

The Transit Express CNG Experience



Bob Behling
CNG Logistics/Probe Alternative Fuel Systems
Maintenance and Service Provider for
Transit Express

About Transit Express

- Contract transit/shuttle transportation services company
 - Demand response transit services for Milwaukee county and other outlying counties (e.g., ADA and special needs passengers)
 - Private shuttle services (e.g., weddings, corporate excursions)\
- 600,000 passenger trips/year
- Fleet operates 24-7-365
- ~4,000,000 miles per year
- 250-275,000 gallons of gasoline and diesel use/year
- 50,000 GGE of CNG use/year

About Our Fleet



- ~ 150 vehicles in total fleet
- Most are Sprinter vans (diesel); few trolleys
- 22 vehicles are CNG powered
 - 15 OEM Dodge 2500 passenger vans (MY 2001) being replaced by new Ford E250/350s with BAF Technologies systems installed by AutoTruck
 - 1 OEM Ford E350 passenger van (MY – 2003); (portable fueler)
 - 6 Champion 32' 28-passenger buses (FCC chassis w CWI B Gas)

About Our Fleet

- Passenger vans travel average of 200-275 miles per day
 - Depending on routes, shifts, some vehicles travel up to 350/day
 - Avg van travels 25-28K/yr, consumes 2500 GGE of CNG/yr
 - Lots of stops, engine run time during hydraulic lifts
 - Generally, van leaves with scheduled pick-up manifest for the day but daily fuel consumption can occasionally exceed fuel tank capacity (~18-20 GGE) so units occasionally need to stop at fleet yard to fuel during rounds (as needed)
- 2 buses run regular routes, 4 are on charter duty
 - Fuel consumption per bus varies; avg = 20-25 GGE/day

About Our CNG Fueling Station

- Two compressor packages: one for time-fill system and another for fast-fill system (inter-connectable if needed)
- Station equipment owned by WE Energies on Transit Express property (property lease) and maintained under cost-sharing arrangement. Station is public accessible.
- Public access fast-fill station serves Transit Express and variety of other area fleets (about 35-45,000 GGE/yr)
 - Occasional We Energies vehicles (light-duty sedans/pick-ups)
 - Outpost food stores/deliveries
 - Milwaukee School System (maintenance vehicles)
 - Misc. consumers and commercial contractors (HVAC, etc)

About Our CNG Fueling Station

- One 110scfm (~55 GGE/hr) CNG compressor package serves the time-fill fueling system for overnight and idle time fills
 - No storage
 - 14 posts, each with 2 hoses @ 3600 psi (one offers 3000 psi)
- The other 110scfm CNG compressor package serves fast-fill dispenser for “top off” and public access
 - Three-bank high-pressure cascade CNG storage system
 - 22” dia. 20’ long, 10Kscf tanks @ ~4000psi storage (~ 200-250 GGE total capacity; ~80-90 GGE of usable capacity before compressor kicks in – based on programmable controller)
 - 2 hose dispenser: 1 @ 3000psi; 1 @ 3600psi
 - Dispenser has credit card/fueling card payment system





About Our CNG Costs

- Transit Express enjoys favorable fueling arrangement with WE Energies (allows us to focus on our business)
- WE Energies' performs regular PM and Transit Express shares in some of the repair and parts replacement costs
 - Assures system has high “up” time % and reliable operations
- WE Energies collects Wisconsin road taxes (\$.247/GGE) and federal motor fuels excise taxes (\$.183/GGE) on the Transit Express gas bill and pays these taxes to state/feds
 - Reduces administrative burden for Transit Express
- WE Energies also processes and passes back full \$.50/GGE value of federal motor fuels excise tax credit on T/E gas bill

About Our CNG Costs

- Transit Express pays gas and electric bill
 - Special NGV 3 rate provides discount similar to large industrial customers)
- Transit Express receives revenues from the payment processor with complete data reporting (customer, volumes, dates, etc).
- All customers (including municipalities and other fed tax exempts) pay the “retail” pump price based on rate calculations provided by WE Energies each month
- Transit Express, municipalities and other tax exempts file for federal motor fuel tax reimbursement using IRS 8849

Transit Express' Sample CNG Costs:

We Energies NGV3 Rate

	Jan 11	Feb 11	Mar 11	Apr 11	May 11	2011 Mo. Avg.
Gas cost/therm	.6903	.7097	.6723	.7124	.6821	.6934
= Gas cost/GGE (1.248 x therm cost)	.862	.886	.839	.889	.851	8653
+ Electric compression (1KW/GGE)	0.1261	0.1261	0.1261	0.1261	0.1261	0.1261
+ Fed Excise Tax /GGE	0.183	0.183	0.183	0.183	0.183	0.183
- Fed Excise Tax Credit	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)
+ WI Road Tax /GGE	0.247	0.247	0.247	0.247	0.247	0.247
= Cost to TE at pump	.9181	.9421	.8951	.9451	.9413	.9214
Net cost to Transit Express after recovering federal motor fuels excise tax (.183)	0.7351	.7591	.7121	.7621	.7583	0.7384

Thoughts and Comments About Our NGV Program

Suggestions/Tips
For Successful Implementation

Thank You For Your Interest

Bob Behling – Station Service/Repairs Provider
Transit Express
Cngdude@yahoo.com