: 35% to 2017 and 50% CO2 reduction thereafter for existing biofuel production and 60% for new plant start-ups after 2017. Current generation European biofuels such as ethanol from sugar beets cannot achieve the 50% so the levels will be subject to review.
- **Shared Effort to Reduce Greenhouse Gas Emissions** assigns each European member state an emissions reduction objective for construction, road and maritime transport, services, agriculture, waste, and small industrial installations. These are sectors omitted from the EU Energy Trading Directive, another part of the package, which requires other large energy and industrial sectors to reduce their emissions by 10% by 2020 (in comparison to 2005 emissions). Each country's specific obligation to reduce emissions in the transport sector has yet to be established.

The last element of the package, **Carbon Capture and Storage**, sponsors demonstrations programs to sequester CO2 emissions mostly from large industries and does not involve the transport sector.

Separate from December's six-part package, a **Clean and Efficient Vehicles** directive mandates government agency use of alternative fuel vehicles. Those AFVs could be an important market stimulus when coupled with the other requirements of the Energy and Climate Package.

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Clean vehicles have gotten the attention of European policymakers

## Companies

### Keeping Up the Pressure

*Toyota Is Pulling Out the Stops at Detroit Show, Promises PHEVs for Utilities Starting This Year*  
Global automotive leader Toyota is going all out at the North American International Auto Show in Detroit this week, emphasizing an electric future involving new vehicles not only with new batteries but batteries supplied by new affiliated factories.

Toyota is pushing ahead its schedule for first deployment of plug-in hybrid electric vehicles with utilities, from 2010 to later this year.

#### 'Electrified or Not,' i.e. Alt Fuels Like CNG

A new Camry Hybrid for 2010 is being shown and, beyond electricity as an alternative fuel, Toyota is talking up its display late last year at the Los Angeles Auto Show of a Camry Hybrid fueled solely by compressed natural gas (*F&E*, September 29).

"We cannot lose sight of our future," environmental/public affairs group VP Irv Miller said in an NAIAS release. "Nowhere is this more important than with our industry's duty and commitment to provide true sustainable mobility with vehicles that significantly reduce fuel consumption, our carbon footprint and overall greenhouse gases," Miller said.

Toyota vows to "broaden the scope of its advanced alternative-fuel vehicle development."

The firm said it will launch an urban commuter battery EV by 2012. The FT-EV concept on show in Detroit shares its platform with the "revolutionary" new four-seat iQ urban commuter, which it says is "already a huge hit in Japan."

"Last summer's four-dollar-a-gallon gasoline was no anomaly. It was a brief glimpse of our future," Miller said. "We must address the inevitability of peak oil by developing vehicles powered by alternatives to liquid-oil fuel, as well as new concepts, like the iQ, that are lighter in weight and smaller in size. This kind of vehicle, electrified or not, is where our industry

### California Warns Truckers

Trucking industry workers who have had regular exposure to diesel and other types of vehicle exhaust showed an elevated risk of lung cancer with increasing years, says the California Air Resources Board, citing a study of cancer deaths by job type in 31,135 Teamsters members from 1985 to 2000.

"The more we study these emissions the more dangerous it appears," agency chair Mary Nichols said in a release.

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Toyota is showing a concept battery car called the FT-EV based on the iQ Japan commuter car, and the HS 250h, the first purpose-built hybrid by Lexus must focus its creativity."

Promoting its hybrid drive technology as its strategic core, Toyota says it will launch as many as "ten new hybrid models by the early 2010s, in various global markets." The third-generation Toyota Prius is being shown for the first time at NAIAS, as is the new Lexus HS250h, the first purpose-built Lexus hybrid.

Beginning in late 2009, Toyota will start global delivery of 500 PHEV Prius cars with lithium ion batteries from Toyota's Panasonic EV Energy venture.

"Of these initial vehicles, 150 will be placed with U.S. lease-fleet customers," Toyota says, "for market and engineering analysis."

"Future customers will have high expectations," Miller said, terming the PHEV program "a key first step in confirming how and when we might bring large numbers of plug-in hybrids to global markets."

The third-generation Prius has been designed to accommodate either the lithium ion battery pack with plug-in capability, or the nickel metal hydride battery for the conventional gasoline-electric system.

#### Automakers 'Must Look' to Alt Fuels

Toyota noted when it unveiled the dedicated-CNG Camry Hybrid concept car that "growing demand for liquid petroleum simply and effectively will exceed supply," and that "before that occurs, automakers must look to vehicles powered by alternative fuels.

"We believe CNG will be one of those alternatives."

"Current CNG benefits are amplified by rapidly changing market conditions," Toyota said. "Natural gas is a clean and safe gasoline alternative... proven worldwide natural gas reserves are estimated to last until 2100 and have the potential to last until 2200."

The concept Camry Hybrid has twin Type IV CNG tanks from Lincoln Composites holding the equivalent of 8 gasoline gallons. Single-fill range is estimated at more than 250 miles.

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#### It's Not Just Toyota

Seemingly all the automakers are trumpeting electricity at NAIAS 2009.

GM is showing a PHEV concept car called the Cadillac Converj and Chrysler is elaborating on its ENVI plans.

Honda is challenging the Toyota Prius with its all-new Insight, also a purpose-designed hybrid electric vehicle, right.



## Electric Vehicles

### Ford Fusion Hybrid Battery

*A Better Nickel Battery from Sanyo-Delphi Keys 41-mpg Performance of Fusion Hybrid*

Better batteries are one key to the performance of the new Ford Fusion Hybrid sedan (and companion Mercury Milan Hybrid), which is to achieve EPA fuel efficiency of 41 miles per gallon, city, and be able to travel at 47 mph on its electric drive alone.

“It is a brand new cell chemistry,” hybrid propulsion systems application manager Gil Portalatin told *F&F* last week, describing the vehicle’s new nickel metal hydride battery cells, by Sanyo. The change is not in the anode or cathode, he says, but in the material that separates them when they are wound. The result 28% more energy capacity and far better thermal performance, allowing for simpler air cooling.



under the hood of the Ford Fusion Hybrid

Ford Fusion Hybrid battery packs are made by Delphi, Portalatin says. The vehicle’s Ford-designed powertrain is manufactured by AW (Aisin).

#### \$27,270 for the Fusion Hybrid

“We are now able to offer even better range of travel on battery power at a greater speed, thanks to a more efficient, seamless transition between the battery-powered motor and gasoline-driven engine,” Ford global product development VP Derrick Kuzak said when the new hybrid was unveiled in Los Angeles in November. City driving range on a single tank of gasoline is expected to be more than 700 miles.

The vehicle is to go on nationwide sale this spring with an MSRP of \$27,270.

Ford says it will launch a battery electric van next year and a small battery car with Magna in 2011.

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Faster Freight Clean Air California takes place March 23-25 in Long Beach

### V2G Is Licensed in Delaware

The municipal utility in Newark, Del., says it’s the first in the U.S. to license vehicle-to-grid technology allowing electric vehicles to store and provide power for the local grid. A University of Delaware team is testing V2G at two locations with partners including **AC Propulsion**.

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### Ener1 Seeks \$480 Million to Expand

Ener1, Inc. (NASDAQ:HEV) is seeking \$480 million in low-interest Department of Energy loans to allow its EnerDel manufacturing subsidiary to double existing capacity in Indianapolis to the level of 600,000 lithium ion battery packs for hybrid electric vehicles per year by 2011.

The Advanced Technology Vehicle Manufacturing Incentive Program money would also allow a second, twice-as-large plant capable of producing battery packs for up to 1.2 million HEVs annually by 2015. “A critical new industry is taking shape,” Ener1 chairman and CEO Charles Gassenheimer said in a release. “Building a strong U.S. supply chain in this rapidly emerging industry is a top priority to maintain competitiveness vis-a-vis foreign manufacturers that have already invested very heavily.”

EnerDel, CEO Ulrik Grape, 317-585-3443;

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### A123 Seeks \$1.84 Billion to Start Production

A123Systems, citing a partnership with Chrysler for the automaker’s ENVI electric vehicles, is seeking \$1.84 billion in DoE ATVMIP loans to build U.S. lithium ion battery facilities, with capacity for support five million hybrid vehicles or half a million plug-in electric vehicles per year by 2013, employing 14,000 people. “This new facility would greatly accelerate this change and help ensure that the American economy replaces its dependence on foreign oil with reliance on advanced, homegrown batteries,” A123Systems president and CEO David Vieau said in a release.

The first A123 plant would be in southeast Michigan.

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### Odyne Is Folding Its Tent

Long Island’s Odyne, which burst on the scene in 2007 with an aggressive plan to apply proprietary battery management technology to take heavy duty hybrid electric vehicles to plug-in operation, is suspending operations.

Odyne engaged Matrix USA “to explore strategic alternatives” late last year, as it said the presence of Eaton in the heavy duty hybrids marketplace made it impossible to compete (*F&F*, October 27).

“After careful consideration,” Odyne said January 6, management “has determined to wind-down the operations of the company, terminate substantially all of its employees, discontinue its operating leases, resolve its outstanding liabilities and liquidate its remaining assets.”

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## Electric Vehicles

### AFS Trinity Seeks \$2.5 Billion Boost

*Firm Wants to Commercialize 'Extreme Hybrid' In an Existing OEM Plant as Software is Refined*

AFS Trinity wants the government to ante \$2.5 billion in "green re-tooling" money to save an existing OEM factory by using it to produce vehicles with the firm's "Extreme Hybrid" plug-in drivetrain. Some 80% of the money would be paid under subcontract to the U.S. carmaker, AFS says, citing an estimate from its partner Ricardo.

The XH-150 (for 150 mpg) drive uses lithium batteries to store energy and ultracapacitors for power, an arrangement AFS says extends the life of the batteries, helping make PHEVs economical.



*XH drive uses ultracaps to accelerate, protecting batteries from deep-cycle damage*

The company's emphasis now is on forging the "relationships" to make production in an OEM factory possible, says technology chief Don Bender. At the same time, he says, AFS continues to advance and refine the software that governs the XH drive.

The XH-150 drive has been demonstrated nationwide in a pair of modified Saturn Vue SUVs.

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## Government Opportunities

### Clean Cities Petroleum Reduction

The Department of Energy's National Energy Technology Lab in Pittsburgh is seeking proposals for Clean Cities Petroleum Reduction Technologies Projects for the Transportation Sector. Areas of interest include alternative fuels fueling infrastructure, incremental costs of dedicated alternative fuel vehicles, and education and outreach.

As much as \$6 million is expected to be available, and as many as 24 awards anticipated. Responses to solicitation DE-PS26-09NT01236-00 are due February 27.

DoE/NETL, Janet Laukaitis, 412-386-5173; [janet.laukaitis@netl.doe.gov](mailto:janet.laukaitis@netl.doe.gov); [www.netl.doe.gov](http://www.netl.doe.gov)

### International Methane-to-Markets

The U.S. EPA says it has some \$7 million to fund as many as 40 projects and activities to "advance methane recovery and use as a clean energy source internationally," and is seeking proposals from international and local governments, states, not-for-profit organizations, and universities.

Proposals under solicitation EPA-OAR-CCD-09-03 are due March 5. Methane-to-Markets initiative.

EPA, Lynda Garland, 202-343-9719; [garland.lynda@epa.gov](mailto:garland.lynda@epa.gov); [www.grants.gov](http://www.grants.gov)

## Natural Gas Vehicles

### Deep Discount Threatened

*CNG Advocates in Utah Fighting to Keep Their Lowest-in-the-Nation Prices of Fuel*

Drivers of natural gas vehicles in Utah have enjoyed the lowest fuel prices in the U.S., but are facing a significant increase behind a ruling last month by the state's Public Service Commission.

Prices are to rise from about 88¢ per gasoline gallon equivalent to \$1.14 in the coming weeks and \$1.43 on July 1 (based on current market rates, which the PSC has said should prevail).

"We are compelled by the broader public interest," states the agency, "to completely eliminate the subsidy... which has kept the price of CNG artificially low at the expense of other ratepayers, sooner rather than later."

"For those who have purchased a CNG-fueled vehicle to address energy security and/or air quality concerns, the contribution to resolving these issues remains regardless of the price of CNG," PSC said.

Utah drivers are having none of it. John Mitton of NaturalDrive, which has a new certification for CNG Impala conversions (*F&F*, January 1) and who runs the popular CNG Chat website, is urging drivers to protest the ruling.

### Cheap Wexpro Gas for All?

A key argument is that Utah's Questar utility developed the so-called Wexpro gas field in Wyoming with ratepayer money. Thus Utah ratepayers, who account for the bulk of CNG sales in the state, should be allowed to enjoy the fruit of that investment.

"The PSC is going to re-open this," Mitton told *F&F* last week.

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### Clean Energy San Francisco

San Francisco's Yellow Cab in has extended its CNG deal with Clean Energy (NASDAQ:CLNE) for ten years, the supplier says. Yellow's taxis use more than 350,000 gallons of CNG per year, Clean Energy says, stating that the 24/7 public access station can dispense 1,000 gallons per hour, and is "the largest U.S. CNG taxi station of its kind."

"We look forward to the continuing addition of more CNG cabs to its already sizeable 100-cab CNG fleet," Clean Energy VP Jim Harger says in a release.

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## International NGVs

### Biomethane Buses for Stockholm

Sweden's Storstockholms Lokaltrafik expects to have 80 Stockholm transit buses running on biomethane fuel this year. Based on existing supply contracts with two suppliers of wastewater-derived fuel, SL will increase the number of biomethane buses to approximately 250 over the next four years, and routes will expand to the Stockholm suburbs.

As many as 500 biomethane buses could enter service if fuel is available, SL environmental officer Stefan Wallin told *F&F* last week. The agency operates Volvo and MAN buses and carries some 700,000 passengers daily. Its biomethane efforts were noted early this month by the Biogasmax partnership in Lille, France.

SL's commitment is helped by the fact that back-up will be available as a new liquefied natural gas import terminal comes on line at Nynäshamn, some 20 miles south of Stockholm, notes Volvo veteran Peter Boisen, who now chairs NGVA Europe. Biogasmax is holding a **European biomethane conference** in Gothenburg, Sweden **September 7-9**.

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### from the Gas Vehicles Report

- India's Toyota Kirloskar will introduce a natural gas version of its Innova as early as the end of this month, according to the international *Gas Vehicles Report* (GVR).

CNG systems, to be fully warranted by Toyota, are being supplied by Minda Industries, which has a joint venture partnership with Impco called Minda Autogas.

- Tanzania has embarked on a major NGV program, hoping to deploy some 400 CNG vehicles in Dar es Salaam by this coming March. Partners include Tanzania Petroleum Development and PanAfrican Energy, a unit of Orca Exploration, with an initial \$3 million earmarked covering two new Dar es Salaam fueling stations for the first quarter of 2010. The goal is to convert at least 10,000 cars, buses and trucks to natural gas at a cost of some \$30 million over five years.



- Peru will field its 3,000th CNG taxi this month as part of an aggressive plan to take NGVs from Lima to the cities of Chinchá, Cañete, Ica and Nazca, with approximately 150 fueling stations to be in place by year-end.

The GVR is organizing a major NGVs trade show in Madrid this coming June, as well as the next world meeting NGV2010Roma, in June 2010 in Rome ([page 9](#)).

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### IANGV Priorities for 2009

Priorities for the International Association for Natural Gas Vehicles in 2009 include harmonization of NGV standards, an ongoing emphasis on compressed natural gas cylinder safety and handling, and supporting industry members in forming national NGV associations, says Brett Jarman, IANGV's new executive director.

ISO 15500 requirements governing CNG fuel system components are currently undergoing revision, Jarman notes. Terminology is toward the top of the list, with terms such as "bi-fuel" and "dual-fuel" to be more rigorously defined.

Rich Kolodziej, president of NGVAmerica, is the current IANGV president as well. Kolodziej wants to see both the world population of NGVs and national NGV association numbers double during his two-year term.

The next world NGVs meeting doesn't take place until June 2010 in Rome, but IANGV will have a presence at the GNV2009 NGV show in Spain this June, at the International Gas Union's World Gas Congress meeting in Argentina in early October ([see page 9](#)), and at **ANGVA 2009** in Donghae, Korea **October 27-29**.

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### Opportunity in Canada

The Ontario Ministry of Transport's Green Commercial Vehicle Program is expected to pave the way for natural gas refuse trucks in Canada, says Alicia Milner, who heads CNGVA, the Canadian Natural Gas Vehicle Alliance.

It's a four-year, \$15 million program and represents "the first serious funding we have had in Canada for quite a while," Milner says. As much as \$15,000 per vehicle is available for private operators.

Separately, the City of Toronto is expected to seek bids on a natural gas refuse truck demonstrator later this month, Milner reports. In Canada's West, municipalities in British Columbia have pledged to be carbon-neutral by 2012, she says, further stimulating demand for clean-fuel vehicles. CNGVA, president Alicia Milner, 613-564-0181;

[alicia.milner@cngva.org](mailto:alicia.milner@cngva.org); [www.cngva.org](http://www.cngva.org)



### 886 Miles of Biofuels

Clean Cities is talking up the 886-mile, Lake Erie-Gulf of Mexico I-65 Biofuels Corridor as the nation's first, crediting officials of the Indiana Office of Energy and Defense Development and other organizations in four states. Some \$1.3 million in federal funding made possible 31 E85 and five B20 stations, as well as a biodiesel blending facility on the Indiana-Ohio border, says a Clean Cities report. Matching funds for were provided by individual infrastructure owners.

IOEDD, Eric Burch,

317-232-8944; [eburch@oed.in.gov](mailto:eburch@oed.in.gov); [www.in.gov](http://www.in.gov)

Central Indiana Clean Cities, Kellie Walsh,

317-834-3754; [kwalsh@ccicca.org](mailto:kwalsh@ccicca.org); [www.cicca.org](http://www.cicca.org)

## Strategies

### Fuel Systems Solutions

*Prospering Parent Is Bringing Impco Back, Moves to Buy Argentina's Tomasetto Achille*  
Fuel Systems Solutions, Inc. (NASDAQ:FSYS) is on the move, bringing its Impco Technologies subsidiary back into U.S. road vehicles with hardware for bi-fuel natural gas and propane vehicles, investing \$22 million to buy the Buenos Aires-based owner of the Tomasetto Achille line of compressed natural gas vehicle conversion products, and expanding its Italian subsidiary BRC, which supplies both OEMs and the aftermarket.

"Our technology and U.S. manufacturing facility provides Fuel Systems a strong and unique base to enter the U.S. automotive market," FSSI president Matthew Beale said in a release last week.

"We will begin by serving U.S. automotive fleets."

"The next step," Beale said, "will be to replicate our original equipment manufacturers and delayed-OEM model to distribute to U.S. consumers." The delayed-OEM process allows FSSI to take delivery of vehicles from the manufacture, install its bi-fuel systems, and deliver the completed vehicles directly to dealers.



Fuel Systems Solutions

"We're going to pool our resources and work as a team," says Tim Standke, director of automotive operations for Impco Technologies.

Impco already holds several certifications for its dual-fuel systems on General Motors engines, and expects by April to have more than half a dozen more for both CNG and propane for 5.3- and 6.0-liter engines, with E85 capability for the smaller line.

One of the first orders of business for Impco's new North American Automotive Alternative Fuel Division, Standke says, will be to try to change the way that certifications are issued so that the far larger automotive market may be addressed.

### Fuel Systems Solutions at a glance

**Headquarters:** Santa Ana, California

**Employees:** Approximately 1,200 worldwide

**Key Subsidiaries:** BRC Gas Equipment in Cherasco, Italy and Impco Technologies in Santa Ana, Calif.

**Products:** Natural gas and propane engine systems, both OEM and aftermarket, sold in approximately 60 countries, with a volume some 800,000 kits per year.

**Key Customers:** PSA Peugeot-Citroën, Ford, Jaguar, Daimler, MAN, Volkswagen, Fiat-Tofas, Mitsubishi, Chevrolet, Subaru, Maruti Suzuki, Dewan-Hyundai.

#### Fuel Systems Solutions by the Numbers

(in thousands of dollars)

	three months ended		nine months ended	
	September 30, 2008	September 30, 2007	September 30, 2008	September 30, 2007
Revenues	105,539	65,235	298,423	185,621
Gross Profit	30,698	15,705	86,762	43,971
Net Income	11,867	(359)	22,701	1,055

end-of-year 2008 results for Fuel Systems Solutions, Inc. (NASDAQ:FSYS) are expected to be released in March

"We want to change the wording and open up the marketplace," he says. New political leadership and increasing concerns about global warming and energy independence, Standke told *F&F* last week, are making agencies like the U.S. EPA and California Air Resources Board more receptive to a streamlined process.



"The climate's changed," he says, since concerns about emissions and OBD compatibility prompted a tightening of regulations a decade ago.

"Our goal is to try to make it easier to get to the vehicles that are already out there," Standke adds. To that end, he says, "We'll be setting up our own installer network."

In Italy, FSSI acquired an outfit called Zavoli to complement BRC's OEM systems with aftermarket capability (the Zavoli acquisition closed in July 2007). Last month, FSSI said that BRC's new delayed-OEM installation plant in Pisa would be fully operational early this year. The facility complements new plants in Livorno, Italy and in Czakram, Poland. Annual capacity exceeds 100,000 vehicles.



FSSI, which saw its sales surge by more than 60% during the first nine months of 2008 (net income rose more than 20-fold) is buying Argentina's Tomasetto Achille line by acquiring Buenos Aires-based Distribuidora Shopping SA. DS, FSSI says, notched sales of \$33 million for its fiscal year ended April 30, with exports accounting for more than 75% of consolidated revenue. The company has a 150,000-square-foot production facility and has more than 250 employees in Argentina.

#### 'Comprehensive Product Range'

"DS is an outstanding fit with our transportation business," Beale said last month. "The transaction reinforces our natural gas vehicle product line and expands our global manufacturing and distribution footprint.

"We are also fortunate to welcome a top quality management team led by DS's founder, Carlo Evi," Beale said. "Despite the current challenging economic environment, we continue to take the steps necessary to position our business to capture the clear medium term growth opportunity in our markets."



"Our combined companies will offer a comprehensive product range in the market for alternative fuel systems."

FSSI will launch Impco's new automotive unit on February 6 as it marks Impco's 50th anniversary at its Santa Ana headquarters.

### Key Contacts at Fuel Systems Solutions

Matthew Beale, president

Mariano Costamagna, CEO

Bill Larkin, CFO, 714-656-1320; [blarkin@fsys.com](mailto:blarkin@fsys.com)

Tim Standke, Impco North America automotive, 714-656-1250; [tstandke@impcotecnologies.com](mailto:tstandke@impcotecnologies.com)

Marco Seimandi, BRC marketing director, +39-172-4868520; [m.seimandi@brc.it](mailto:m.seimandi@brc.it)

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[www.fuelsystemssolutions.com](http://www.fuelsystemssolutions.com)  
[impcotecnologies.com](http://impcotecnologies.com); [www.brc.it](http://www.brc.it)

## Events

### Target 2030 This Week in Sacramento

January 14-15, Target 2030: Solutions to Secure California Transportation, Energy and Climate Future, an interactive symposium organized by Calstart.

Hyatt Regency Hotel in Sacramento.

Timed to immediately precede the inauguration of President Barack Obama and "highlight California's unique role in pursuing leading strategies to reduce transportation-related greenhouse gases and oil dependence."

Calstart, Debby DuBose, 626-744-5600; fax 626-744-5610; ddubose@calstart.org; [www.calstart.org](http://www.calstart.org)

### FFCA California Discounted Until Friday

March 23-25, Faster Freight Cleaner Air California at the Long Beach Convention Center in Long Beach, Calif.

Organized by Santa Monica, Calif.-based Gladstein, Neandross & Associates.

Early registration discount ends January 16.

GNA, Sean Budway, 310-894-1496  
or U.S. toll-free 800-993-0302; fax 310-314-9196;  
sean.budway@gladstein.org; [www.ffcacalifornia.com](http://www.ffcacalifornia.com)

### Landfill Methane This Week in Baltimore

January 13-14, 12th LMOP Annual Conference and Project Expo, organized by the Landfill Methane Outreach Program of the U.S. EPA.

At the Hilton Baltimore in Baltimore, Maryland.  
EPA/LMOP, Rachel Goldstein, 202-343-9391;  
goldstein.rachel@epa.gov; [www.epa.gov/lmop](http://www.epa.gov/lmop)

### GNV2009 in Madrid This Coming June

June 17-19, GNV2009 international trade fair for natural gas vehicles in Madrid, Spain. Organized by the NGV Communications Group, publishers of the multi-lingual *Gas Vehicles Report*.

for The GVR (Italy), Claudio Kohan,  
+39-0376-294055; ckohan@thegvr.com  
or info@gnvmadrid2009.com; [www.gnv2009madrid.com](http://www.gnv2009madrid.com)

### NGV2010Roma – June 2010

For those who plan ahead, the 12th International Conference & Exhibition on Natural Gas Vehicles, the world natural gas vehicles meeting, aka NGV2010Roma, will be held June 8-10, 2010 at the New Rome Fair in Fiumicino (Rome airport), Italy.

Organized by the NGV Communications Group, publishers of the international *Gas Vehicles Report*.  
*Today's Solution for Sustainable Transportation* theme.  
GVR (Italy), Claudio Kohan, +39-0376-294055;  
ckohan@thegvr.com or info@ngv2010roma.com;  
[www.ngv2010roma.com](http://www.ngv2010roma.com)

International Association for Natural Gas Vehicles/IANGV,  
Brett Jarman (Australia), +61-2-6608-0011;  
bjarman@iangv.org; [www.iangv.org](http://www.iangv.org)



### Top o' Next Month in San Francisco

February 1-4, 2009 National Biodiesel Conference and Expo. San Francisco Marriott Moscone.

Organized by the National Biodiesel Board.

NBB, Amber Pearson, 512-992-0672;

apearson@biodiesel.org; [www.biodieselconference.org](http://www.biodieselconference.org)



### 'Alt Fuels and the Bottom Line'

Noting that the late-2008 drop in petroleum pricing has already begun to reverse, and that the transition from fossil fuels has begun, the Las Vegas-based Alternative Fuel Vehicle Institute is hosting a free webinar titled *Bottom of the Barrel: Maximizing Your Bottom Line in the Transition to Alternative Fuels* mid-day on January 27.

The 90-minute AFVi webinar will be conducted by industry experts who will also be participating in AFVi's 2009 Alternative Fuels & Vehicles Conference + Expo.

AF&V 2009 is being April 19-22 in Orlando, Fla.

AFVi, Kasia McBride, 702-254-4180;

fax 702-254-4630; kmcbride@afvi.org; [www.afvi.org](http://www.afvi.org)

### IGU World Gas Abstracts Due February 1

October 5-9, 24th World Gas Conference in Buenos Aires, Argentina, organized by IGU, the International Gas Union.

*The Global Energy Challenge: Reviewing the Strategies for Natural Gas* theme.



Topics to be covered include renewables (biomethane) and transportation applications.

Abstracts for technical papers due February 1.

WGC2009 Secretariat, +54-11-5252-9801; fax +54-11-4813-0073; registration@wgc2009.com; [www.wgc2009.com](http://www.wgc2009.com)

### World Bioenergy-Clean Vehicles Stockholm

September 14-18, World Bioenergy-Clean Vehicles & Fuels 2009 conference and trade show in Stockholm, Sweden. Organized by Jönköping-based Elmia AB.

Elmia, Mr. Torbjörn Johnsen,

+46-36-15-2254; fax +46-36-16-4692;

torbjorn.johnsen@elmia.se; [www.wbcvf2009.se](http://www.wbcvf2009.se)

### GIE+EXPO in October

October 29-31, GIE+EXPO, Green Industry & Equipment Expo at the Kentucky Exposition Center in Louisville. Sponsored by the Outdoor Power Equipment Institute, the Professional Grounds Management Society, and the Professional Landcare Network.

GIE+EXPO Events, 812-949-9200 or toll-free 800-558-8767;  
fax 812-949-9600; info@gie-expo.com; [www.gie-expo.com](http://www.gie-expo.com)



### Meetings!!

Click here for instant access to a complete listing of upcoming meetings and conferences courtesy *Fleets & Fuels*