

EIA Data Collection & Analysis During Energy Emergencies



NASEO/NEMA State Petroleum Shortage Planning Workshop

Hannah Breul

February 21 | Atlanta, Georgia

EIA's Mission Statement

The U.S. Energy Information Administration (EIA) collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.

Ongoing Activities: Office of Petroleum and Biofuels Statistics

- Collect data on the U.S. petroleum market on a weekly, monthly, and annual basis
- Provide weekly, monthly, and annual supply and demand balances for the United States
- Collect data on origins and quality of U.S petroleum imports
- Collect monthly and annual data on capacities for refineries, biofuel production (ethanol and biodiesel), and storage
- Collect weekly and monthly data on prices, both retail and further upstream
- Collect monthly data on sales of petroleum products
- Collect annual data on end use demand for distillate fuel oil, residual fuel oil, and kerosene

Petroleum Data Characteristics

- **Weekly Data**
 - Emphasis is on timely release within days of report period end
 - Best used as an early indicator of trends
 - Typically based on sample surveys and estimates
- **Monthly Data**
 - Typically released within 60 days after the end of the report period
 - Accuracy is generally improved relative to weekly data
 - Includes more data based on a complete census of in-scope operators
 - Monthly data include more detail than weekly reports
- **Annual Data**
 - Includes monthly revisions, and considered the most accurate data
 - Some data are only available annually (e.g., refinery capacity, and end use demand of fuel oil and kerosene)

Popular products produced by the Office of Petroleum and Biofuels Statistics

- **Weekly**
 - Weekly Petroleum Status Report
 - Gasoline and Diesel Fuel Retail Prices
 - Residential heating oil and propane prices (October through mid-March)
 - This Week In Petroleum (excluding the feature article)
- **Monthly**
 - Petroleum Supply Monthly
 - Company Level Imports
 - Biodiesel Production Report
 - Petroleum Marketing Monthly
 - Prime Supplier Report
- **Annual**
 - Petroleum Supply Annual
 - Annual Refinery Capacity Report
 - Fuel Oil and Kerosene Sales Report

Ongoing Activities: Office of Energy Markets and Financial Analysis

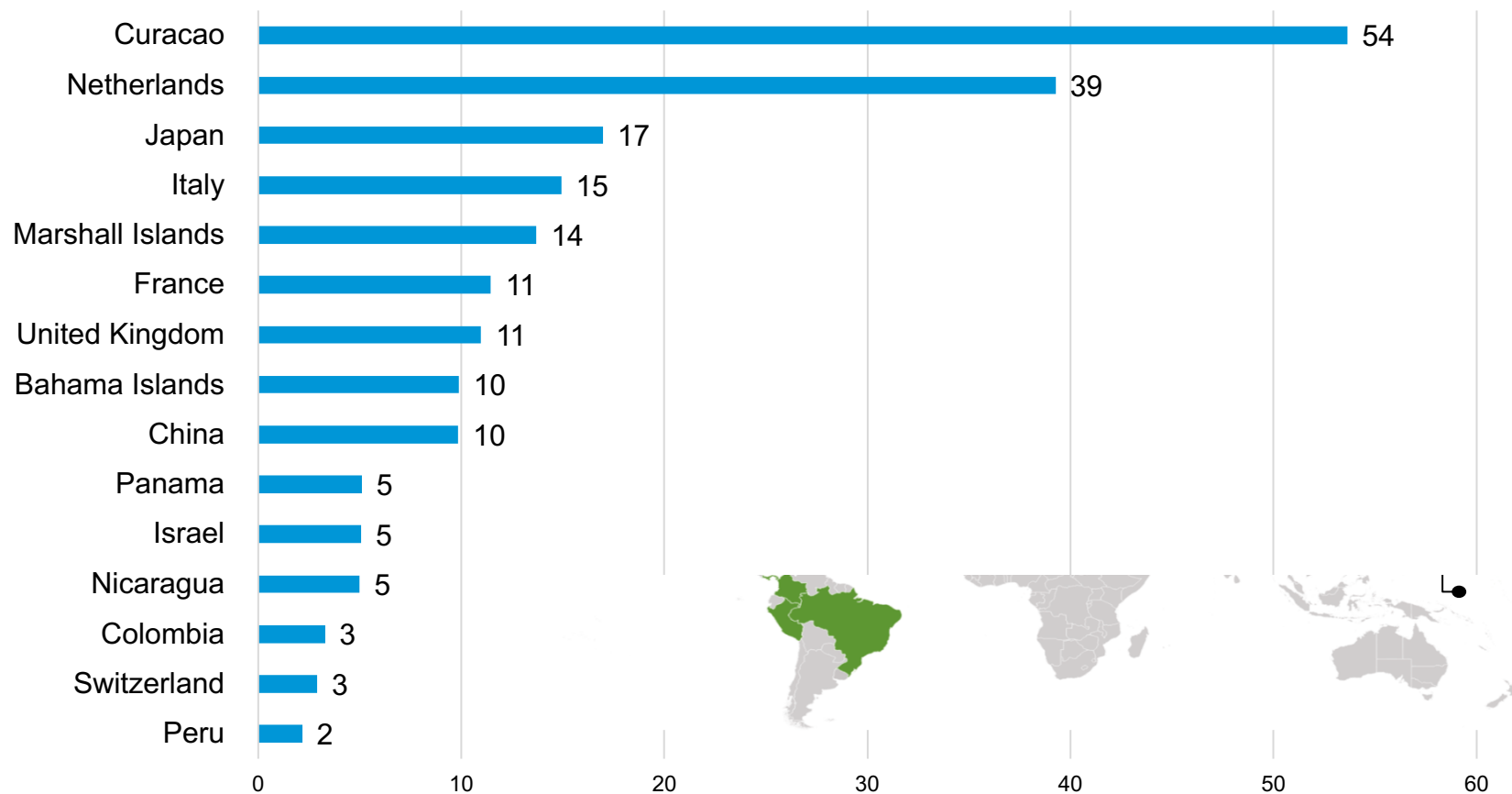
- The Petroleum Markets Team (PMT) is part of the Office of Energy Markets and Financial Analysis
- PMT researches and analyzes U.S. and global crude oil and petroleum product markets on an ongoing basis
- PMT focuses on current and near term markets, answering questions from the public, the industry, Congress, the White House, and other EIA stakeholders/clients
- PMT analysis includes
 - Crude and product supply, refining, logistics and distribution, including regional crude oil and petroleum product supply/demand balances
 - Supply disruptions, e.g. propane during the winter of 2013/2014, gasoline and diesel during and after hurricanes/storms, e.g. crude and product supply following pipeline disruptions
 - Crude oil prices and wholesale and retail gasoline and diesel prices

Ongoing Activities: Office of Energy Markets and Financial Analysis, cont'd

- PMT works closely with the Office of Petroleum and Biofuels Statistics
- PMT publishes This Week in Petroleum (TWIP), an article presenting analysis of a current petroleum market trend or issue
 - TWIP is often used during hurricanes and other events to communicate information about impacts on petroleum markets
- PMT also pursues special projects and in depth studies, including overviews of region transportation fuel supply markets and planned refinery maintenance

Publish timely petroleum market analysis each week for EIA's *This Week in Petroleum*

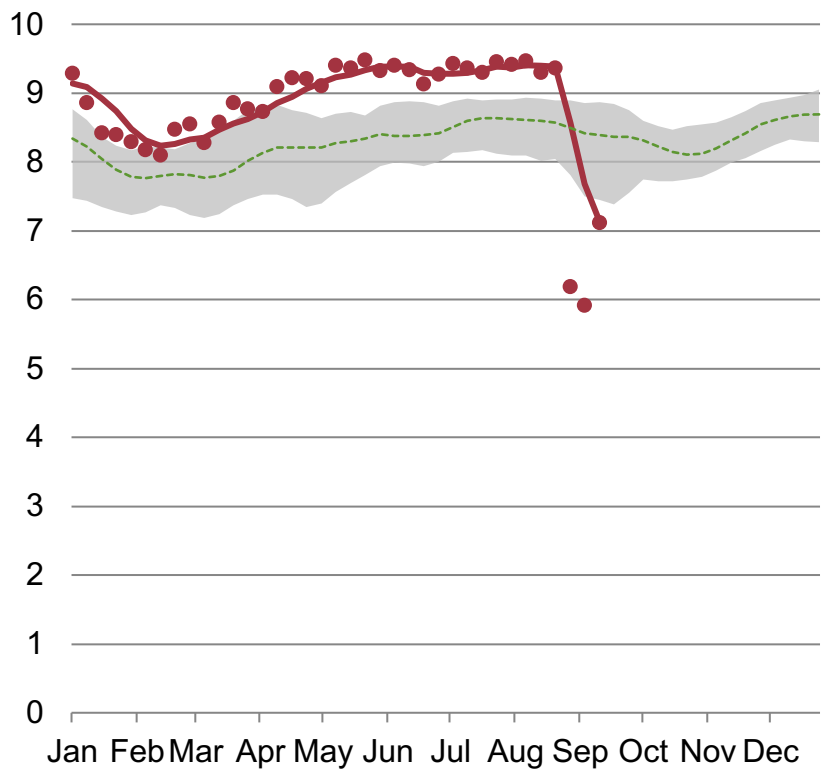
U.S. crude oil exports January through May 2016 (excludes Canada)
thousand barrels per day



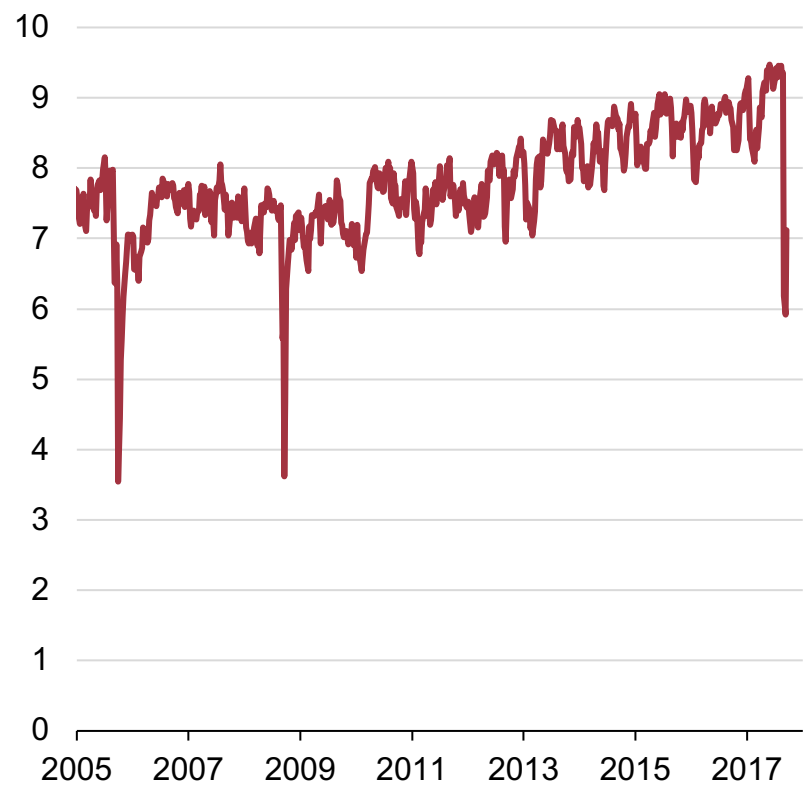
Source: U.S. Energy Information Administration, *This Week in Petroleum*, August 2016

TWIP provides timely analysis of emerging trends: Hurricane Harvey caused U.S. Gulf Coast refinery runs to drop

Gulf Coast (PADD 3) gross refinery inputs million barrels per day

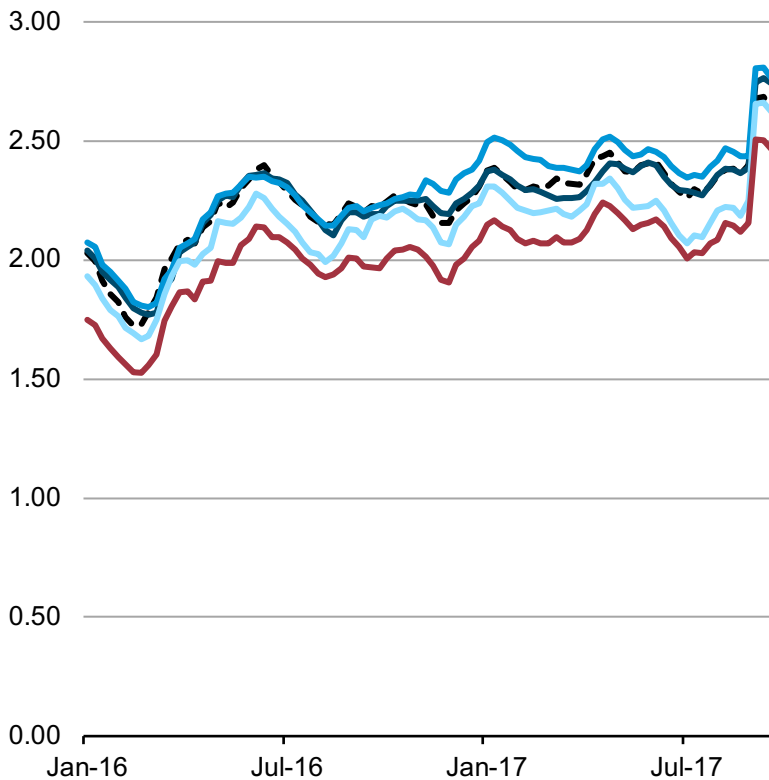


Gulf Coast (PADD 3) gross refinery inputs million barrels per day

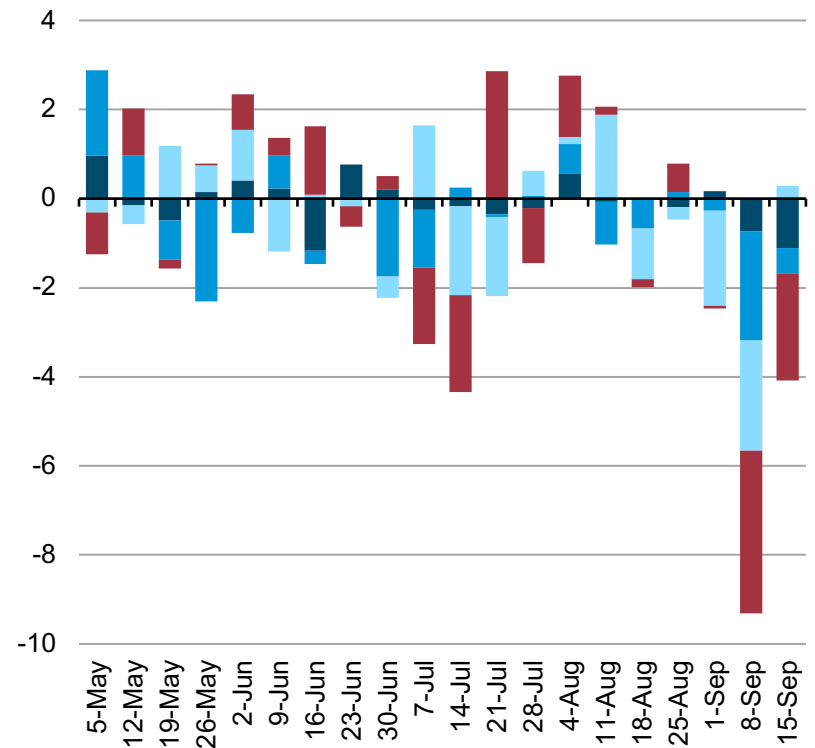


Reduced refinery output contributed to higher gasoline prices, and large swings in gasoline inventories

Weekly regular gasoline prices
dollars per gallon



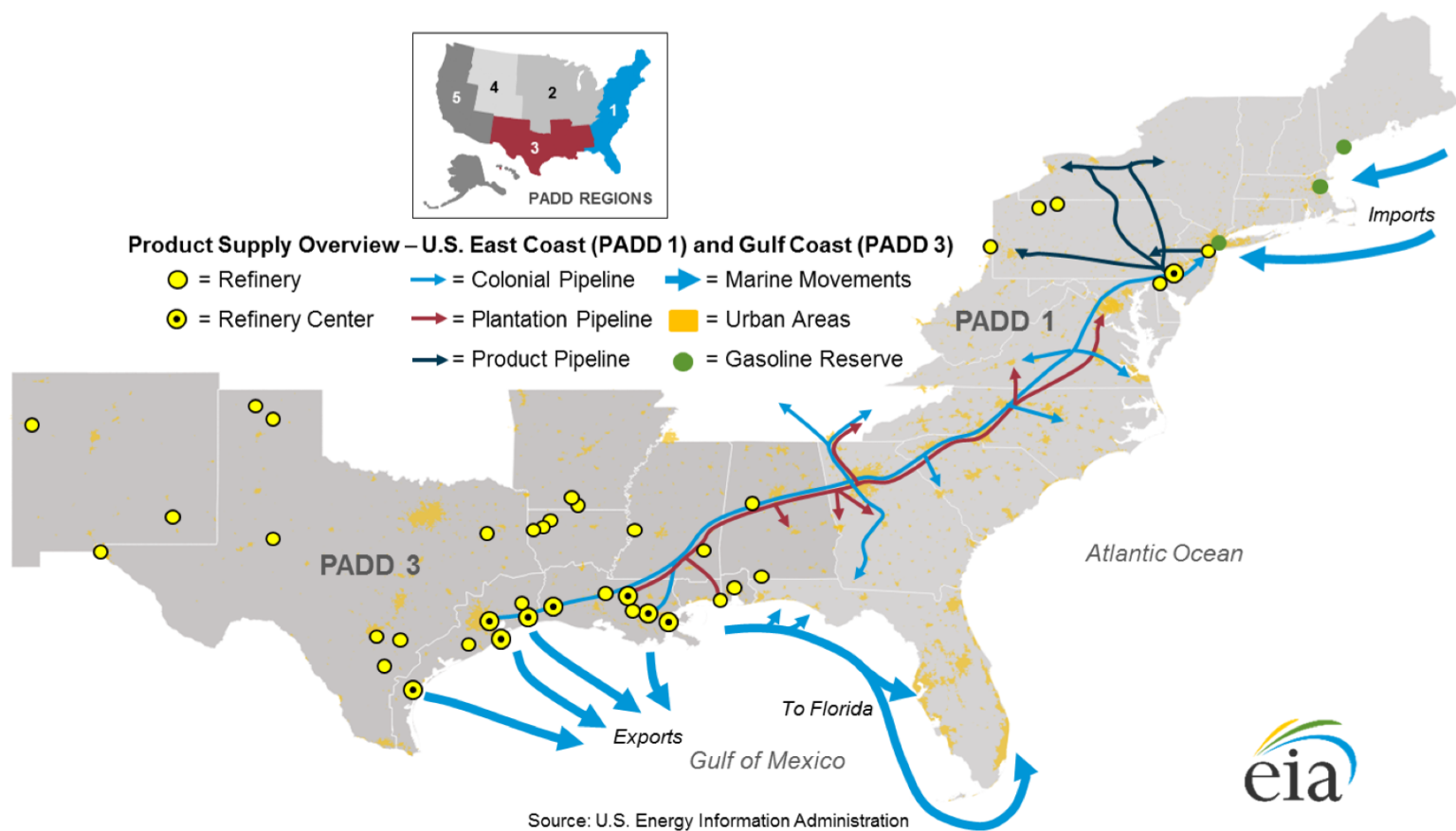
Weekly change in total motor gasoline inventories
million barrels



The regional transportation fuels market studies contain detailed supply and demand information for each region

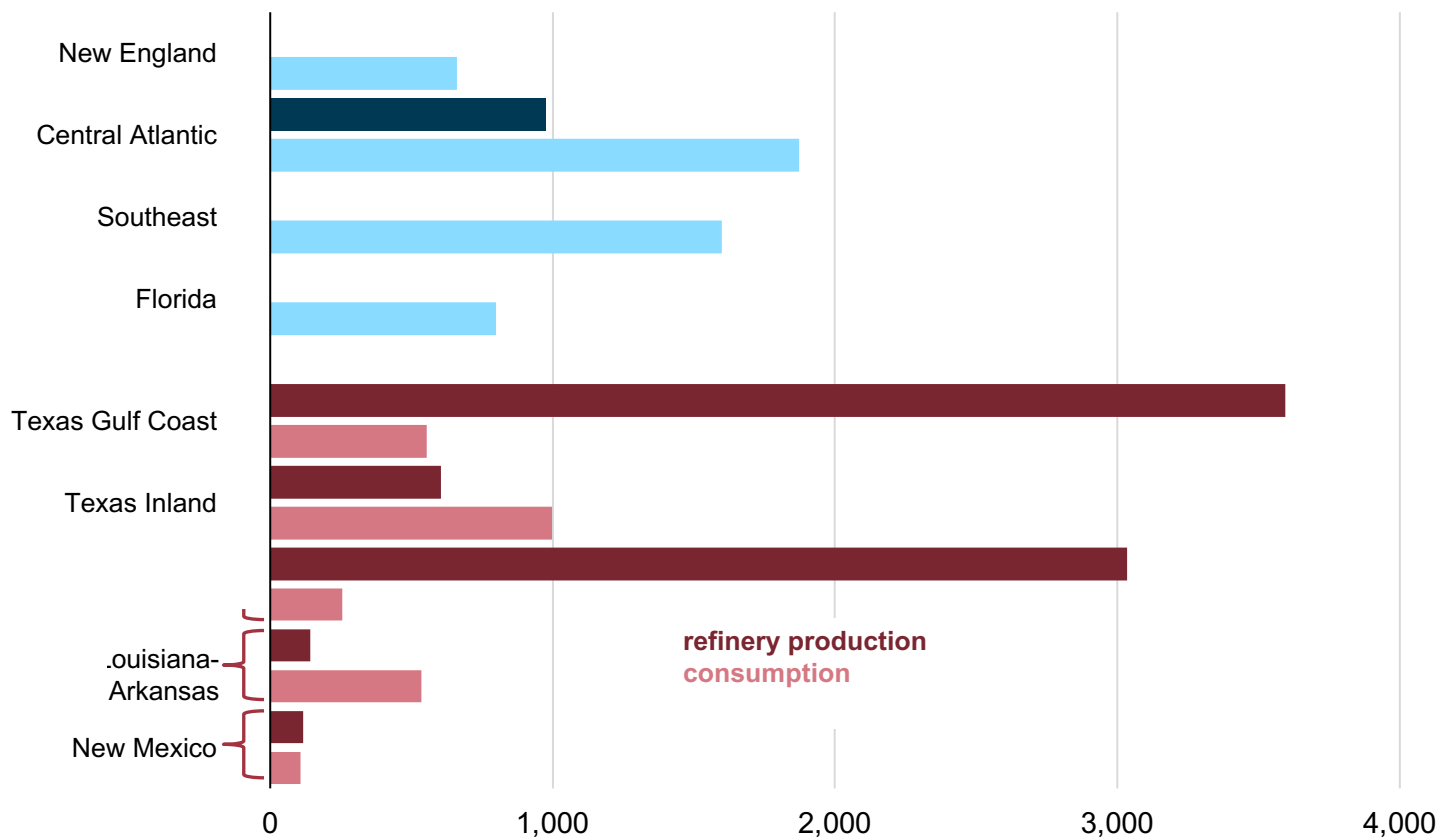
- Each regional market chapter of the report includes information on
 - Supply and demand balances
 - Infrastructure logistics
 - Demand centers
 - Supply vulnerabilities
 - Retail markets
 - Future anticipated changes
- Some data is even more granular, by state or city
- The reports include detailed maps showing refineries, terminals, pipelines, and major ports

Example map: Pipelines and water movements link production and consumption markets



The nine market regions in PADDs 1 & 3 vary significantly in both size and how they are supplied

2014 regional transportation fuel refinery production and consumption
thousand barrels per day



EIA's role during energy emergencies

- EIA plays a part in DOE's emergency response during energy emergencies, working closely with ISER
- EIA data on inventory levels, based on latest weekly data is often key to developing situational awareness following a hurricane or other event
- In addition, EIA has historically reached out to industry participants to gather additional information and sometimes data to produce analysis of the impact of energy emergencies on petroleum markets
- NPC Emergency Preparedness Study recommended that EIA's participation in the DOE emergency response process be formalized to take advantage of EIA's knowledge and understanding of the petroleum supply chain

Questions?