

AGL CNG Infrastructure Program



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Market Drivers for NGVs



Abundant Domestic Energy Supply

- 98% produced in North America
- Development of shale has increased supply to > 100 years

Reduced Emissions

- Reduces emissions up to 90% over diesel and gasoline
- Meets EPA 2010 NOx levels without urea injection, etc.

Reduced Greenhouse Gases

- NGVs emit 20 – 29% less CO₂ than diesel and gasoline

Cost Savings

- Jan 2012 NYMEX = \$0.31 + ~ \$0.17 delivery = ~ \$0.48/therm
- \$0.48 x 1.25 therms/Gasoline Gallon Equivalent = \$0.60/GGE
- Underlying commodity is \$0.60/Gallon!

Available Natural Gas Vehicles

[<http://www.ngvamerica.org/pdfs/marketplace/MP.Analyses.NGVs-a.pdf>]

Altech-Eco (Ford)

- 2.0L Focus (bi-fuel or dedicated)
- 2.3L Fusion (bi-fuel or dedicated)
- F-150/250/350 (bi-fuel or dedicated)

American Honda

- 1.8L Civic GX (dedicated)

BAF Technologies (Ford - dedicated)

- 4.6L Crown Vic/Gr. Marquis/Town Car
- 5.4L E250/350 vans; F150/250/350 p.u.
- 6.8L E-450 cutaway

Baytech/Landirengo (primarily GM)

- 4.8L Vans, pick-ups (bi-fuel/dedicated)
- 6.0L Vans, p.u, cutaways, W3500/4500 CF, Isuzu NPR/HD, Workhorse W42
- 8.1L C4500-8500 Topkick, Workhorse W62

FuelTek (Ford)

- 5.4L E150/250/350 vans and E350 club wagon; F250/350 p.u. + C/C (bi-fuel)

General Motors

- Chevy Express/GMC Savana vans

IMPCO (GM)

- 3.5L, 3.9L Impala (bi-fuel)
- 4.8L G series vans (bi-fuel)
- 5.3L Tahoe, Avalanche, Suburban
- 6.0L pick-ups and G vans (bi-fuel)

NaturalDrive (GM)

- 3.5L, 3.9L Impala (dedicated)

Cummins Westport

- 8.9L "ISL-G" – 250-320hp

Emission Solutions Inc.

- 7.6L Phoenix NG – 175-260hp
Re-power Int'l DT466/MaxxForceDT

Westport Innovations Inc

15L "GX" – 400/450hp

AGL's CNG Experience

- AGL has been in the CNG vehicle business since the '70s
- AGL owns and maintains eight CNG refueling stations on customer premises for fleet vehicles in Georgia (city/county maintenance vehicles, forklifts, etc.)
- AGL provides maintenance services to 30 additional fleet customers who own their own stations
- AGL has a department of full time CNG technicians, 24-hr. emergency dispatch, etc.

AGL CNG Capabilities

- Trained and Experienced on the following CNG Equipment and Accessories
 - Ariel Compressors
 - Bauer Compressors
 - Caterpillar Engines
 - FuelMaker Compressors
 - Ingersoll Rand Compressors
 - Tulsa Gas Technologies CNG Dispensers
 - Weatherford Enterra Compressors
 - Xebec Dryers
- Emergency Back-up CNG Refueling
 - 40 SCFM Trailer Mounted Natural Gas Engine Driven Compressor
 - Can be on site and operating within hours of notification
- CNG Station Design and Construction

AGL Partnership with MARTA

- AGL and MARTA developed a CNG transit bus program in 1996
- AGL maintains 2 CNG stations for MARTA's 370 CNG buses



- Program Benefits:
 - Saves millions of dollars on diesel fuel costs
 - Displaces about 150,000 barrels of oil each year
 - Reduces emissions by millions of pounds of pollutants

CNG Station Considerations

Station Size and Design Considerations

- What's needed? Time-Fill or Fast-Fill
- Number of vehicles per day, fueling patterns, maximum daily flow, maximum hourly flow
- Available back-up fueling or need for redundancy?
- Dispensing/Metering/Data/Payment needs?
- Modular approach adds capacity as fleet grows



Station Location Options:

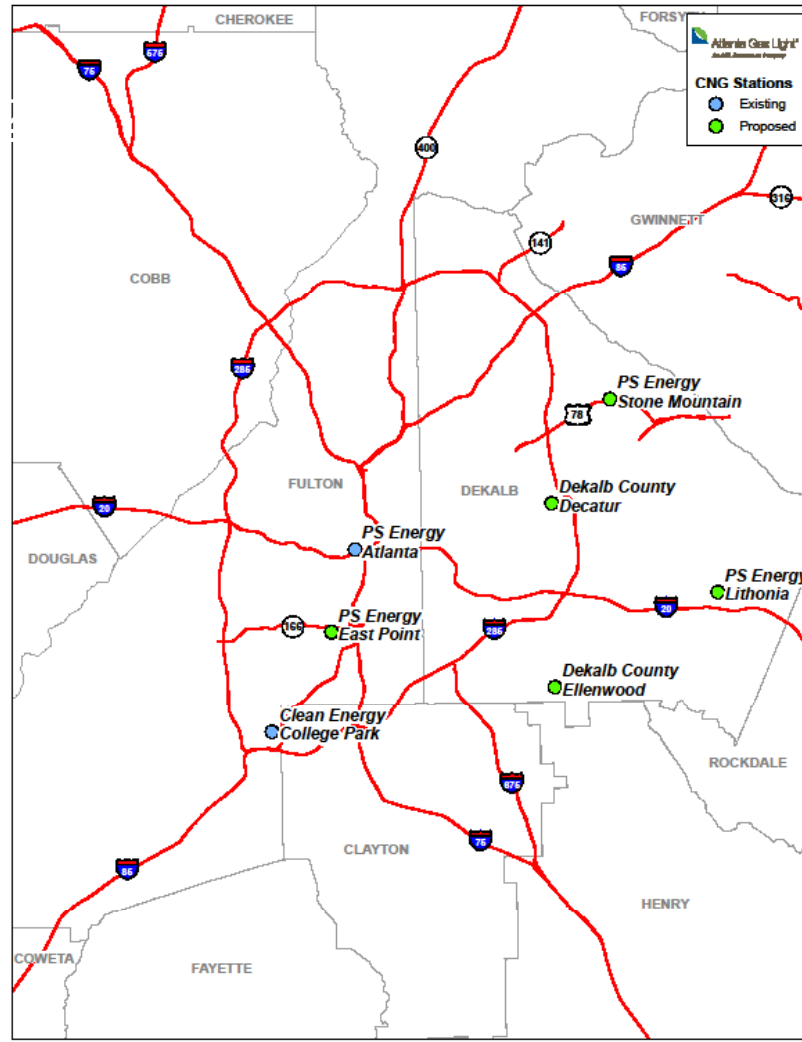
- Offsite – use existing public access station if available, convenient and of sufficient capacity.
- Onsite - private access only
- Onsite - with public access “outside the fence”

Existing and Proposed Public Stations

Existing (2)

Clean Energy,
College Park

PS Energy,
Whitehall St.



Proposed (5)

PS Energy – Lithonia

PS Energy – Stone Mtn.

PS Energy – East Point

DeKalb Co. – Ellenwood

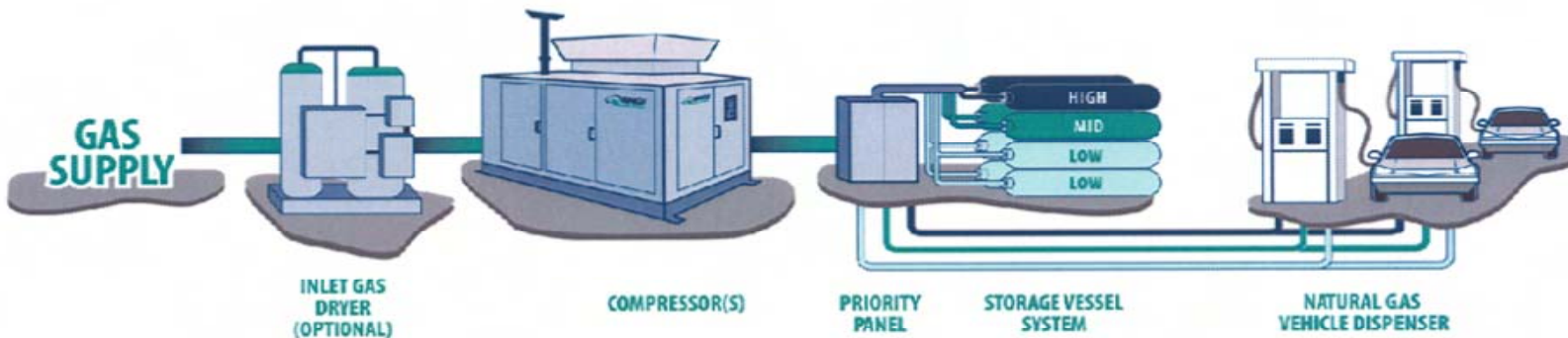
DeKalb Co. – TBD

AGL CNG Infrastructure Program

- Approved by Georgia Public Service Commission Nov 2011
- 5 year program to invest \$11.57 million from USF
 - Up to 25% for “limited access stations” available during the RFP process
- Available anywhere on AGL’s distribution system in Georgia
- AGL will not provide land
- AGL will not be the CNG Retailer
- Includes Home Refueling Appliance (HRA) lease option

AGL to Provide CNG Equipment

- AGL will install, own and maintain the CNG compressors, storage, controls, etc. (“CNG Equipment”)
- CNG Retailer/Applicant to lease land for CNG Equipment
- CNG Retailer to install, own, and maintain the dispensers, card readers, etc. and make any site improvements



Application of Rule 8

- Installation of any necessary gas mains, service lines, and metering equipment to provide gas delivery service to the CNG Station will be handled in accordance with AGL's Rule 8 Non-residential Extension Policy and by a separate standard Non-residential Extension Agreement.

RFP Selection Criteria

Criteria	Weighting
1) Cost Effectiveness Ratio (CER) = Throughput / Investment	90%
2) Location/Station Characteristics <ul style="list-style-type: none">–Strategic fit for area wide coverage, green corridors–Proximity to major roadways for visibility/ease of access–Proximity to other CNG stations (dispersed is better)–Operating hours/public access–Security, tenant/cashier available	5%
3) Growth Potential <ul style="list-style-type: none">–Potential additional fuel usage from anchor fleet–Applicant’s plans for promoting CNG/growing throughput–Proximity to other fleets in the area–Population density of surrounding area, etc.–Letters of intent from other fleets in the area	5%

Contractual Requirements

1) CNG Retailer

- Perform the CNG Retailer function for an initial term of five (5) years
- Meet all licensing and other requirements to operate as a CNG Retailer
- Purchase natural gas from a certificated marketer and obtain CNG Services under AGL's CNG-1 Rate
- Accept major fleet cards and standard credit cards
- Post a CNG retail price in dollars/cents per GGE
- Commit to a minimum volume of 30,000 GGE annually at each Public Access Station or 150,000 GGE annually at each Limited Access Station

2) Land Owner

- Lease land for the CNG Equipment for a minimum five (5) year term
- Provide access to the fueling island(s) on a 24/7 basis
- Provide access AGL employees to maintain the CNG Equipment

AGL CNG Plan – CNG-1 Rate

Delivery charges - Same as General Gas Delivery Service.

Facilities Charges

- 1) Operations and Maintenance (O&M) Charge – A pass through of actual O&M costs at each CNG Station
- 2) Equipment Usage Fee (EUF) - 10% of CNG Equipment cost
 - Adjusted for Utilization Percentage (UP)
 - Adjusted for Customer Investment Percentage (CIP)

$$\text{EUF} = \text{CNG Equipment Cost} \times 10\% \times \text{UP} \times (1 - \text{CIP})$$

Reserve Account

EUF revenue from Phase 1 stations will be held in a Reserve Account for the following purposes:

1. Equipment replacement and/or upgrades of Phase 1 stations
2. Home Refueling Appliance (HRA) lease program
3. Construction of Phase 2 stations

CNG Station Options¹

No.	Nominal GGE/hr.	Required Volume GGE/yr.	Compressor Redundancy	Station Design	Cost – A ² (15 psig)	Cost – B (100 psig)	Applicant Cost ³	CER Score
1	75	30,000 – 59,999	100%	2 x 150 cfm 36,000 cf	\$800,000	\$750,000	\$53,000	0.15
2			50%	2 x 75 cfm 36,000 cf	\$550,000	\$500,000	\$53,000	0.22
3	150	60,000 – 159,999	100%	2 x 400 cfm 36,000 cf	\$1,050,000	\$950,000	\$85,000	0.23
4			50%	2 x 150 cfm 36,000 cf	\$800,000	\$750,000	\$53,000	0.31
5	400	160,000 – 299,999	100%	3 x 500 cfm 72,000 cf	\$1,575,000	\$1,425,000	\$85,000	0.42
6			50%	2 x 400 cfm 36,000 cf	\$1,050,000	\$950,000	\$85,000	0.62
7	750	300,000 – 599,999	67%	3 x 500 cfm 72,000 cf	\$1,575,000	\$1,425,000	\$85,000	0.78
8	1500	> 600,000	67%	3 x 1000 cfm 72,000 cf	\$2,450,000	\$2,250,000	\$150,000	1.00

Note 1: These station options and cost estimates are just a guide and are subject to change prior to AGL issuing the final RFP. AGL makes no warranties regarding the accuracy of these cost estimates.

Note 2: Two estimates for each station depending on available pressure, A for 15 psig, B for > 100 psig.

Note 3: Applicant cost assumes no cost for land or site improvements, just dispensers/card readers.



CNG Station EUF and Maintenance

No.	Nominal GGE/hr.	Compressor Redundancy	Station Design	Annual Volume	Use ¹ %	EUF ² \$/GGE	Maintenance \$/GGE
1	75	100%	2 x 150 cfm 36,000 cf	30,000	20	0.53	1.00
				150,000	100	0.53	0.20
2	75	50%	2 x 75 cfm 36,000 cf	30,000	20	0.37	0.85
				150,000	100	0.37	0.17
3	150	100%	2 x 400 cfm 36,000 cf	60,000	20	0.35	0.85
				300,000	100	0.35	0.17
4	150	50%	2 x 150 cfm 36,000 cf	60,000	20	0.27	0.50
				300,000	100	0.27	0.10

Note 1: Utilization % is calculated based on nominal station capacity even if the actual installed capacity is twice that much due to a second compressor added for 100% redundancy.

Note 2: The \$ amount used in the EUF calculation is the cost of total installed capacity, including any redundant compression.

Estimated CNG Retailer Cost

No.	GGE /hr.	Compressor Redundancy	Station Design	Annual Volume	Use %	EUFG \$/GGE	Maint. \$/GGE	Gas Cost ¹ \$/GGE	Electricity ² \$/GGE	Total \$/GGE
1	75	100%	2 x 150 cfm 36,000 cf	30,000	20	0.53	1.00	0.60	0.19	\$2.32
				150,000	100	0.53	0.20	0.60	0.16	\$1.49
2	75	50%	2 x 75 cfm 36,000 cf	30,000	20	0.37	0.85	0.60	0.19	\$2.01
				150,000	100	0.37	0.17	0.60	0.16	\$1.30
3	150	100%	2 x 400 cfm 36,000 cf	60,000	20	0.35	0.85	0.60	0.17	\$1.87
				300,000	100	0.35	0.17	0.60	0.15	\$1.17
4	150	50%	2 x 150 cfm 36,000 cf	60,000	20	0.27	0.50	0.60	0.17	\$1.60
				300,000	100	0.27	0.10	0.60	0.15	\$1.13

Note 1: Gas cost based on Jan 2012 NYMEX settlement price of \$3.08/mmBtu plus delivery charges.

Note 2: Electricity cost based on Georgia Power PLM-6 rate with no off peak or time of use riders.

Example of CER Calculation

Project	A	B
Nominal station size	75 GGE/Hr.	75 GGE/Hr.
Redundancy	50%	100%
Design	2 x 75 cfm	2 x 150 cfm
Station Cost	\$550,000	\$800,000
CIAC Income Tax – 29.88%	\$164,340	\$239,040
Total USF Payment	\$714,340	\$1,039,040
Year 1 GGE	30,000	30,000
Year 2 GGE	30,000	40,000
Year 3 GGE	30,000	50,000
Year 4 GGE	30,000	60,000
Year 5 GGE	30,000	70,000
CER	0.17	0.19

Example of EUF Calculations

Project	A	B
Nominal station size	75 GGE/Hr.	75 GGE/Hr.
Redundancy	50%	100%
Design	2 x 75 cfm	2 x 150 cfm
Station Cost	\$550,000	\$800,000
Annual Volume GGE	30,000	30,000
Utilization %	20%	20%
Annual EUF	\$11,000	\$16,000
EUF (\$/GGE)	\$0.37	\$0.53

CNG Program Timeline

- AGL to issue RFP for project applications on or before March 1, 2012
- Applications will be due in 45 days (mid-April timeframe)
- AGL will evaluate applications and issue notices of awarded projects within 30 days (mid-May timeframe)
- Applicants will have 90 days to finalize and execute contracts with AGL (mid-August)
- Any funds awarded to applicants who fail to sign contracts with AGL will be made available to other applicants
- Any available funds remaining after the RFP process will be available on a first-come-first-served basis

RFP Application

The information which will need to be provided in the RFP application will include, but is not necessarily limited, to the following:

- Project Applicants
 - CNG Retailer
 - Property Owner
 - Fleet Customer(s)
- Site Address
- Site Description
- Station Size Requested
- Redundancy Requested
- Annual Volume for Years 1 - 5