# New York State Energy Planning Board

## Energy Assurance Planning in New York State

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# Overview of Presentation

- Conceptual Framework
- State Energy Profile
- Monitoring Market Dynamics
- Tabletop Exercises
- Interdependencies and Vulnerabilities
- Energy Supply Disruption Events

# Energy Assurance: Conceptual Framework

- **Goal**: Improve energy supply reliability and reduce the probability and consequence of disruptions across all fuels
- Development of detailed **State energy and infrastructure profiles**
- **Market monitoring** tracks fuel flows, key industry stakeholders and infrastructure, trends in supply, demand, inventories, production and price
- Identify and understand energy infrastructure **vulnerabilities and interdependencies**
- Identify responses and market adaptations to **energy supply disruption events** by industry and government

# NYS Energy Profile

- Energy Supply and Demand and Stakeholder Information
  - 2013 New York State Energy Plan
  - 2012 NYS Patterns and Trends: Annual energy statistical information
  - NYISO Gold Book: Electric sector information
  - U.S. EIA State Energy Profile: Data sets
  - NYS Energy Emergency Plan: Annual update

# Market Monitoring and Supply Disruption Tracking

- Multiple levels of situational awareness
  - Real-time disruptions and response: DPS, NYSERDA, OEM, NYISO and industry stakeholders
  - Track data for inventories, production, demand, prices, and other indicators of fuel availability: DPS, NYSERDA and industry stakeholders
  - Infrastructure monitoring from US DOE, USCG, State and industry stakeholders.

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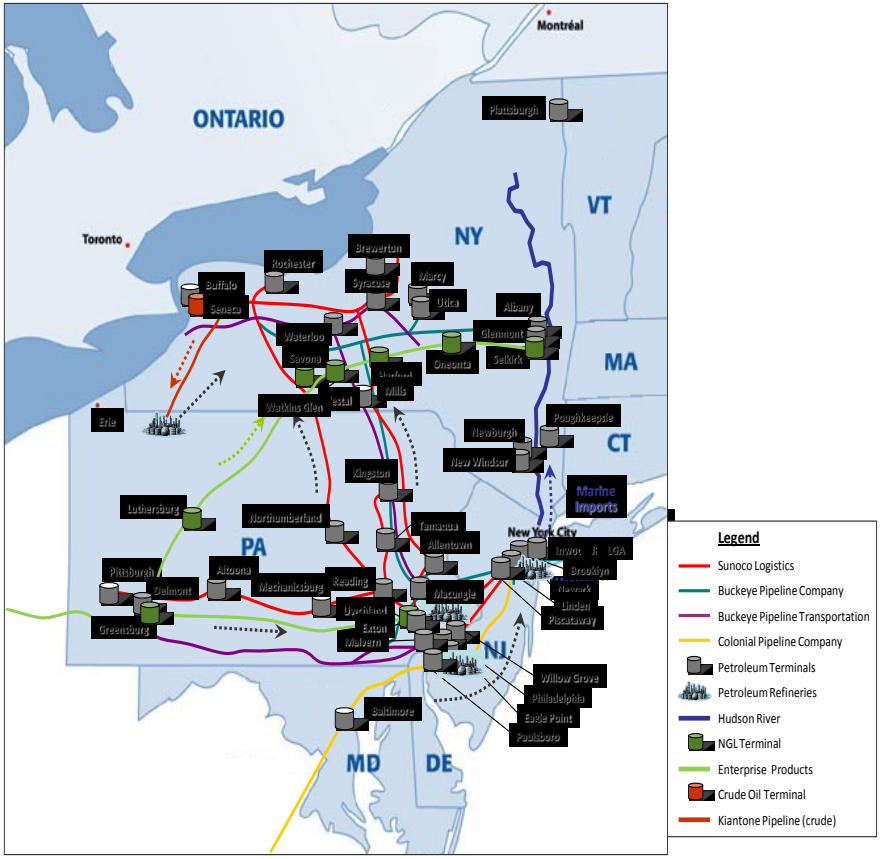
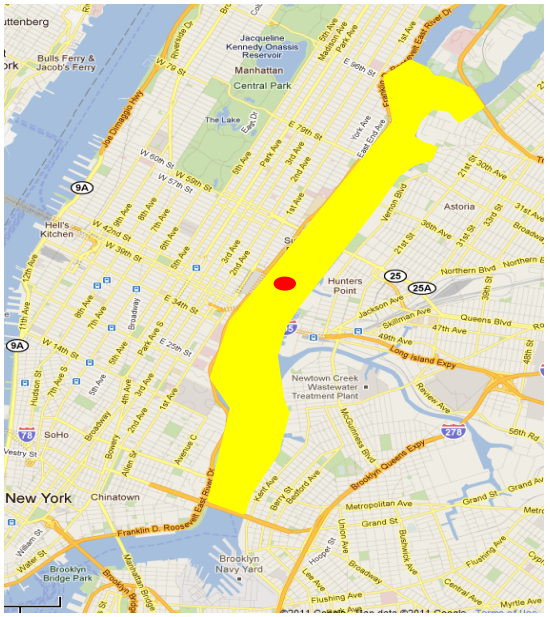
# Monitoring Market: Regional Infrastructure Trends

- **Situation**: NY depends on regional, national and global flow of petroleum products.
- **Scenario**: Changing fuel specs and refinery closures in the Northeast will alter the product flow.
- **Implications**: NY increasingly dependent on Gulf Coast pipeline shipments, international imports and other emerging U.S. sources.
- **Energy Assurance Actions:** Maintain and build operational awareness of storage, ports, tankers, barges, pipelines, and rail capacities.



# Tabletop Exercises: Preparing for Abrupt Events

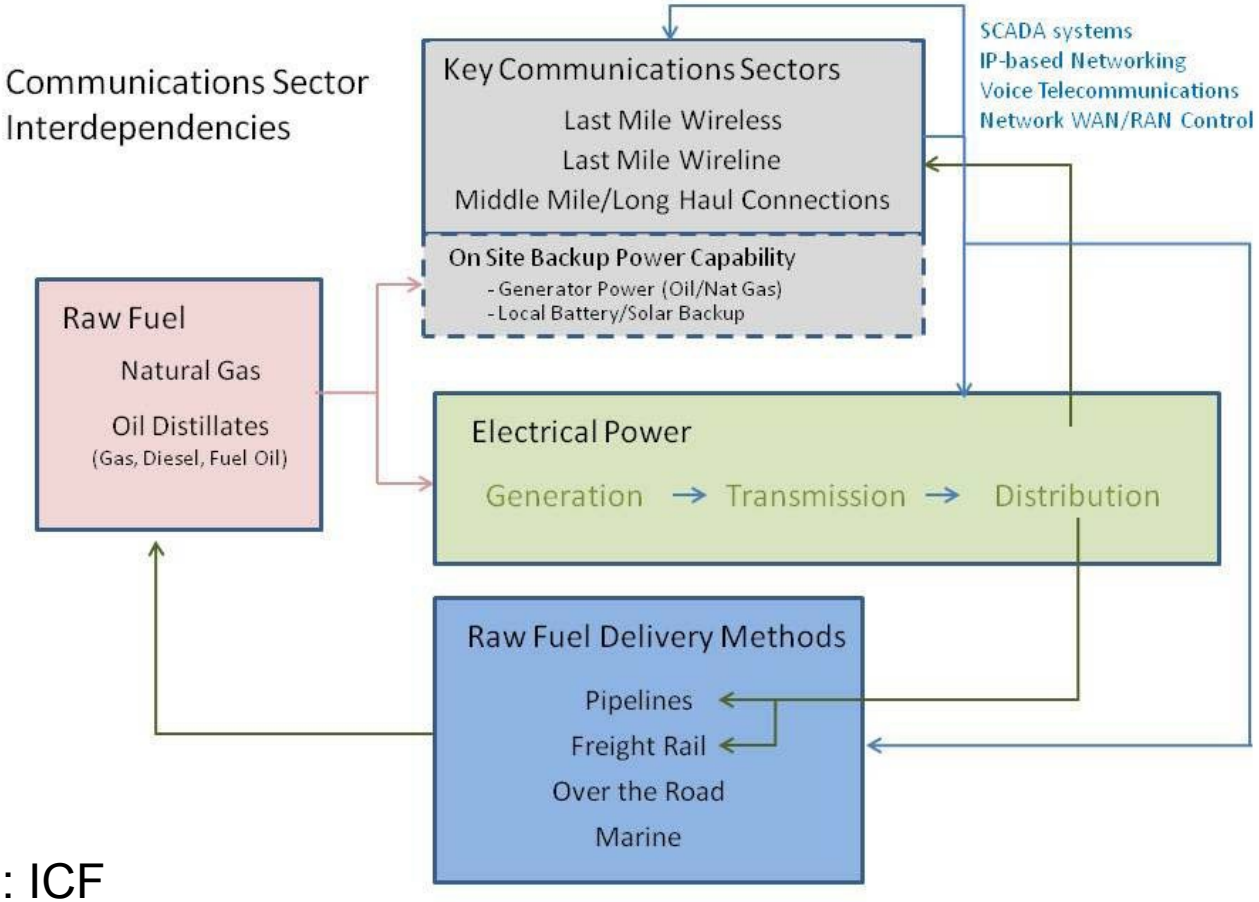
- **Event**: Nov. 2011 - Petroleum, natural gas and electric industry participated in downstate exercise with local and state government representatives.
- **Objective**: Tested interplay of natural gas and petroleum distribution system during cold weather pattern, coupled with regional transportation disruption.
- **Finding**: Mutual reliance among electric generators, natural gas system and petroleum distributors
  - Limited awareness of each other's operating requirements.
  - Petroleum relied upon as fuel of last resort for multiple sectors. Fuel inventories are a key factor.




# Interdependencies and Vulnerabilities

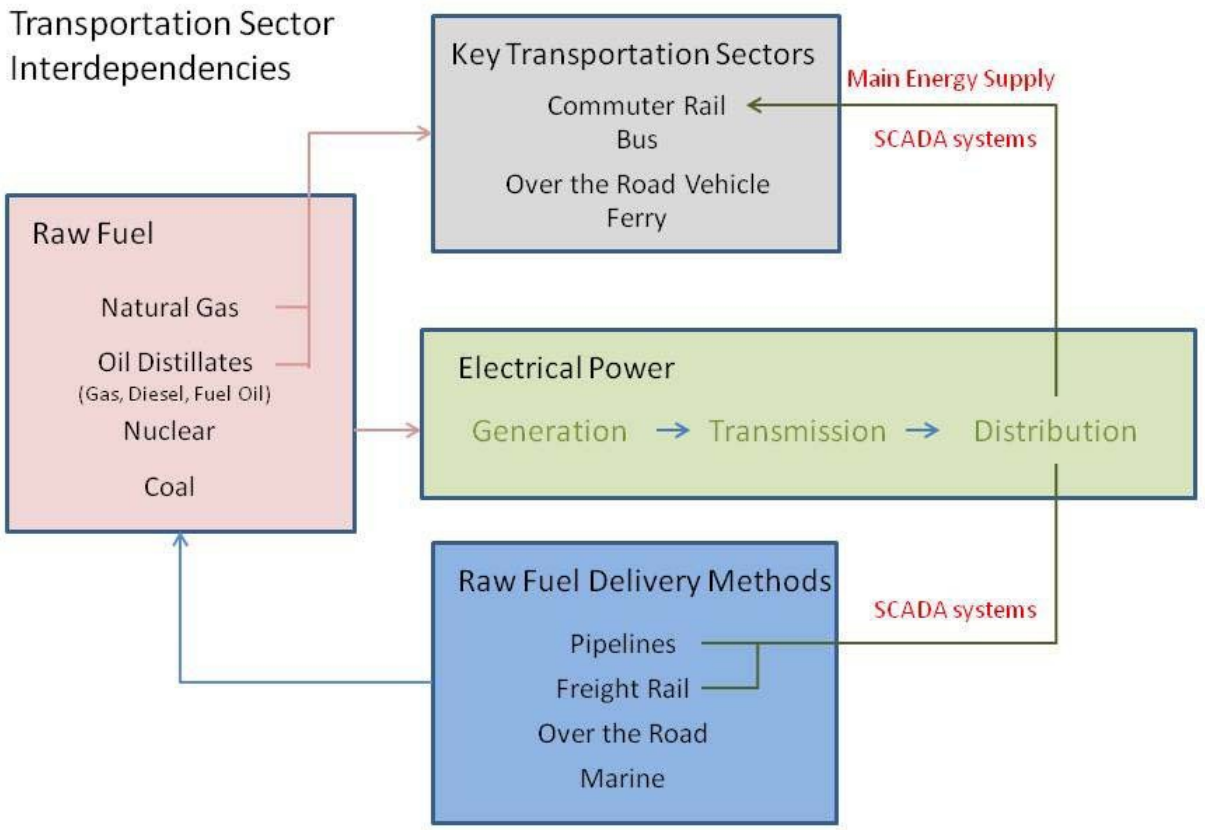
- Seek to identify our energy supply blind spots
- Fuels, electricity, communications and transportation are highly interconnected and interdependent.
  - Where can the loss of one system affect the others?
  - Potential for cascading effects?

# Interdependencies: Communications




Source: ICF

# Interdependencies: Transportation




Source: ICF

# Energy Supply Disruption Events

- Tracking response strategies at the public and private levels
  - Government: Response and recovery
    - Federal and State roles
    - Market intelligence  gathering
    - Communications protocols
    - Recovery phase
  - Industry stakeholders:  Response actions and market adaptations
    - Repair and recovery of assets, mitigation, mutual aid
    - Alternative supply arrangements
    - Product delivery changes:  customer curtailment programs

# Questions?