# Fueling Your

# Alternative Fuel Vehicle Fleet

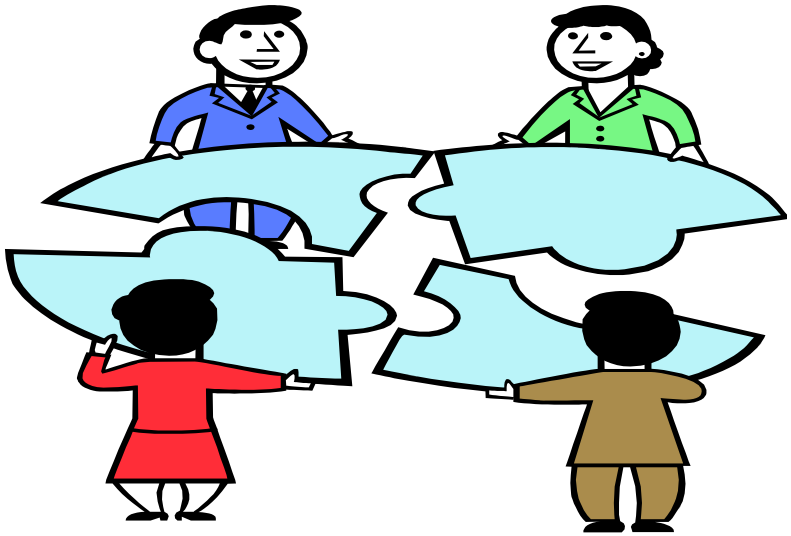
Clean Cities
U.S. Department of Energy
15TH ANNIVERSARY
15 Years of Petroleum Reduction

NREL
National Renewable Energy Laboratory
*Innovation for Our Energy Future*

***Boston MA***
***October 14, 2010***

# Topics

- Why Propane as Auto Gas?
- Technology / Vehicle Offering
- Supply / Infrastructure
- AmeriGas - Overview



# What Should I Do?????

# Why AutoGas

- Cleaner burning – vs. Gasoline
  - ✓ Greenhouse Gases -18%
  - ✓ NOX -20%
  - ✓ Carbon Mon -60% vs. Gasoline
- Reduce dependence on foreign oil
  - ✓ 19.4 MBPD imported
  - ✓ 12.4 MBPD 2/3 use for Transportation
- Reduced operating costs - $5K to$15K over live of vehicle
- New Engine Technology – liquid injection
- Fueling – on premise or outside providers

# Why AutoGas

- Designed to Meet Your Needs
  - ✓ Location
    - Outside Fueling
    - On Premise Fueling
    - Mix of Outside/On Premise Fueling
- Fuel capacity options
  - ✓ 1,000 – 2,000 Gallons
  - ✓ 2,000 – 5,000 Gallons
  - ✓ 12,000 – 30, 000 Gallons
- Permits provided by AmeriGas
  - ✓ Timing – 3 to 9 months depending
- Equipment can be purchased or on loan with multi-year agreement
- Customer Provides Electrical (220 Single Phase), and site preparation
- Lease/Payback options are available on a cents/gallon basis

# Vehicle Solutions

- New – Factory Production
- Aftermarket - Retrofit

# Vehicle Information - New

**Clean Fuels**
Models: Blue Bird
Engine: 8.1 L

**Clean Fuels**
Models: G4500 Chassis
Engine: 6.0L

**Clean Fuels**
Models: Workhorse W42
Engine: 6.0L

**Clean Fuels**
Models: **GM C2500/3500 SERIES CAB CHASSIS**
Engine: 6.0L

**Clean Fuels**
Models: G3500 Cut-Van
Engine: 6.0L

# Vehicle Information - New

**Roush Trucks**
Model: F 250; F350
Engine: 5.4L V8
Year: 2009- 2010

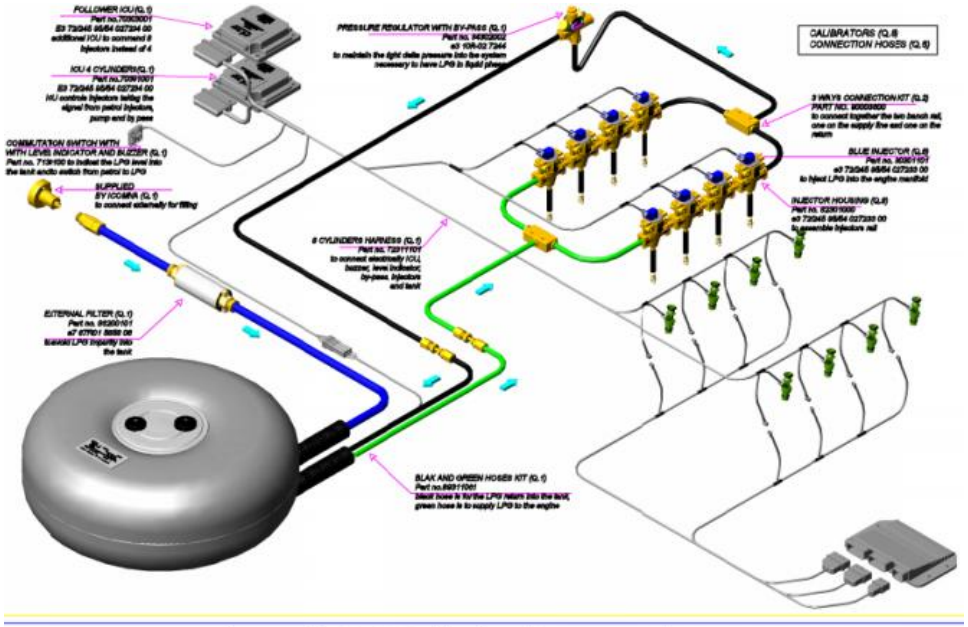
**Roush Vans**
Models: E 150; -E 250; -E 350
Engine: 5.4L V8
Year: 2009 - 2010

**Roush Cutaway**
Model: E 350
Engine: 5.4L V8
Year:: 2009, 2010, 2011

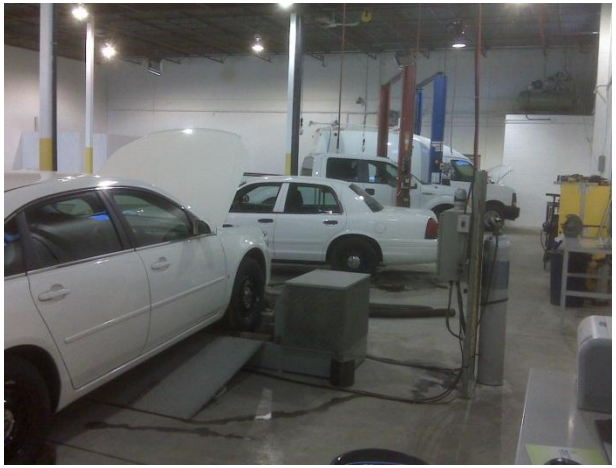
**Roush Cutaway**
Model: E 450
Engine: 6.8L V10
Year:: 2009, 2010, 2011

# Vehicle Information - Retrofit

Propane liquid injection JTG® system
by ICOM




Icom JTG 8 Cylinder Propane System



# Dispenser Options

## Basis System Options – Test and Low Volume

$12K-$15K – usage target 40,000 Gallons/year **(Costs are approximate and differ based on installation)**

CFT PRO 2100

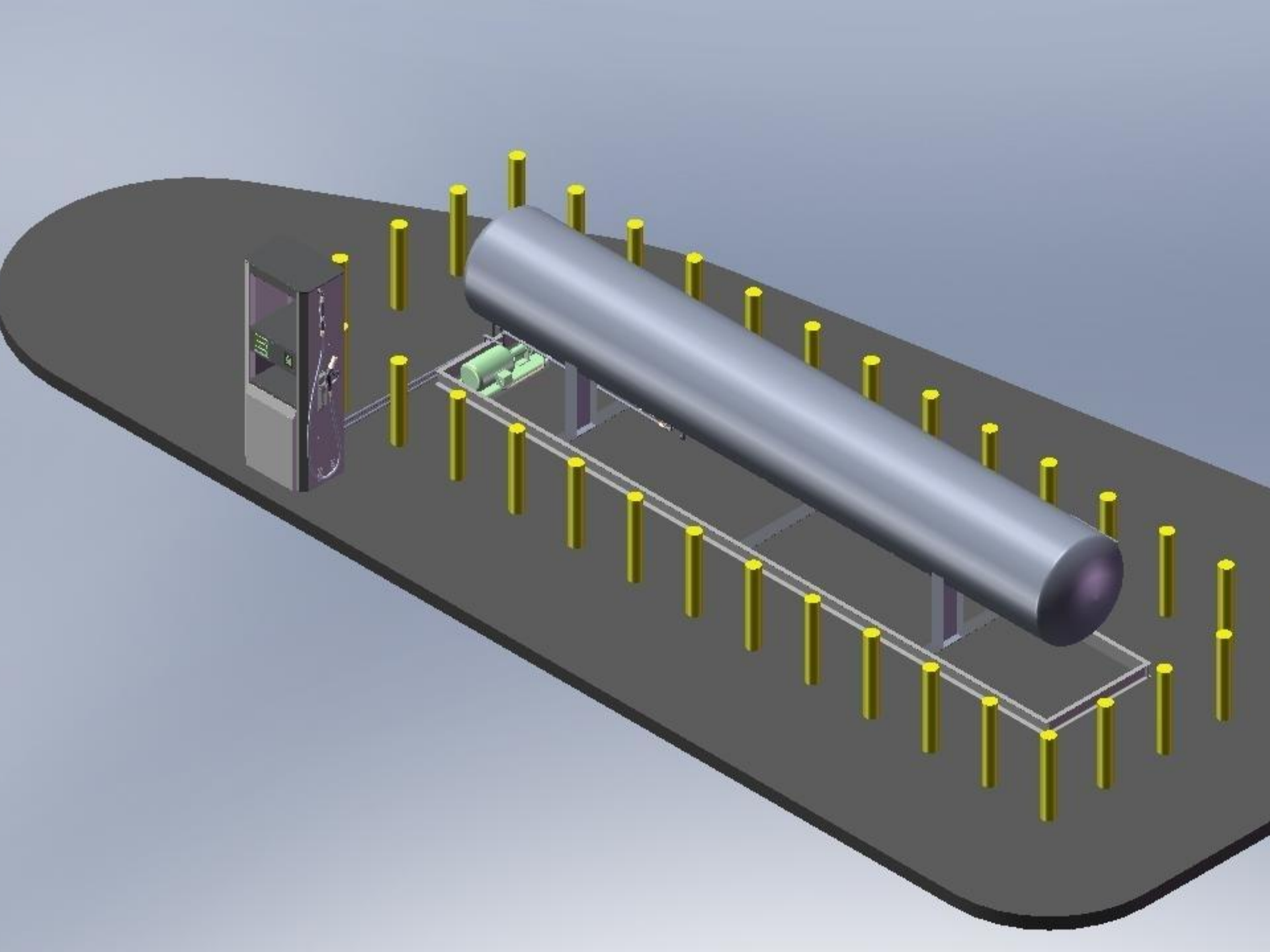
# Dispenser Options

- Medium and High Volume Options
  - ✓ Card Readers
  - ✓ Fuel Management System Interface
  - ✓ $20K to $30K – Usage target 80,000 Gallons

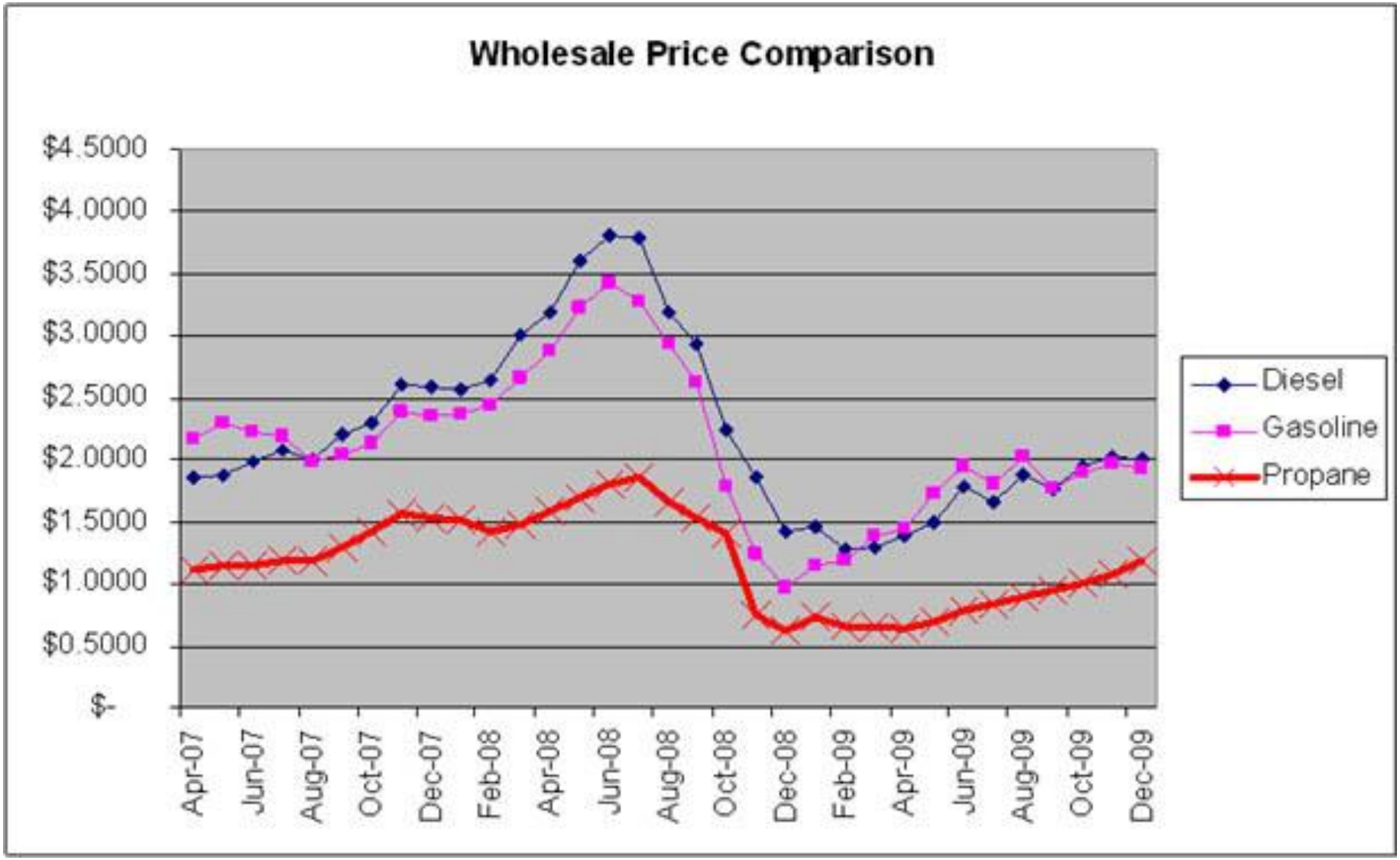
PRO 6100 Series

PRO 7200 Series

Gilbarco Self Serve Style



# Fuel Pricing History

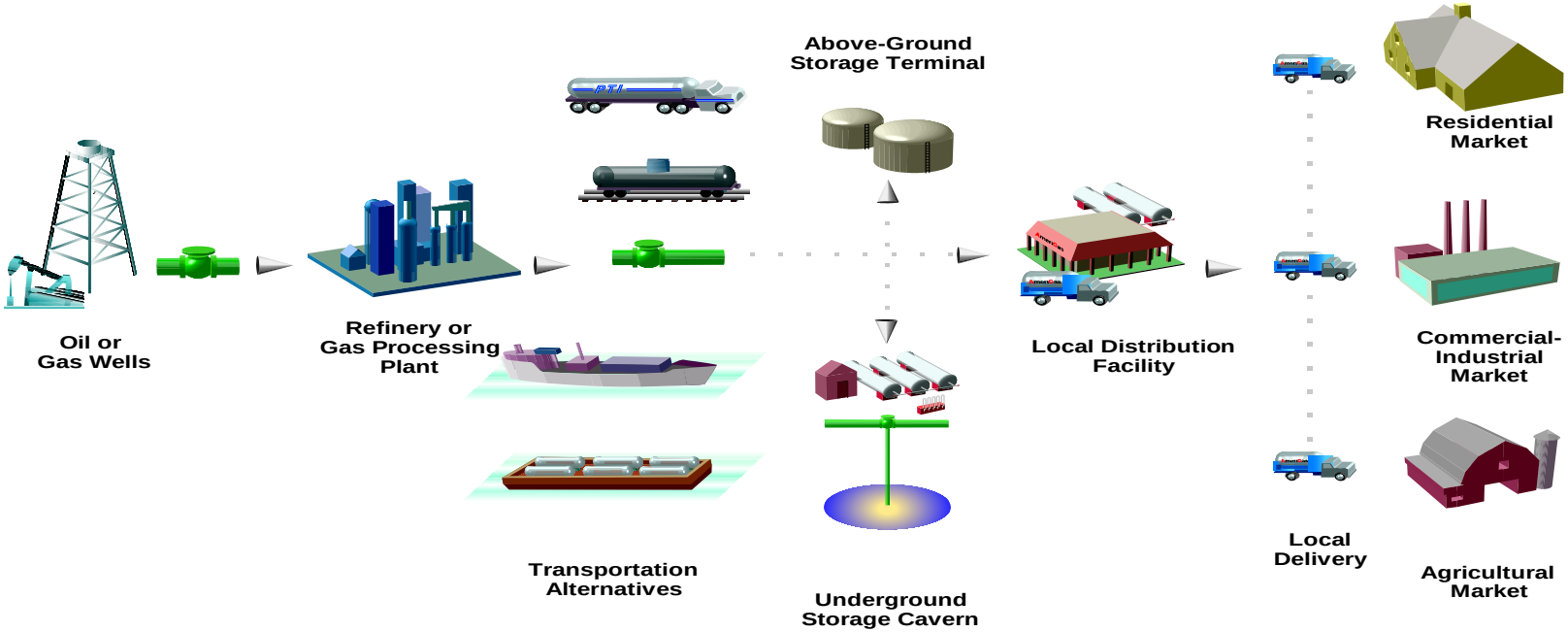


# AmeriGas – Overview

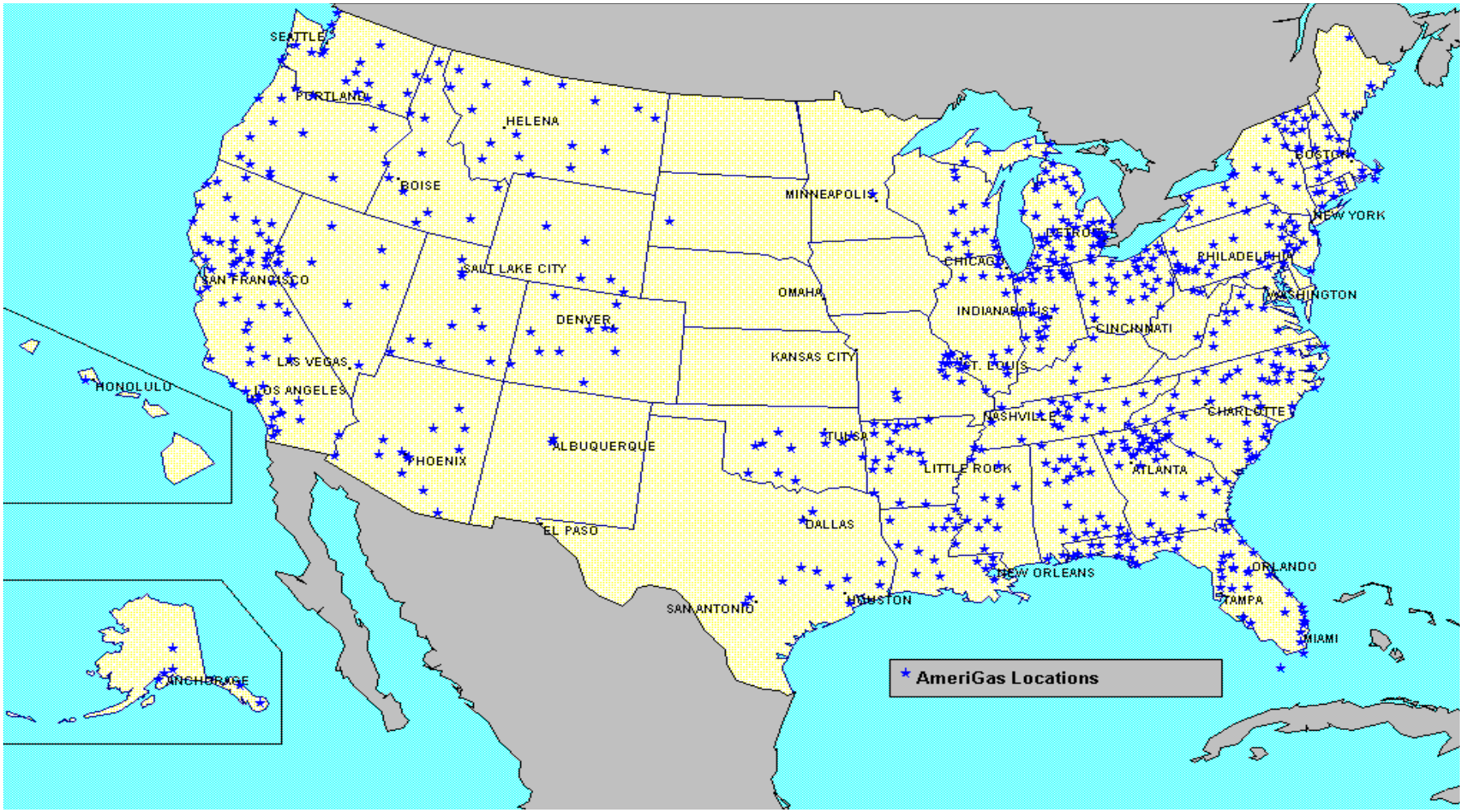
- **Assured Supply - *What Does It Mean to You?***
- **Supply and Logistics**
  - ✓ Staff of 60 in Houston, TX
  - ✓ PTI transport fleet – 300 drivers
    - Serve Customer and AmeriGas District
- **AmeriGas Commitment**
  - ✓ Trucks
  - ✓ Tanks
  - ✓ Railcars
  - ✓ Allocation
  - ✓ Local Districts to Serve Your Needs

# National Presence - Supply

## Propane – From Source to Consumer



# National Presence - Supply



# AmeriGas – Mid-West

- Local District Operations/Sales
  - ✓ Market Manager and Staff
    - Installation, Delivery, Service
  - ✓ Market Sales Manger and Account Mangers

# The answer is...

# Auto Gas

# Why AmeriGas?

- **Committed to Autogas**
- **Local Staff to serve fleets**
- **Solutions tailored for fleets**

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