



Houston Distributing Company, Inc.

®

November 2017

# Topics

- **Who Houston Distributing.**
- **What we do.**
- **Initial CNG challenges.**
- **Show how the CNG proposition works.**



# Where are we?



**Houston Distributing Co.**  
**7100 Highlife Dr. Houston, TX 77066**



# Where are we?



**Houston Distributing Co.**  
**7100 Highlife Dr. Houston, TX 77066**



# Who are we?



- Trace back to 1940's
- Established in 1968
- Over 400 employees



# Who are we?



- 500,000+ Sq. ft. warehouse
- 1,000 brands & packages
- 300+ vehicles
- 27 Long Haul trucks
- 100 delivery trucks
- 180 sales & merchandising vans
- Servicing 7,000+ accounts



# HDC Station with Freedom CNG



## Our Station

- 10-14 gallon per min flow rate
- 3 Dispensers, 3 HF and 3 reg. nozzles
- 2-250 HP 3-stage compressors
- 550 KW back-up power generator
- Large turning radius
- Security Cameras
- Major credit cards and Fuelman



**Beltway 8 & Hwy 249 Location**  
**7155 Highlife Dr. Location**



# CNG did not happen without challenges

- **Truck Range**
  - Issues with 1<sup>st</sup> few trucks
- **Maintenance shop up-fit**
  - \$72,000
- **Driver acceptance in the beginning**
- **Initial added capital costs**



# CNG advantages

- Predictable fuel cost short and more importantly, the long term.
- We are a partner in the station, although Freedom CNG operates and maintains the station.
- We are doing our part cleaning up the air, displacing over 700,000 gallons of diesel with our current fleet of CNG trucks and vans.
- Now we see maintenance advantages and drivers like it.
- Assured fuel supply in any power outage event. Harvey.



# Fleet Benefit

## Actual: CNG vs. Diesel Trucks and Vans 2015 (Diesel Cost average \$2.18)

Vehicle Type	27 Long Haul Trucks			10 Delivery Trucks			52 Light Duty		
Fuel Type	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings vs Diesel
Annual Miles Driven	4,328,872	4,288,944		154,878	138,353		1,101,864	729,429	
Fuel Used	716,700	812,300		31,699	28,957		73,434	61,267	
MPG	6.04	5.28		4.89	4.78		15.00	11.91	
Maintenance	\$ 83,302	\$ 72,288	\$ (11,014)	\$ 32,333	\$ 19,326	\$ (13,007)	\$ 93,920	\$ 65,950	\$ (27,970)
Cost of fuel	\$ 1,562,406	\$ 1,315,926	\$ (246,480)	\$ 69,104	\$ 46,910	\$ (22,193)	\$ 160,086	\$ 99,253	\$ (60,834)
TTL Cost to Operate	\$ 1,645,708	\$ 1,388,214	\$ (257,494)	\$ 101,437	\$ 66,236	\$ (35,200)	\$ 254,006	\$ 165,203	\$ (88,804)
Cost per Mile	\$ 0.38	\$ 0.32	\$ (0.06)	\$ 0.65	\$ 0.48	\$ (0.18)	\$ 0.231	\$ 0.226	\$ (0.0040)
Cost per vehicle	\$ 60,952.15	\$ 51,415.33	\$ (9,537)	\$ 10,144	\$ 6,624	\$ (3,520)	\$ 4,885	\$ 3,177	\$ (1,708)

Lower operating & maintenance costs



# Fleet Benefit

## Example: CNG vs. Diesel Trucks and Vans (Diesel @\$2.38) \$50. per BBL

Vehicle Type	27 Long Haul Trucks			10 Delivery Trucks			52 Light Duty		
Fuel Type	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings
Annual Miles Driven	4,328,872	4,288,944		154,878	138,353		1,101,864	729,429	
Fuel Used	716,700	812,300		31,699	28,957		73,434	61,267	
MPG	6.04	5.28		4.89	4.78		15.00	11.91	
Maintenance	\$ 83,302	\$ 72,288	\$ (11,014)	\$ 32,333	\$ 19,326	\$ (13,007)	\$ 93,920	\$ 65,950	\$ (27,970)
Cost of fuel	\$ 1,705,746	\$ 1,315,926	\$ (389,820)	\$ 75,444	\$ 46,910	\$ (28,533)	\$ 174,773	\$ 99,253	\$ (75,520)
TTL Cost to Operate	\$ 1,789,048	\$ 1,388,214	\$ (400,834)	\$ 107,777	\$ 66,236	\$ (41,540)	\$ 268,693	\$ 165,203	\$ (103,490)
Cost per Mile	\$ 0.41	\$ 0.32	\$ (0.09)	\$ 0.70	\$ 0.48	\$ (0.22)	\$ 0.244	\$ 0.226	\$ (0.0174)
Cost per vehicle	\$ 66,261.04	\$ 51,415.33	\$ (14,846)	\$ 10,778	\$ 6,624	\$ (4,154)	\$ 5,167	\$ 3,177	\$ (1,990)

Lower operating & maintenance costs



# Fleet Benefit

## Example: CNG vs. Diesel Trucks and Vans (Diesel @\$2.60) \$55.00 Per BBI

Vehicle Type	27 Long Haul Trucks			10 Delivery Trucks			52 Light Duty		
Fuel Type	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings
Annual Miles Driven	4,328,872	4,288,944		154,878	138,353		1,101,864	729,429	
Fuel Used	716,700	812,300		31,699	28,957		73,434	61,267	
MPG	6.04	5.28		4.89	4.78		15.00	11.91	
Maintenance	\$ 83,302	\$ 72,288	\$ (11,014)	\$ 32,333	\$ 19,326	\$ (13,007)	\$ 93,920	\$ 65,950	\$ (27,970)
Cost of fuel	\$ 1,863,420	\$ 1,315,926	\$ (547,494)	\$ 82,417	\$ 46,910	\$ (35,507)	\$ 190,928	\$ 99,253	\$ (91,676)
TTL Cost to Operate	\$ 1,946,722	\$ 1,388,214	\$ (558,508)	\$ 114,750	\$ 66,236	\$ (48,514)	\$ 284,848	\$ 165,203	\$ (119,646)
Cost per Mile	\$ 0.45	\$ 0.32	\$ (0.13)	\$ 0.74	\$ 0.48	\$ (0.26)	\$ 0.259	\$ 0.226	\$ (0.032)
Cost per vehicle	\$ 72,100.81	\$ 51,415.33	\$ (20,685)	\$ 11,475	\$ 6,624	\$ (4,851)	\$ 5,478	\$ 3,177	\$ (2,301)

Lower operating & maintenance costs



# Fleet Benefit

## Example: CNG vs. Diesel Trucks and Vans (Diesel @\$2.85) \$60.00 Per BBI

Vehicle Type	27 Long Haul Trucks			10 Delivery Trucks			52 Light Duty		
Fuel Type	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings
Annual Miles Driven	4,328,872	4,288,944		154,878	138,353		1,101,864	729,429	
Fuel Used	716,700	812,300		31,699	28,957		73,434	61,267	
MPG	6.04	5.28		4.89	4.78		15.00	11.91	
Maintenance	\$ 83,302	\$ 72,288	\$ (11,014)	\$ 32,333	\$ 19,326	\$ (13,007)	\$ 93,920	\$ 65,950	\$ (27,970)
Cost of fuel	\$ 2,042,595	\$ 1,315,926	\$ (726,669)	\$ 90,342	\$ 46,910	\$ (43,432)	\$ 209,287	\$ 99,253	\$ (110,034)
TTL Cost to Operate	\$ 2,125,897	\$ 1,388,214	\$ (737,683)	\$ 122,675	\$ 66,236	\$ (56,439)	\$ 303,207	\$ 165,203	\$ (138,004)
Cost per Mile	\$ 0.49	\$ 0.32	\$ (0.17)	\$ 0.79	\$ 0.48	\$ (0.31)	\$ 0.275	\$ 0.226	\$ (0.05)
Cost per vehicle	\$ 78,736.93	\$ 51,415.33	\$ (27,322)	\$ 12,268	\$ 6,624	\$ (5,644)	\$ 5,831	\$ 3,177	\$ (2,654)

Lower operating & maintenance costs



# Fleet Benefit

## Example: CNG vs. Diesel Trucks and Vans (Diesel @\$3.30) \$70.00 Per BBI

Vehicle Type	27 Long Haul Trucks			10 Delivery Trucks			52 Light Duty		
Fuel Type	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings	Diesel	CNG	CNG Savings
Annual Miles Driven	4,328,872	4,288,944		154,878	138,353		1,101,864	729,429	
Fuel Used	716,700	812,300		31,699	28,957		73,434	61,267	
MPG	6.04	5.28		4.89	4.78		15.00	11.91	
Maintenance	\$ 83,302	\$ 72,288	\$ (11,014)	\$ 32,333	\$ 19,326	\$ (13,007)	\$ 93,920	\$ 65,950	\$ (27,970)
Cost of fuel	\$ 2,365,110	\$ 1,315,926	\$ (1,049,184)	\$ 104,607	\$ 46,910	\$ (57,696)	\$ 242,332	\$ 99,253	\$ (143,080)
TTL Cost to Operate	\$ 2,448,412	\$ 1,388,214	\$ (1,060,198)	\$ 136,940	\$ 66,236	\$ (70,703)	\$ 336,252	\$ 165,203	\$ (171,050)
Cost per Mile	\$ 0.57	\$ 0.32	\$ (0.24)	\$ 0.88	\$ 0.48	\$ (0.41)	\$ 0.305	\$ 0.226	\$ (0.08)
Cost per vehicle	\$ 90,681.93	\$ 51,415.33	\$ (39,267)	\$ 13,694	\$ 6,624	\$ (7,070)	\$ 6,466	\$ 3,177	\$ (3,289)

Lower Operating Costs

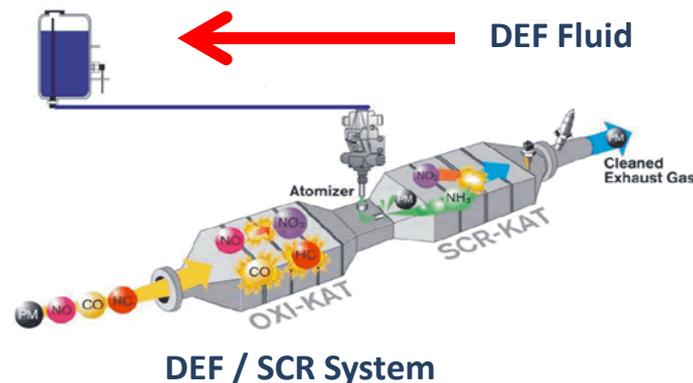


# No DEF Hassel or Cost with CNG

## Added DEF costs

- **DEF Fluid cost** - 1 DEF gallon per 50 gallons of diesel fuel
  - 4-5 cents additional per diesel gallon
- **Filter replacement cost** - @ 160,000+ miles typically 28,000 - 30,000 gallons of diesel fuel used, depending on the driving style.
  - 8-16 cents additional per diesel gallon
- **Regeneration Time** – depending on driving style, regen needs to be performed at each 100 - 200 gallons of diesel.
  - 6-12 cents additional per diesel gallon

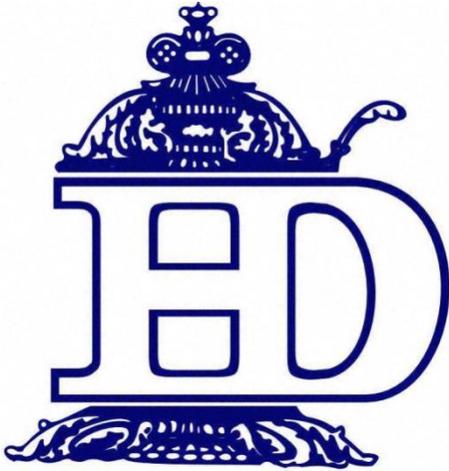
DEF / SCR adds **\$ .20 - \$ .33** cents additional per diesel gallon  
so if diesel is **\$2.30** per gallon add **\$ .25** to cover DEF/SCR costs  
or in this example **\$2.30 + \$ .25 = \$2.55**



More sensors , more issues,  
more maintenance



# Thanks



Enjoy one of our many fine beers today!

