

# PS ENERGY GROUP: CRITICAL TRANSPORTATION FUEL SUPPLY, TRANSPORT & DISPENSING ISSUES

Roger W. Murray



**ps energy group inc**

PS Energy Proprietary Information. All Documents Confidential.



## BRIEF OVERVIEW OF PS ENERGY GROUP, INC.

## HISTORY OF PS ENERGY EMERGENCY FUELING PROGRAM

## STRATEGIES: TRANSPORT & DISPENSING

1: Assess and Understand Your Needs

2: Develop a Plan

3: Deployment/Logistics

4: Challenges

5: Minimizing Obstacles

## ADVANTAGES OF PS ENERGY EMERGENCY FUELING PROGRAM

## EMERGENCY FUELING QUICK FACTS

## QUESTIONS



Founded in 1985, PS Energy Group, Inc. ([www.psenergy.com](http://www.psenergy.com)) is a privately owned, Atlanta-based company that offers business, industry and government a full range of energy and transportation solutions. As one of the nation's top diversity-owned businesses, PS Energy Group provides transportation fuels, emergency fueling, fuel management and fleet management services, including **etrac**™, a telematics solution that helps improve productivity, profitability and the quality of the environment through better asset monitoring and vehicle tracking.



## HISTORY OF PS ENERGY EMERGENCY FUELING PROGRAM

- **In 1995**, PS Energy Group developed an Emergency Fueling Service designed specifically for the utility industry. This *first-of-its-kind* program involved the development of emergency deployment strategies to help resolve power interruption due to hurricanes, tornadoes, ice storms and other natural disasters.
- **In 1998**, PS Energy formally launched its nationwide Emergency Fueling Program, providing several relief options to industry and utilities when conventional fueling is unavailable or ineffective.
- **In 2005**, for our efforts during Hurricane Katrina, PS Energy received a commendation from BellSouth for outstanding achievement.
- **In 2006**, PS Energy Group received the Supplier of the Year Award from the Georgia Minority Supplier Development Council in recognition of our energy-based relief efforts during Hurricane Katrina.
- Involved in every major hurricane relief effort **since 1995**.
- **In 2012**, Hurricane Sandy brought new challenges.



# STRATEGIES: TRANSPORT AND DISPENSING

## 1: ASSESS AND UNDERSTAND YOUR NEEDS

# HURRICANE KATRINA





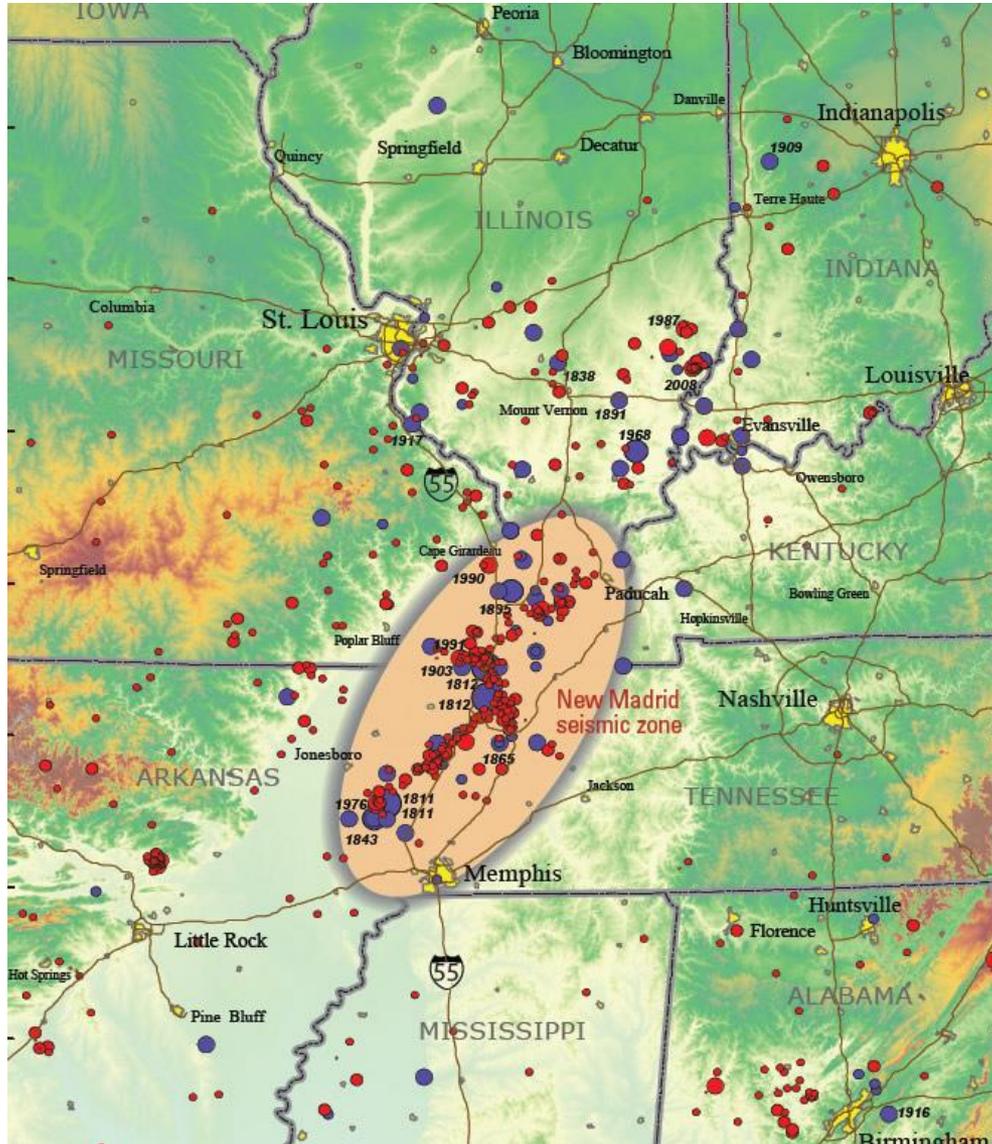
A line that stretches over 1/4 mile long of motorists waiting to fill up with gas at a Valero station on Rt. 130 in Cranbury. 10/31/12 (Tony Kurdzuk/The Star-Ledger)

A gas attendant pumps fuel at long gas lines at the Ridgefield Vince Lombardi Service Area area on the New Jersey Turnpike after Hurricane Sandy Ridgefield. 10/31/12 (William Perlman/The Star-Ledger)



## WHY HAVING A PLAN IS CRITICAL

NEW MADRID SEISMIC ZONE: SCIENTISTS REMAIN CONCERNED ABOUT A MAJOR DESTRUCTIVE EARTHQUAKE



Topographic map showing earthquakes greater than magnitude 2.5 (circles) of the central United States.

Red circles are earthquakes that occurred after 1972.

Blue circles are earthquakes that occurred before 1973.

Larger earthquakes are represented by larger circles.

Yellow patches show urban areas with populations greater than 10,000.



# EARTHQUAKE



## ASSESS AND UNDERSTAND YOUR NEEDS

- Type of Event
  - Hurricane
  - Tornado
  - Ice Storm
  - Earthquake
- Understand Fueling Needs
  - Equipment
  - Supply
- What Will Operations Look Like:
  - Current Site
  - Staging Areas
  - Routes (“Milk Runs”)
  - Field Fueling
  - Combination of All
- Develop Minimum and Maximum Scenario
- Develop Worst-Case Scenario
- Understand Each Fueling Scenario From a *Logistics* Standpoint
- Collaboration with Vendors



## 2: DEVELOP A PLAN

## EMERGENCY RESPONSE REQUIREMENTS

- Determine Daily Fuel Requirements & Estimated Duration
  - What's your operation look like now?
- Determine Number of:
  - Staging Areas
  - Routes ("Milk Runs")
  - Field Fueling
  - Combination
- Determine:
  - Equipment Requirements
  - Types of Equipment
    - Bobtails
    - Transports
    - Mobile Fueling Stations
    - Portable Tanks
- Determine Operational Hours:
  - Daytime
  - Nighttime
  - 24 Hours



- Timeline for Pre-Positioning Fueling Equipment at Designated Staging Areas
- Determine How to Manage Operations at Staging Sites:
  - Who Will Be There?
  - Parking of Utility Vehicles
  - Security
- Tanker for Storage
- Fueling Station with Dual Hose & Dual Fuel Capabilities
- Need any Emergency Misc. Equipment? (Generators, Reefers, Sleepers, Etc.)
- Plan for Resupply

**EVERY EVENT IS DIFFERENT!**



- Maintain wide-area resource network to ensure availability & reliability.
  - Continuously evaluate new suppliers.
  - Continuously solidify existing relationships.
  - Create redundancy.
- Utilize multiple types of fueling vehicles, equipment capable of directly fueling:
  - Storage Tanks
  - Generators
  - Vehicles
- Identify supply sources or terminals, in case of pipeline shutdown or supply disruption.
  - Logistics
- Should resources become constrained, move outside of constrained area and draw supply from other states or regions.
- Source first wave of equipment located adjacent to general areas of disaster.
  - Vendors located within affected areas often limited in the equipment and personnel they can provide, due to stress of being in “the heart of the storm.”
  - Thus, significant numbers of vehicles and personnel often required from areas unaffected by the event.



Ensure that:

- All drivers adhere to safety & environmental regulations.
- All drivers CDL-Hazmat certified.
- Equipment meets all DOT & state requirements.
- All trucks equipped with spill kit, and drivers trained in containment procedures.



## EXAMPLE OF WHAT A BASE TEMPLATE MIGHT LOOK LIKE: TIER 1 EVENT

- Top off all inground tanks within service territory after all vehicles have pre-fueled prior to event.
- Pre-position fuel and equipment (8-10 tankers).
- 72,000 – 90,000 gallons pre-staged fuel requirement.
- 60,000 gallons of fuel delivered to designated staging areas within 24 hours after event.
- 60,000 gallons daily requirement for 15-day duration.
- Minimum equipment requirement:
  - Minimum of 5 Staging Areas, each with:
    - 1 Tanker for Storage
    - 1 Fueling Station with Dual Hose and Dual Fuel Capabilities (Manned for Daytime Fueling)
    - 1 Bobtail with Dual Hose and Dual Fuel Capabilities (Manned with 3 Personnel for Nighttime Fueling)
  - Service Center Requirements:
    - 1 Fueling Station with Dual Hose and Dual Fuel Capabilities to Supplement Inground Tank
    - Fueling Station to be positioned in south lot across from Service Center.
    - Manned for Daytime Fueling
    - Emergency Miscellaneous Equipment (Generators, Reefers, Sleepers, etc.)
    - 1 Bobtail with Diesel Fuel (Manned 1 Person)
  - Total of Minimum Equipment Required:
    - 5 Tankers for Storage (39,000 Gallons)
    - 6 Fueling Stations (46,800 Gallons)
    - 6 Bobtails (Gallons Depend on Size of Equipment)
    - Customer reserves the right to call for more equipment than listed above.
- Equipment is to be used in Gulf Coast Region of service territory.
- Equipment is based on supporting Gulf Coast staging areas only. Other divisions to provide own fueling needs.
- Other divisions reserve the right to call upon Gulf Coast fuel coordinator to take over their fueling requirements, in which case, customer's minimum equipment needs will rise drastically.

## EXAMPLE OF WHAT A BASE TEMPLATE MIGHT LOOK LIKE: TIER 2 EVENT

- Top off all inground tanks within service territory after all vehicles have pre-fueled prior to event.
- Pre-position fuel and equipment (8-10 tankers).
- 72,000 – 90,000 gallons pre-staged fuel requirement.
- 80,000 gallons of fuel delivered to designated staging areas within 24 hours after event.
- 80,000 gallons daily requirement for 15-day duration.
- Frac Tanks (Tank Farm)
  - Minimum of 4 frac tanks or suitable storage devices to store a minimum of one-day supply of fuel reserve.
  - Frac tank/storage devices requirement could increase, depending on reserve requirement needed.
- Minimum equipment requirement:
  - Minimum of 10 Staging Areas, each with:
    - 1 Tanker for Storage
    - 1 Fueling Station with Dual Hose and Dual Fuel Capabilities (Manned for Daytime Fueling)
    - 1 Bobtail with Dual Hose and Dual Fuel Capabilities (Manned with 3 Personnel for Nighttime Fueling)
  - Service Center Requirements:
    - 1 Fueling Station with Dual Hose and Dual Fuel Capabilities to Supplement Inground Tank
    - Fueling Station to be positioned in south lot across from Service Center.
    - Manned for Daytime Fueling
    - Emergency Miscellaneous Equipment (Generators, Reefers, Sleepers, etc.)
    - 4 Bobtails with Diesel Fuel (Manned)
  - Total of Minimum Equipment Required:
    - 10 Tankers for Storage (78,000 Gallons)
    - 11 Fueling Stations (85,800 Gallons)
    - 14 Bobtails (Gallons Depend on Size of Equipment)
    - Customer reserves the right to call for more equipment than listed above.
- Equipment is to be used in Gulf Coast Region of service territory.
- Equipment is based on supporting Gulf Coast staging areas only. Other divisions to provide own fueling needs.
- Other divisions reserve the right to call upon Gulf Coast fuel coordinator to take over their fueling requirements, in which case, customer's minimum equipment needs will rise drastically.



# OPIS TERMINAL MAP



## 3: DEPLOYMENT/LOGISTICS

## IMPLEMENT PLAN: HOW PS ENERGY DOES IT



## 4: CHALLENGES

## CHALLENGES

- Lack of Preparedness
  - Slow Reaction Time
  - Lack of Pre-Contracted Resources
  - Prolonged Recovery Period
- Relied on Local Resources
  - Difficult to Obtain, Esp. During Protracted Recovery Period
  - Sources May be Destroyed
  - Everyone Competing for Same Resources
- Travel Routes May Be Damaged
  - Roads Impassable
  - Bridges Out
  - Major Detours
  - Heavy Traffic
- Lack of Communication
  - Cellular Infrastructure May Be Compromised
  - Lack of Inter-Agency Cooperation and Communication
- Interruption to Business Operations
  - Chain of Command



## 5: MINIMIZING OBSTACLES

# HURRICANE KATRINA





A line that stretches over 1/4 mile long of motorists waiting to fill up with gas at a Valero station on Rt. 130 in Cranbury. 10/31/12 (Tony Kurdzuk/The Star-Ledger)

A gas attendant pumps fuel at long gas lines at the Ridgefield Vince Lombardi Service Area area on the New Jersey Turnpike after Hurricane Sandy Ridgefield. 10/31/12 (William Perlman/The Star-Ledger)





## MINIMIZING OBSTACLES

- Have plan in place.
- Work with experienced contractors.
- Dedicate equipment to specific customers/functions.
- Have ample resources outside of the affected area to lessen the risk of non-availability.
- Have broad network of suppliers & equipment to cover even the largest and longest lasting emergency event.
- Maintain effective communication infrastructure:
  - Equip drivers with cell phones and/or satellite phones,
  - Ensure drivers have onsite contact.
  - Equip vehicles with mobile asset tracking devices.
- Mutual aid agreements with other agencies.



Ensure that:

- All drivers adhere to safety & environmental regulations.
- All drivers CDL-Hazmat certified.
- Equipment meets all DOT & state requirements.
- All trucks equipped with spill kit, and drivers trained in containment procedures.



## ADVANTAGES OF PSE EMERGENCY FUELING PROGRAM

- Extensive Experience
- Asset & Fuel Supply Ensured When Shortages Occur
- Reliability
- Quick Response & Time Savings
- Continuous Around-the-Clock Service
- Multiple Fueling Locations – Staging Areas
- Uninterrupted Business Operations
- One Call for All Emergency Fueling Requirements



## 2005-2012 EMERGENCY FUELING QUICK FACTS

### ***TIME***

Begin Date	July 7, 2005
Completion Date	November 20, 2012
Total # of Days Contracted	448
Total Shift Hours Worked	142,459.69
Equivalent # of YEARS 1 Person Worked	68.49

### **MILES**

Total Mileage Driven	1,054,714.42
Calculated # of Trips Around the Earth	42.36

### **USAGE**

Total # of Gallons Used	4,230,677.60
Estimated # of Vehicles Fueled	211,533.88
Amount of Equipment Used for Fueling	492

**NUMBER OF FUEL OUTAGES (INABILITY TO SUPPLY) -- ZERO!**



## QUESTIONS

For a copy of this presentation, please email Roger Murray:

[roger.murray@psenergy.com](mailto:roger.murray@psenergy.com)