



November 18, 2011

Mr. Richard Corey  
Stationary Source Division Chief  
California Air Resources Board  
1001 "I" Street  
P.O. Box 2815  
Sacramento, CA 95812

**Re: CLNE Comments on CARB's Draft LCFS Program Review Report and LCFS Compliance Scenarios.**

Dear Mr. Corey:

Clean Energy is very appreciative for being provided the opportunity to comment on the Draft LCFS Program Review Report prepared by the California Air Resources Board (CARB) staff over this past year. We are also very grateful for being selected to provide direct input throughout 2011 as an LCFS Advisory Committee participant. We believe our ability to participate throughout this process has been extremely useful in both heightening our understanding of staff's objectives and enabling us to collectively strengthen our relationship with CARB staff as we worked through a number of issues that would have otherwise posed a significant implementation challenge for the Natural Gas Vehicle (NGV) Industry. Clean Energy certainly appreciates all of the hard work and thought that staff has applied throughout the rulemaking, the implementation process and on the LCFS Program Review and we look forward to working with the agency well into the future to address future rule implementation issues as they are identified.

With that please accept the following comments by Clean Energy pertaining to the LCFS Program Review Report.

**Harmonization of CA LCFS with Other Programs, p. 29**

Much like other low carbon fuel standards referenced within the LCFS Program Review, other policy actions by other states that promote low carbon fuel strategies should be mentioned as they will certainly help support vehicle adoption rates. For example, on November 9, 2011, Colorado, Oklahoma, Pennsylvania, and Wyoming all signed an MOU to attract US auto manufacturers to produce OEM natural gas vehicle product that is affordable and can meet public demand. Ohio, led by Governor Kasich, is also attempting to create a similar MOU and action plan between the states of Indiana, Michigan and Pennsylvania to help further drive natural gas vehicle adoption rates. In a nutshell, such efforts will certainly help support the growth of the NGV Industry, reduce the incremental costs associated with NGV purchases, and therefore indirectly boost NGV adoption rates in California where the NGV market is the most mature.

## **A. Oregon LCFS, p. 32**



It should be noted that the status description of the Oregon LCFS is not accurate in that there is no expected action anticipated by Oregon's Department of Environmental Quality (DEQ) in December 2011. The DEQ remains woefully underfunded and unable to move forward with the rule, particularly since there is a 2015 sunset date that prohibits any meaningful expenditure of staff time to move this rule forward. It is in our opinion, that the future of the rule depends highly upon the Oregon Legislature's will to lift the 2015 sunset from Oregon's LCFS regulation and a lack of political will by the Oregon Legislature to do so will effectively place this program on an indefinite hold as no industry will base its business decisions on an unfunded program that has a shelf life of less than 3 years come 2012.

## **Technology, Assessment, Supply and Availability**

### **A. Natural Gas, p. 78**

Clean Energy continues to be somewhat perplexed by CARB's underestimation of the Natural Gas Vehicle Industry, despite the fact that only a portion of the Industry that opted to become a "regulated party" generated roughly 9% of the LCFS credit market for the first quarter. Not only does Clean Energy believe that the total potential reportable credits for NGV use in the market would be significantly greater, we also believe California, and the rest of the country for that matter, will experience much stronger vehicle adoption rates using natural gas, particularly in the heavy- and medium-duty sectors as natural gas provides a value proposition in terms of jobs, fuel cost competitiveness, and lower criteria and greenhouse gas emissions.

It should be noted that while the Gas Vehicle Report (attached) dated November 2011 only reports approximately 112,000 NGVs in the United States, the world currently has over 14 million NGVs operating globally. In fact, the majority of US and foreign auto manufactures produce over 60 makes and models of NGVs for global markets. For the United States, OEMs (International, Freightliner, Kenworth, Peterbilt, Mack, Ford, GM, Autocar, Capacity, Ottawa, and Volvo) and engine manufacturers (Cummins-Westport, Ford, General Motors, Navistar, Volvo, and Westport) for medium- and heavy-duty trucks produce a natural gas truck offering. In fact, Freightliner just celebrated the sale of its 1,000th truck in Anaheim, California, with a ride and drive event at Angel Stadium earlier this month. It should be noted that medium- and heavy-duty trucks consume considerably more fuel than their light-duty counterparts (i.e., a heavy-duty truck in the goods movement sector consumes 18,000 to 20,000 gallons per year v. a passenger car that consumes on average 600 gallons per year). Thus, the total number of vehicles on the road is not necessarily an indicator of the volume of fuel that is actually being consumed by the Industry. The 15,500 natural gas medium- and heavy-duty trucks noted in the Gas Vehicle Report is equivalent to the consumption of 223,329,000 diesel gallon equivalents of fuel.

What's more is that the private fuel provider market is ever expanding to meet increasing market demand. In addition to Clean Energy, the following companies nationwide are now providing CNG and LNG fuel services: Allsup Corporation; Applied LNG Technologies, LLC; AVSG LP; CH4 Energy Corporation; Chart Industries, Inc.; CN Gas Group Corp.; Encana Corporation; Enviro Express Natural Gas LLC; Go Natural Gas, Inc.; General Physics Corporation; Linde; Mansfield Gas Equipment System, Inc.; NorthStar, Inc.; OnCue Express; Petrocard Systems; Pinnacle CNG



Systems; Prometheus Energy Company; Republic Services; Speedy Fuels, Inc.; Trillium USA; Vocational Energy; Waste Management, Inc.; Wisegas, inc.; and, Zeit Energy. Each of these companies are well capitalized. For example, Clean Energy recently raised \$300 million dollars in the later part of this year to add additional NGV stations to our existing 257 nationwide NGV fueling station network that fuels 25,200 NGVs per day. Over the next 2-3 years, Clean Energy will be adding an additional 300 NGV stations to its existing portfolio, half of which will target medium- and heavy-duty trucks at Pilot-Flying J truck stops along every major transportation corridor in the US. With the possible passage of H.R. 1380 or S. 1863 or some variation of the two bills, the adoption rates for medium- and heavy-duty natural gas trucks nationwide will be even more significant and will certainly have a positive impact upon the adoption rates of such vehicles in California, particularly since the San Pedro Ports handle roughly 40 percent of the nation's goods.

Further, as states like Colorado, Georgia, Indiana, Louisiana, Michigan, North Carolina, Pennsylvania, South Carolina, Texas, Virginia, West Virginia, Wyoming continue to consider NGV incentives or memorandums of understanding, this will have a positive impact on product availability and adoption rates in California for NGVs.

#### **B. Biogas, p. 80**

While we certainly believe biogas, or renewable natural gas (RNG), will certainly have a role to play in the California LCFS, it should be noted that this ultra low carbon fuel is most efficiently produced from landfill sources and provides almost a 90 percent carbon reduction based on CARB's lifecycle analysis. However, landfill gas produced in California is not currently allowed access to California's pipeline system due to utility tariffs filed and approved by the California Public Utility Commission (CPUC). Thus, numerous California projects that have tremendous potential to supply a meaningful amount of affordable ultra low carbon fuel for natural gas fleets is not being harnessed for good use. We therefore urge CARB to acknowledge this current barrier and to work with the CPUC to remove this significant barrier to California RNG production. In fact, a Gas Technology Institute study that is expected to be finalized and released at the end of this year has released preliminary results that show non-detect levels of contamination in RNG samples. Thus, to further support the LCFS's viability and expand the breath of ultra low carbon fuel availability in the California market place, it will be critical for CARB to assist in the removal of the existing utility tariffs that are currently on California's books so that this ultra low carbon fuel may advance and be made available in the market place.

#### **C. Investment Section, p. 92**

While it very appropriate for the LCFS Program Review Report to discuss existing investment programs that support future development and growth of the low carbon fuel industry, the document almost exclusively focuses on the biofuel sector and continues that focus in "Meeting the Targets" section for the Gasoline and Diesel scenarios provided initially on November 16, 2011. This rule has been consistently touted as a fuel neutral strategy and it should be reported as such.

With as fuel neutral approach in mind, staff correctly notes that AB 118 funds promote a wide array of low carbon fuel strategies that go well beyond biofuels but it fails to report the funding of such programs with accuracy by focusing exclusively on where AB 118 funds have been awarded up until the date of the report. Due to program deadlines and allocations, this can be very misleading as the "\$5.7 million" reportedly spent on natural gas fueling infrastructure does not truly reflect the



reality of AB 118's investment into the NGV Industry. For example, the 2010-2011 AB 118 Investment Plan will spend an additional \$10.2 million on natural gas vehicles and \$1.2 million on NGV infrastructure. For the 2011-2012 AB 118 Investment Plan, the CEC will provide an additional \$12 million dollars on natural gas vehicles and an additional \$8 million dollars on NGV fueling infrastructure. Thus, the current representation of dollars allocated to NGVs on p. 93 of the LCFS Program Review Document leads the reader to believe only \$5.3 million dollars has been spent toward NGVs, the reality is that \$14.7 million dollars will be spent on NGV fueling infrastructure and \$22 million dollars will be spent on NGVs, not to mention an additional \$8 million dollars of possible investment for heavy- and medium-duty advanced technology strategies that could easily translate into hydraulic hybrid natural gas trucks. We, therefore, ask that the LCFS Program Review Report accurately reflect the investment allocations across all strategies as this provides a more precise picture of actual AB 118 investment. The full plan can be viewed at: <http://www.energy.ca.gov/2011publications/CEC-600-2011-006/CEC-600-2011-006-CTF.pdf>.

Much like other low carbon fuel standards referenced within the LCFS Program Review, other policy actions by federal and state governments promoting alternative low carbon fuel investments should also be mentioned as such actions will certainly boost vehicle adoption rates indirectly in California. For example, there has been no mention of the US House and Senate versions of the NAT GAS Act (H.R. 1380 and S. 1863, respectively) that would provide approximately 5 billion dollars in vehicle and station tax incentives over the next five years. Such a stimulus package, if approved by Congress, would significantly change the status quo of NGV adoption rates nationwide, particularly in the medium- and heavy-duty vehicle market sectors. In addition to the federal level of government, many states are also considering the passage of NGV incentives that could advance NGV adoption rates. For example, the Commonwealth of Pennsylvania is contemplating the adoption of the Marcellus Works package, seven bills that roughly provide 48 million dollars in annual incentives for NGVs and NGV refueling infrastructure over the next five years. Such incentives, once in place, would support more heavy-, medium- and light-duty product in the NGV space and NGV adoption indirectly in California. Additionally, earlier this month, Colorado, Oklahoma, Pennsylvania, and Wyoming have all signed an MOU to support the future purchase of NGVs in their government fleets. Ohio also is attempting to create an additional MOU effort in coordination with Indiana, Michigan and Pennsylvania. Clean Energy believes that if CARB's LCFS Program Review broadens the discussion of all policies that could significantly advance low carbon fuel industries, CARB would have even a stronger case as to why the LCFS should meet its 2020 target with more than sufficient breathing room in terms of compliance.

#### **“Meeting the Targets and Assessment of Whether Adjustments are Needed” Chapter.**

Based on the positive analysis provided above on current and future natural gas vehicle adoption rates, Clean Energy strongly encourages CARB staff to add both a CNG and LNG scenarios to the gasoline and diesel illustrative scenarios provided. Clean Energy firmly believes that natural gas as a transportation fuel will markedly penetrate the medium- and heavy-duty vehicle sectors in the near, mid and long term. As it was noted, OEMs and engine manufacturers are providing natural gas truck options to customers today and such product is proving its capability to be a true alternative to diesel. NGVs are already seeing strong market adoption in transit, refuse, and goods movement vehicle sectors. In fact, some are projecting that by next year, 45 percent of the refuse trucks purchased in the country will be natural gas. Further, with Clean Energy's construction of its American Natural Gas Highway over the next few years, the opportunity for regional and longer distance shippers to enter the market becomes less of an obstacle. In fact, Clean Energy alone has over 40 non-disclosure agreements with shippers across the country demonstrating a strong interest





in trucking companies' interest in making a shift to natural gas. As a national network is constructed, regional networks will soon follow, and OEMs for light-duty applications, encouraged by natural gas oriented states to enter the market, will take passenger car production more seriously.

Finally, it should be noted that the National Petroleum Council's Natural Gas Subgroup developed a February 2011 Draft that estimated that over 8 million Class 3 to Class 8 trucks are on the road in the US today, consuming 2 million barrels of fuel per day or 15% of the total fuel used in the US transportation sector. As a starting point for expanding the commercial outlook for natural gas in the heavy-duty market, one case that was based on some key assumptions around federal incentives, had natural gas trucks taking up to 35% of new truck sales by 2035, reaching unit sales volumes of 274,000 units annually. The resulting natural gas heavy-duty truck fleet grew to approximately 3.2 million vehicles, or approximately 20% of the total heavy-duty fleet.

Thus, for each of the gasoline illustrative scenarios provided in the "Meeting the Targets and Assessment of Whether Adjustments are Needed" chapter, CARB should consider CNG scenarios that show differing penetration rates of light-duty CNG vehicles in the out years. For the diesel illustrative scenarios, each scenario should have a CNG and LNG level of penetration and each scenario should show a different penetration rate of NGVs in this space to complete CARB's analysis based on various assumptions (i.e., federal or state incentive programs, technology advancement, economies of scale production with greater market adoption). Further, CARB has acknowledged in several source materials that the NGV market exists today and that it is growing, particularly in the medium- and heavy-duty markets. Hence, every diesel illustrative scenario should have a LNG and CNG level of penetration and CARB should be further convinced that there will be sufficient LCFS credits available to meet the standard's 2020 carbon reduction goal of 10 percent.

### **Conclusion**

In conclusion, we believe CARB is too focused on biofuels and advanced biofuels to support the LCFS and that such fuels will be complimented by stronger penetration/adoption rates of natural gas vehicles. This is largely being done by what is currently taking place in the market place (more OEMs in the NGV market, more NGV product options available to customers, more well-capitalized fuel providers in the NGV space, more government interest in supporting NGV growth and adoption). Factoring in all of these key factors, CARB should determine that there will be even more flexibility to sustain the LCFS's 10 percent carbon reduction goal well beyond 2020. If you should have any questions or need additional information, please do not hesitate to contact me at your earliest opportunity.

Sincerely,

A handwritten signature in black ink that reads "Todd R. Campbell" with a stylized flourish at the end.

Todd R. Campbell



## Memorandum of Understanding

This Memorandum of Understanding (MOU) describes a coordinated effort between Oklahoma, Colorado, Wyoming, and Pennsylvania (States) to attract automobile manufacturers in the U.S. to develop a functional and affordable original equipment manufacturer (OEM) fleet natural gas vehicle (NGV) that will also meet public demand. The States recognize the benefits and unique attributes of clean burning natural gas and understand the significant opportunity compressed natural gas (CNG) presents to save State and taxpayer dollars by encouraging an energy future that utilizes domestic energy resources to fuel our nation's transportation needs. Through the joint solicitation of a Multi-State Request for Proposal (Joint-RFP) that aggregates annual State fleet vehicle procurements, the States will endeavor to provide a demand base sufficient to support the design, manufacture, and sale of functional and affordable OEM NGVs by automotive manufacturers in the United States.

In anticipation of soliciting a Joint-RFP, the States will endeavor to coordinate with local agencies, municipalities, and companies to determine the number of NGVs each State can commit to purchase and the required specifications necessary to meet fleet needs. The Joint-RFP shall require that the ultimate cost of an OEM NGV should be comparably priced to an equivalent gasoline powered model and that warranty and reliability concerns are not compromised. Simultaneously, the States understand the need for continued development and expansion of CNG fueling infrastructure and should endeavor to encourage private investment, predicated on demonstrating an anticipated increase in State NGVs, to meet growing demand.

Pursuant to the terms of the Joint-RFP, to be executed at a later date, the States intend, where practical, to transition new fleet vehicle acquisitions, in committed volumes, to a resulting OEM NGV. Such future acquisitions should, when economically feasible, rely on traditional distribution channels that incorporate local businesses in procurement processes. In continued recognition of the benefits of CNG, the States should also endeavor to pursue fleet vehicle conversions to CNG, where economically compelling, based on a life-cycle cost analysis. The States will also reach out to fellow Governors to determine broader interest and participation in the principles and process outlined in this MOU.

This MOU embodies the principle understandings of the States but shall not create any legal relationship, rights, duties, or obligations binding or enforceable at law or in equity. Notwithstanding the foregoing, each State shall in good faith endeavor to reach a mutually agreeable and economically beneficial Joint-RFP, as contemplated herein. This MOU does not create additional state power, enhance existing state power, or interfere with federal authority or law. This MOU shall continue to demonstrate the States' understanding until execution of the Joint-RFP, or until otherwise discontinued by either State.

Set forth this 9<sup>th</sup> day of November, 2011 by:

State of Oklahoma

Mary Fallin, Governor

State of Colorado

John Hickenlooper, Governor

State of Wyoming

Matthew H. Mead, Governor

State of Pennsylvania

Tom Corbett, Governor

# Worldwide NGV statistics

Country	Natural Gas Vehicles					Refuelling stations				VRA	Monthly gas consumption (M Nm <sup>3</sup> )			Last update	
	Total	Cars/LCVs	MD/HD Buses	MD/HD Trucks	Others	Total	Public	Private	Planned		Average consumption (actual report)	The consumption in theory	Reported consumption		
Pakistan	2 850 500	2 670 000	500		180 000	3 330	3 330					491,10	0,0%	July 2011	
Iran	2 605 364	2 600 000	5364			1 690	1 662	28	570			330,00	484,09	68,2%	June 2011
Argentina	2 001 742	2 001 742				1 898	1 898				32	237,34	360,31	65,9%	July 2011
Brazil	1 687 562	1 687 562				1 795	1 795				7	168,39	303,76	55,4%	July 2011
India	1 100 000	1 069 380	23 000	715	6 905	683	364	319			163,21	190,00	262,41	0,0%	July 2011
Italy	761 340	757 840	2 300	1 200		858	811	47	38	199		62,03	144,27	43,0%	June 2011
China	600 000	370 000	150 000	30 000	50 000	2 100	1 901	199	400	9			543,10	0,0%	September 2011
Colombia	348 747	325 287	13 800	9 660		651	651			3		45,00	107,68	41,8%	August 2011
Thailand	267 735	219 423	14 175	32 378	1 759	444	419	25		0			108,24	0,0%	July 2011
Armenia	244 000	192 000	17 300	34 700		345	9	336				26,52	114,22	23,2%	September 2011
Ukraine	200 019	10 000	120 000	70 000	19	294	102	192	40	8		83,00	417,80	19,9%	July 2011
Bangladesh	200 000	137 000	10 000	27 000	26 000	600	600			13		59,47	77,56	76,7%	September 2011
Bolivia	140 400	140 400				156	156			46		26,28	25,27	104,0%	April 2010
Egypt	139 804	137 126	1 220	713	745	129	125	4	19			38,00	28,95	131,3%	September 2010
Uzbekistan	120 000	120 000				71	71		10				21,60	0,0%	December 2010
Peru	117 508	117 497	11			165	165					15,67	21,18	74,0%	August 2011
USA	112 000	96 500	13 000	2 500		1 100	550	550		4 747		105,00	58,37	179,9%	July 2011
Russia	100 053	72 800	1 400	12 400	13 453	250	208	42	6	4		28,75	29,65	97,0%	December 2010
Germany	94 890	92 100	1590	1200	0	900	720	180	150	804		14,60	22,31	65,4%	June 2011
Venezuela	90 000	90 000				166	166		300	80		8,15	16,20	50,3%	June 2011
Bulgaria	61 296	61 000	236	60		86	85	1	6			15,00	11,74	127,8%	September 2011
Malaysia	48 946	48 400	486	60		167	165	2		10			10,22	0,0%	June 2011
Myanmar	42 000	23 706	18 290	4		37	37						59,14	0,0%	February 2011
Japan	40 429	15 637	1 506	21 573	1 713	333	287	46		612			24,68	0,0%	March 2011
Sweden	36 381	33 575	1 725	1 080	1	166	130	36		21		9,62	12,08	79,6%	June 2011
Korea	30 443	3 049	26 412	972	10	178	173	5				93,00	80,56	115,4%	June 2011
Canada	14 205	11 800	199	6	2 200	81	71	10		500			2,84	0,0%	December 2010
France	13 500	10 200	2 200	1 100		332	32	300		1 290			9,32	0,0%	July 2011
Tajikistan	10 600	10 600				53	53					4,13	1,91	216,5%	December 2007
Switzerland	9 857	9 547	181	69	60	126	123	3	5	117		1,59	2,32	68,5%	June 2011
Chile	8 164	8 055	109			15	15			1		3,20	1,78	180,1%	December 2010
Kyrgyzstan	6 000	6 000				6	6					0,60	1,08	55,6%	December 2007
Austria	5 910	5 759	133	15	3	201	171	30	5	12		0,50	1,45	34,5%	June 2011
Singapore	5 567	5 552	15			4	3	1					1,04	0,0%	July 2011
Mexico	4 831	4 800	31			14	14			22		0,02	0,96	2,1%	June 2011
Belarus	4 600	4 600				42	42					0,65	0,83	78,5%	September 2011
Netherlands	4 300	3 530	590	180		65	65	20	40	558			2,55	0,0%	June 2011
Trinidad & Tobago	3 000	3 000				8	7	1				0,80	0,54	148,1%	June 2011
Turkey	3 339	1 850	1 489			14	8	6		35		0,40	4,80	8,3%	April 2010
Czech Republic	3 075	2 644	326	41	64	49	34	15	8	80		0,85	1,49	57,1%	June 2011
Spain	3 051	574	1 405	1 028	44	55	9	46	17	21		4,48	5,14	87,1%	June 2011
Georgia	3 000	3 000				50	50						0,54	0,0%	August 2011
Australia	2 825	100	1 700	275	750	47	4	43	39	130			5,38	0,0%	November 2009
Indonesia	2 550	1 755	335	210	250	9	9					1,50	1,50	0,0%	December 2009
Moldavia	2 200	2 200				24	24					0,40	0,40	101,0%	September 2011
Poland	2 082	1 502	276	4	300	33	32	1		49			1,12	0,0%	June 2011
United Arab Emirates	1 751	1 750	1			17	16	1		1			0,32	0,0%	September 2011
Dominican Republic	1 614	1 614				3	3		40			0,09	0,29	31,7%	May 2011
Finland	970	850	85	15	20	18	17	1	2	10		0,28	0,42	66,5%	June 2011
Slovakia	823	429	334	60		11	7	4	2			0,96	1,13	85,3%	December 2010
Greece	600	0	520	80	0	3		3					1,62	0,0%	November 2010
Belgium	241	235	6			14	8	6	6	12			0,05	0,0%	June 2011
Norway	545	300	198	22	25	13	7	6	1			4,55	0,67	682,3%	March 2010
Portugal	504	46	354	54	50	5	1	4	3			1,11	1,12	99,6%	June 2011
Serbia	519	494	25			6	4	2	4	1		0,02	0,16	16,7%	December 2010
Mozambique	315	280	35			2	2						0,16	0,0%	July 2011
Hungary	300	225	75			16	2	14	1	14		0,13	0,27	47,1%	October 2011
United Kingdom	220	20		150	50	14	9	5	5	10		3,00	0,13	2379,1%	September 2010
New Zealand	201	19	61	84	37	14		14					0,26	0,0%	December 2010
Vietnam	282	280	2			3	3			3				0,0%	February 2011
Iceland	255	237	2	16		2	2		2			0,04	0,06	63,5%	December 2010
Luxembourg	234	199	35			6	5	1		2		0,06	0,14	39,4%	June 2010
Croatia	190	100	60	30		1	1		1			0,100	0,22	45,0%	December 2010
Lithuania	195	85	110			3	2	1	2	5		0,20	0,35	57,9%	September 2011
Nigeria	145	60		85		3	3						0,08	0,0%	March 2011
Estonia	130	121	6	3		2	2	0	2			0,02	0,04	47,4%	September 2011
Algeria	125	115	10			3	3						0,05	0,0%	October 2004
Lichtenstein	104	72	31	1		3	3						0,11	0,0%	December 2009
Philippines	71	11	60			3	1	2					0,18	0,0%	October 2011
Macedonia	54	7	47			1		1	3			0,02	0,14	14,8%	January 2011
Ecuador	40	40				1	1						0,01	0,0%	May 2009
Tunesia	34	32	2			1		1					0,01	0,0%	October 2007
Tanzania	31	31				1	1		2				0,01	0,0%	October 2010
South Africa	24	21	2		1	2	2								August 2010
Bosnia & Herzegovina	21	20	1			1	0	1	1	2			0,01	0,0%	October 2010
Kazakhstan	20		20			10	10								December 2010
Latvia	18	18				1	1					0,003	0,00	79,3%	September 2011
Panama	15	15													November 2008
Slovenia	8	8							2	8		0,007			June 2011
Ireland	2	2				1	1			1			0,00	0,0%	October 2008
Montenegro						1		1					0,00		March 2006
Turkmenistan						1	1								November 2009
<b>Total</b>	<b>14.164.416</b>	<b>13.196.828</b>	<b>433.380</b>	<b>249.749</b>	<b>284.459</b>	<b>20.026</b>	<b>17.470</b>	<b>2.555</b>	<b>1.753</b>	<b>9.476</b>	<b>1.394,03</b>	<b>3.891,44</b>	<b>35,8%</b>	<b>October 2011</b>	



**Clean Energy** is America's connection to natural gas fueling — linking the massive gas pipeline system nationwide with vehicles of all types. We build, operate and maintain fueling stations that compress and dispense compressed natural gas (CNG) fuel and dispense liquefied natural gas (LNG) fuel.



## Fueling America's Natural Gas Highway

With the advent of new natural gas engines well-suited for heavy-duty, over-the-road vehicles, major regional and national trucking operators and shippers are moving to natural gas for their fleets.

Why? To reduce fuel costs up to \$1.50 per gallon or more, lower emissions and reduce dependence on imported oil.

Now we are building **America's Natural Gas Highway** with LNG and CNG fueling stations at strategic locations along major trucking corridors to form the backbone of a national transportation fueling infrastructure. Many of the stations will be located at Pilot-Flying J Travel Centers already serving truckers across the country.

We believe the time is right for taking this action.

Our nation needs to focus on reducing dependence on imported oil, and keeping our money and creating jobs here at home.

We look forward to serving truckers and shippers on **America's Natural Gas Highway**.



**Clean Energy**<sup>®</sup>

*North America's leader in clean transportation*