
Winter 2014-15: Propane Outlook



For Midwestern Governors Association

October 14-15, 2014 | Milwaukee, Wisconsin

By

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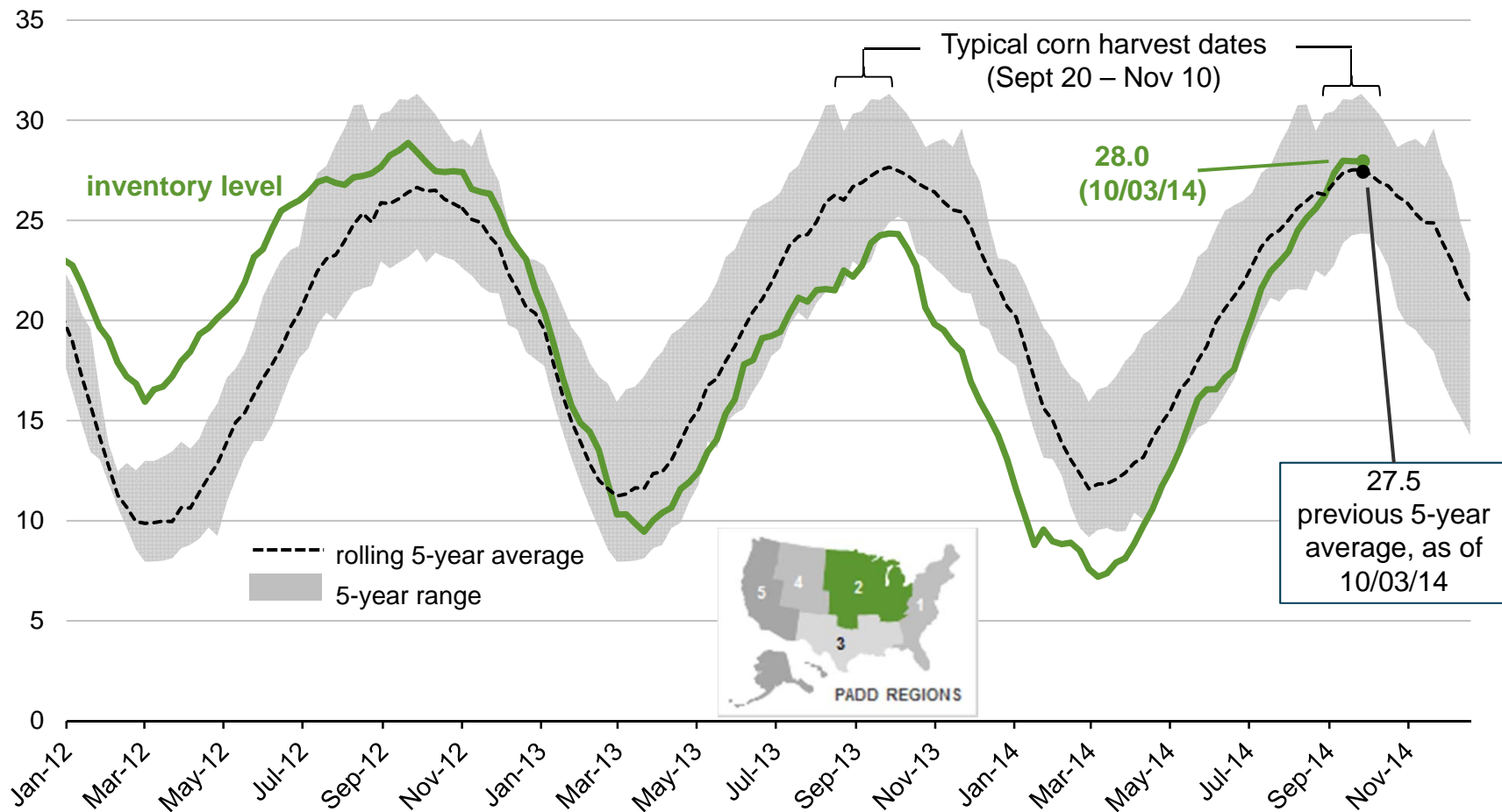


Winter 2014-15 takeaways and potential issues– propane

- Primary propane stocks in the Gulf Coast and Midwest are currently 10 million barrels (17%) above this time last year
- Propane production from natural gas plants is up and is projected to average 970,000 bbl/d this winter, 110,000 bbl/d higher than last winter
- The outlook for propane demand is uncertain
 - Another record corn crop is expected
 - U.S. winter heating degree days have recently ranged from a low of 3,225 in 2011-12 to 4,114 in 2013-14
- Propane supply is adjusting to recent infrastructure changes
 - Cochin Pipeline Reversal
 - New and expanded rail facilities in the Midwest
 - Pre-season secondary and tertiary inventories will be critical to meeting demand from cold weather and/or a wet corn harvest

PADD 2 (Midwest) propane inventories are within the five-year range and above the five-year average

PADD 2 propane* inventories
million barrels



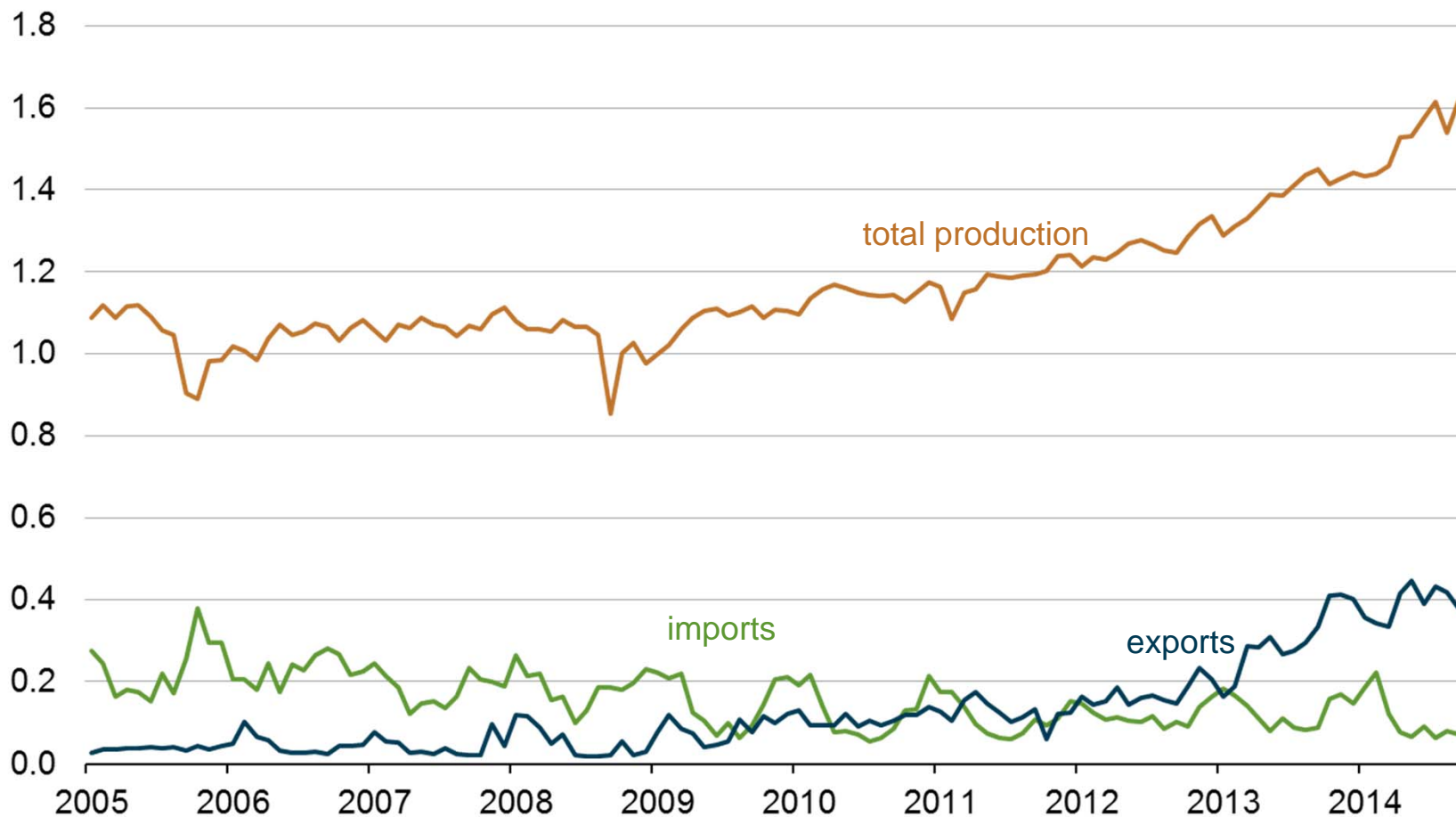
Source: EIA, Weekly Petroleum Status Report, data through October 03

*propane/propylene for fuel use only

U.S. propane production and trade trends

U.S. propane and propylene production, imports, and exports

million barrels per day

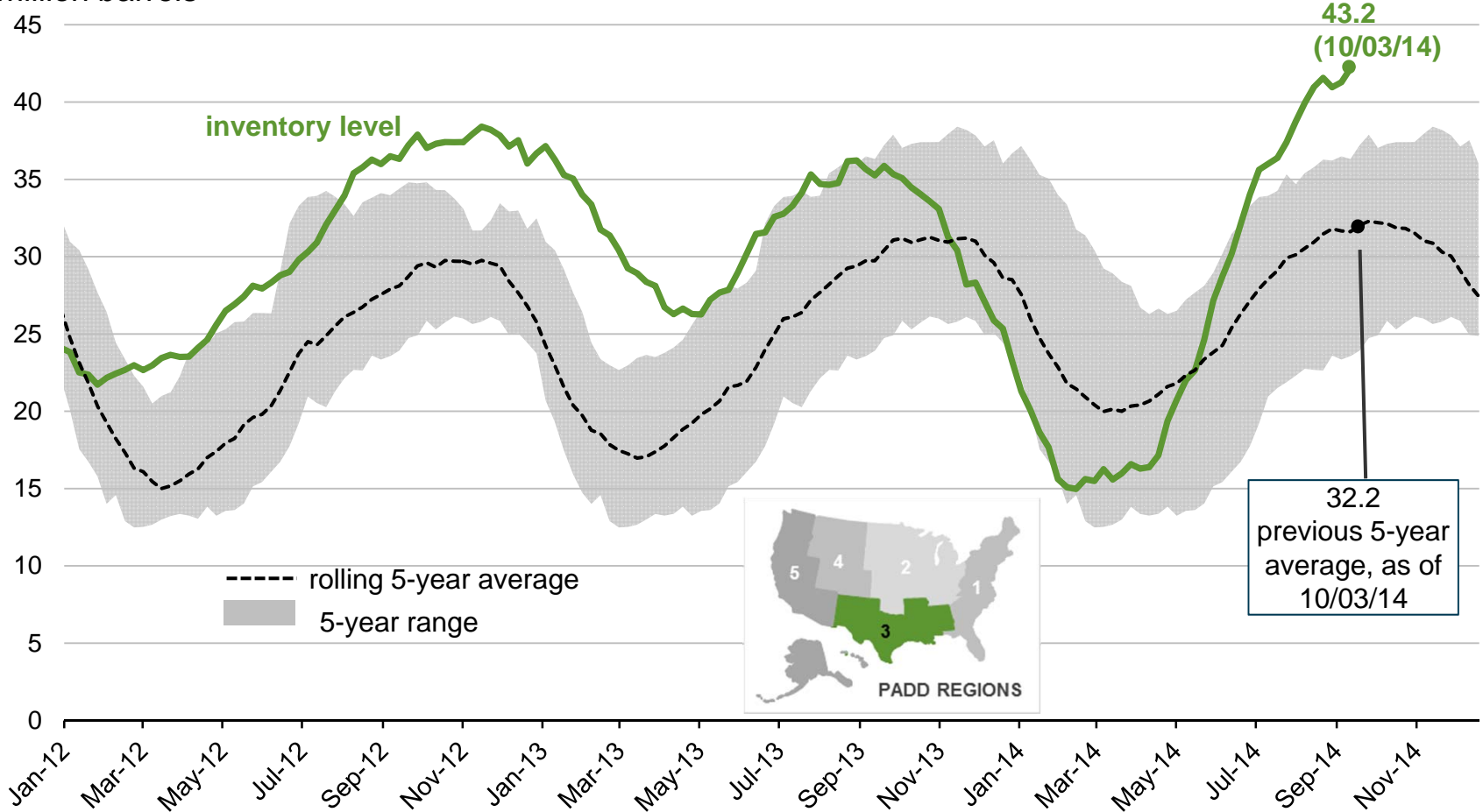


Source: EIA, Petroleum Supply Monthly through July 2014; August and September 2014 are estimates

PADD 3 (Gulf coast) propane inventories are well above the five-year range

PADD 3 propane* inventories

million barrels



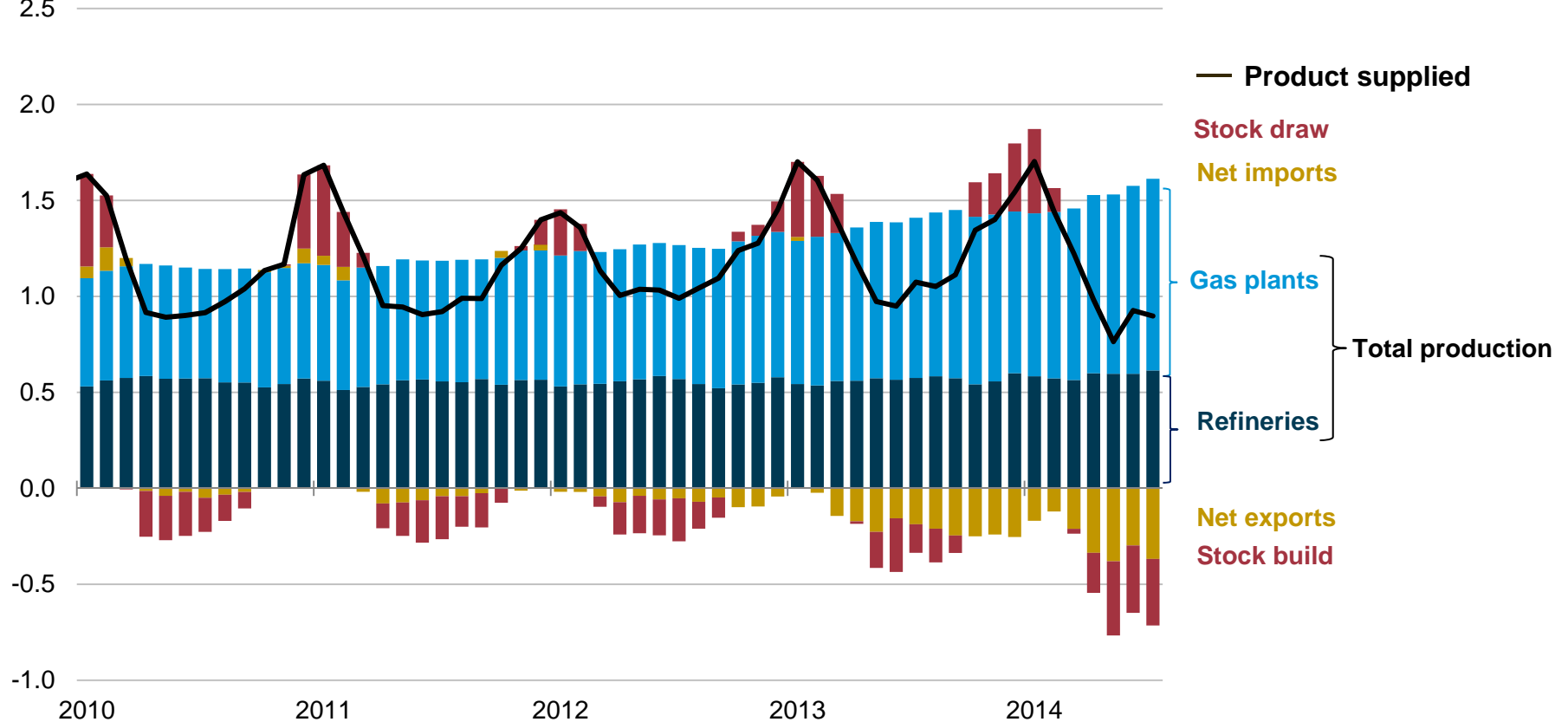
Source: EIA, Weekly Petroleum Status Report, data through October 03

*propane/propylene for fuel use only

Increasing production and exports change U.S. propane supply-demand balance

U.S Propane Supply-Demand Balance, Monthly 2009-14

million bbl/d



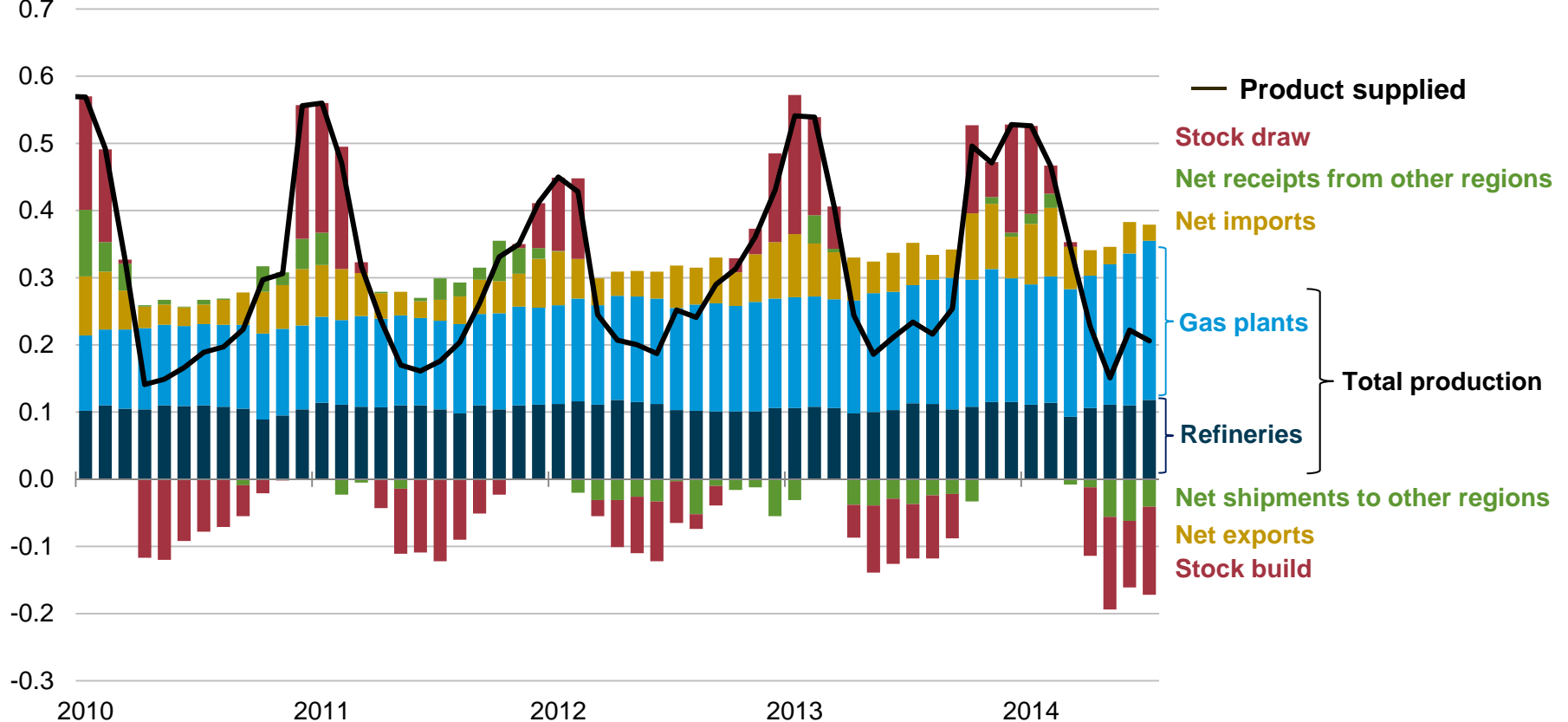
Source: U.S. Energy Information Administration, *Petroleum Supply Monthly*.

Propane demand is seasonal - stocks build in the summer and are drawn in the winter to meet heating needs

Midwest (PADD 2) has become a net supplier of propane to other U.S. regions

PADD 2 Propane Supply-Demand Balance, Monthly 2009-14

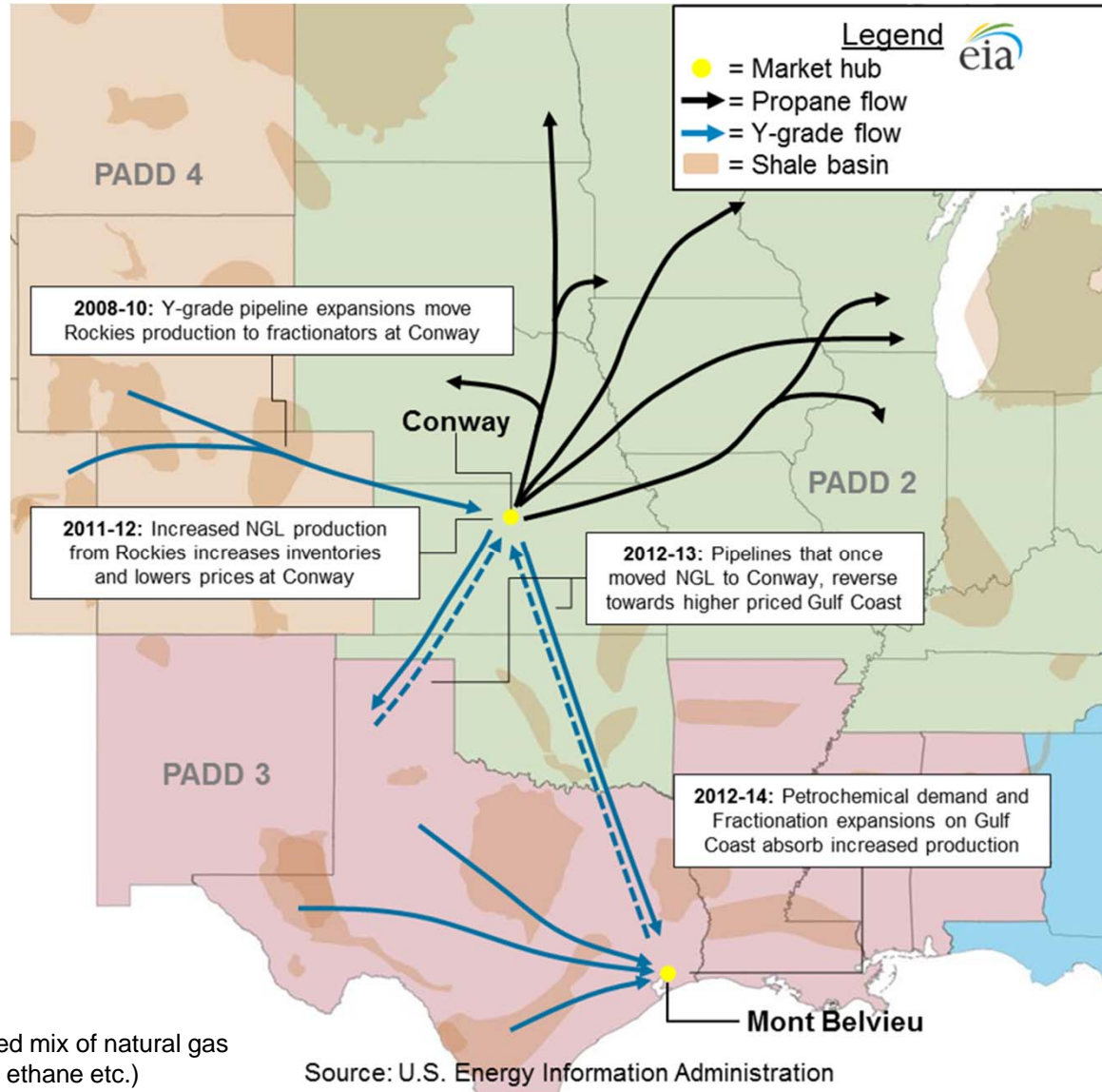
million bbl/d
0.7



Source: U.S. Energy Information Administration, *Petroleum Supply Monthly*.

PADD 2 switched to sending more propane to other regions than receiving in 2012

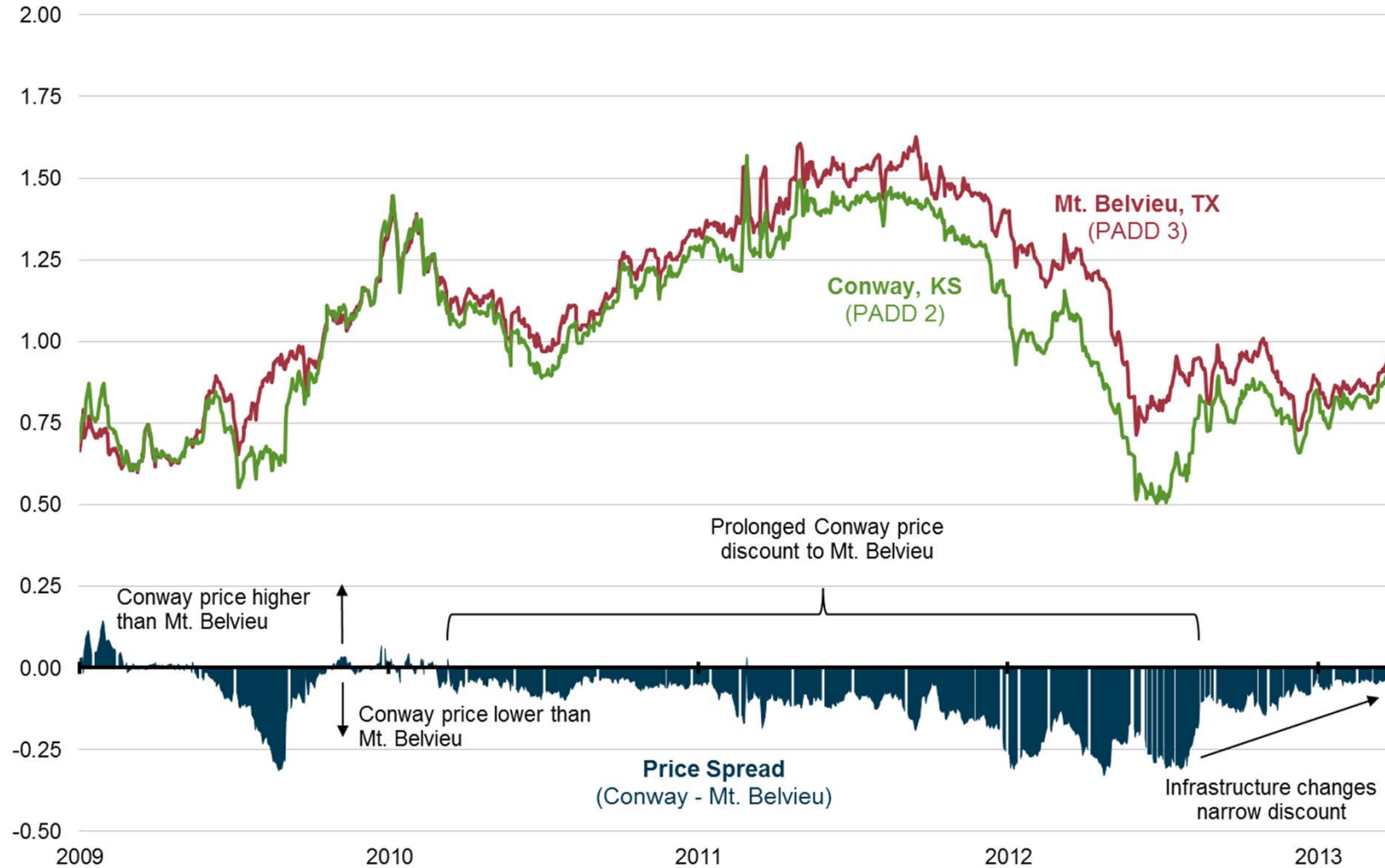
Changes in propane infrastructure and flows



*(Y-Grade) = Unprocessed mix of natural gas liquids (propane, butane, ethane etc.)

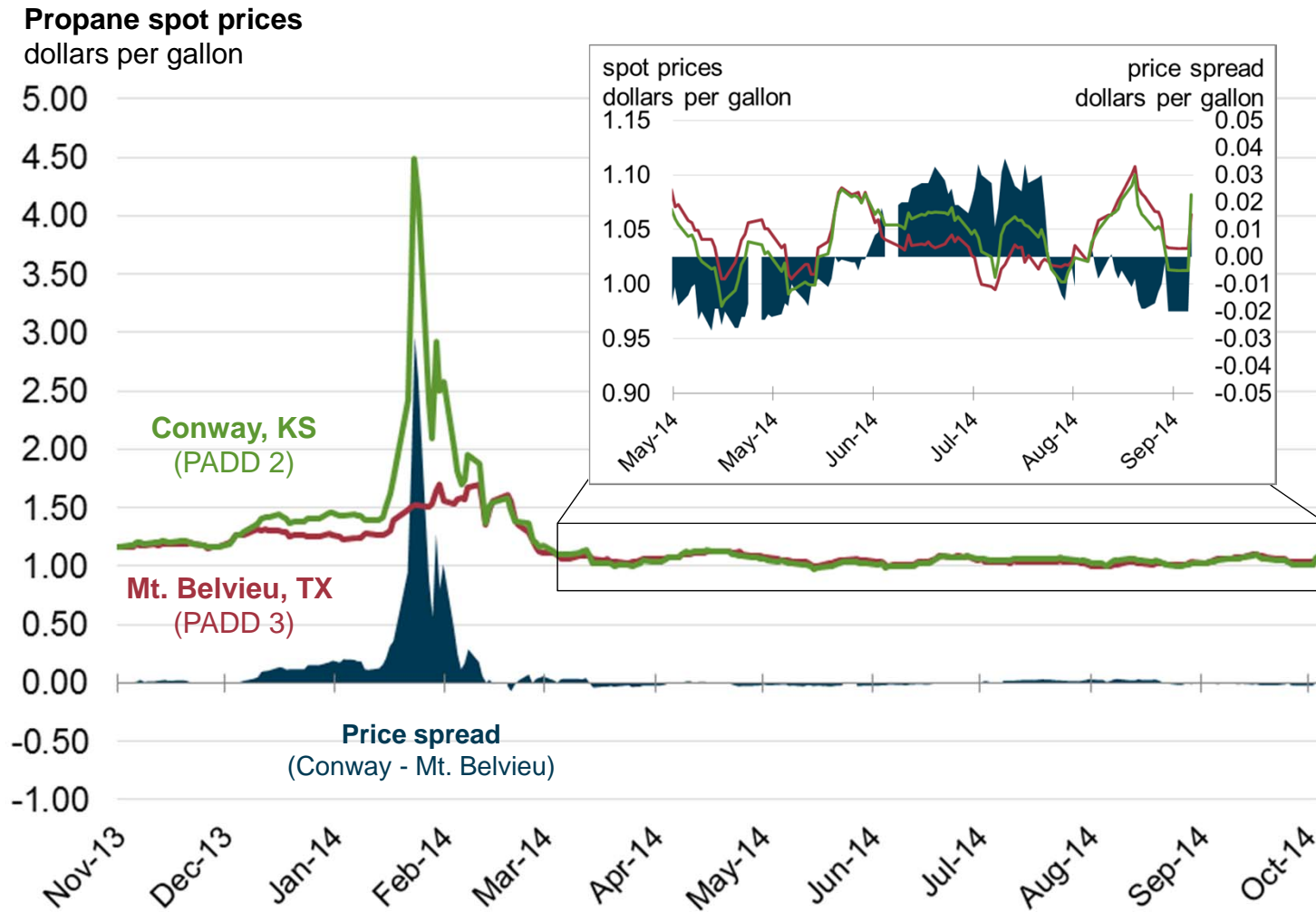
History of Conway (KS) and Mt. Belvieu (TX) prices – 2009-13

Propane spot prices
dollars per gallon



Source: U.S. Energy Information Administration, Thomson Reuters, data through March, 2013

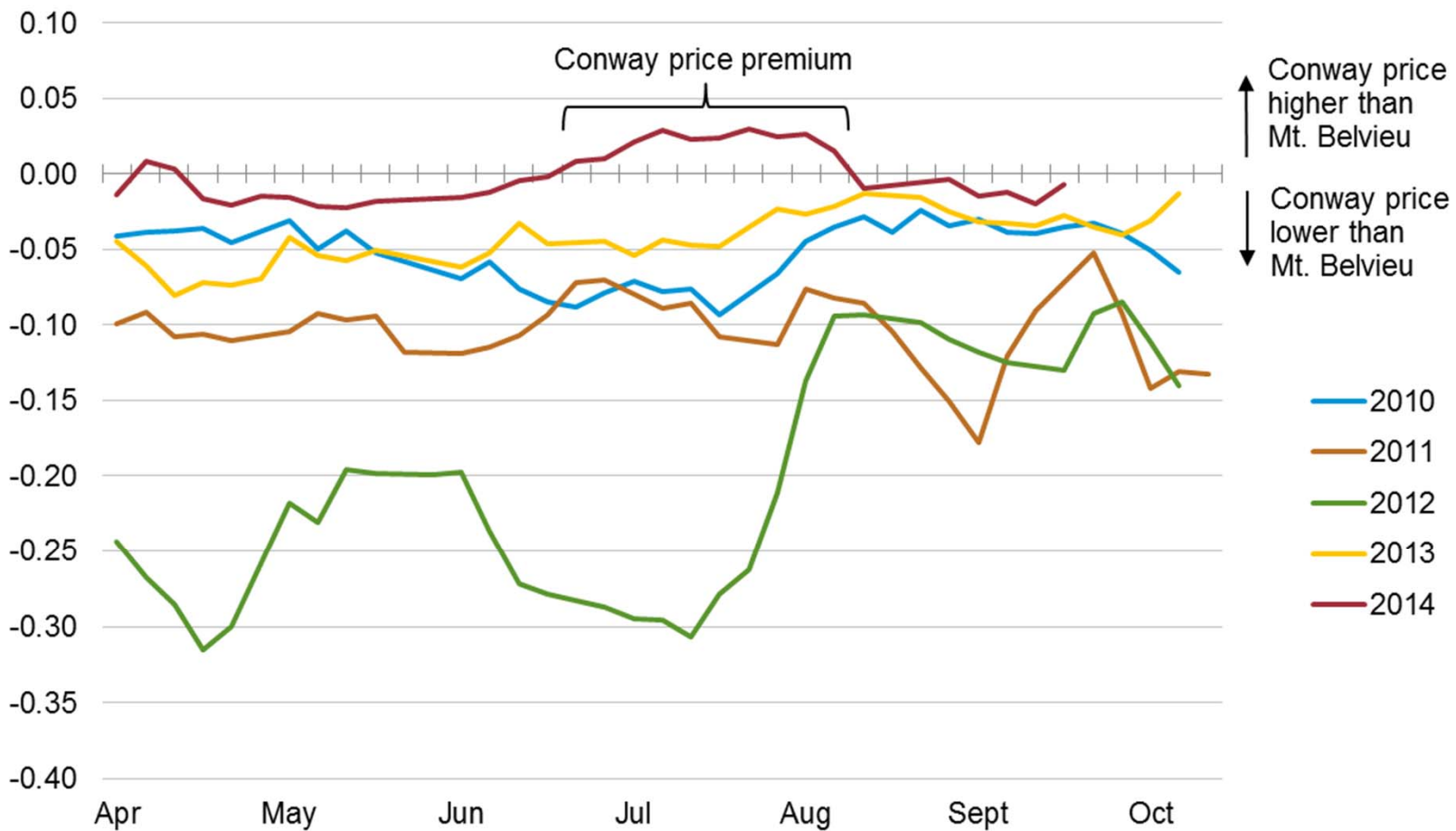
Conway price premium over Mt. Belvieu grew rapidly in late January



Source: U.S. Energy Information Administration, Thomson Reuters, data through October 3, 2014

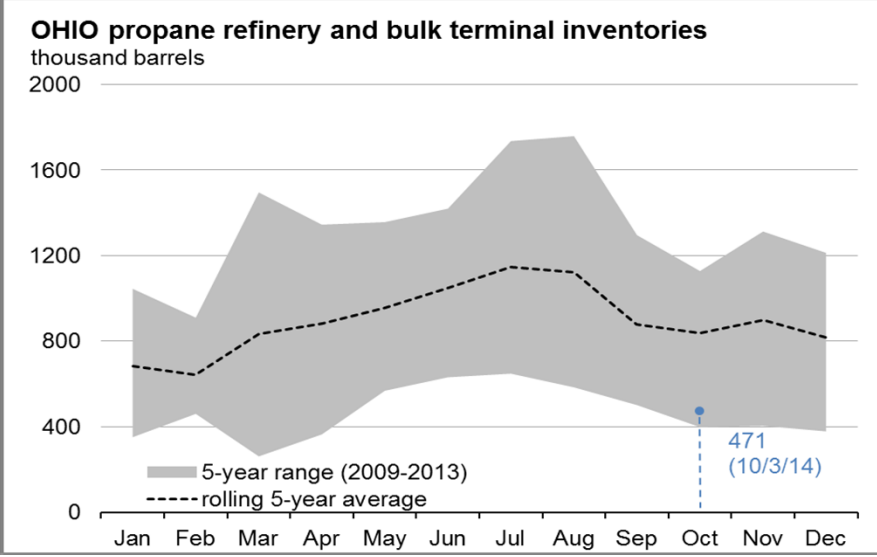
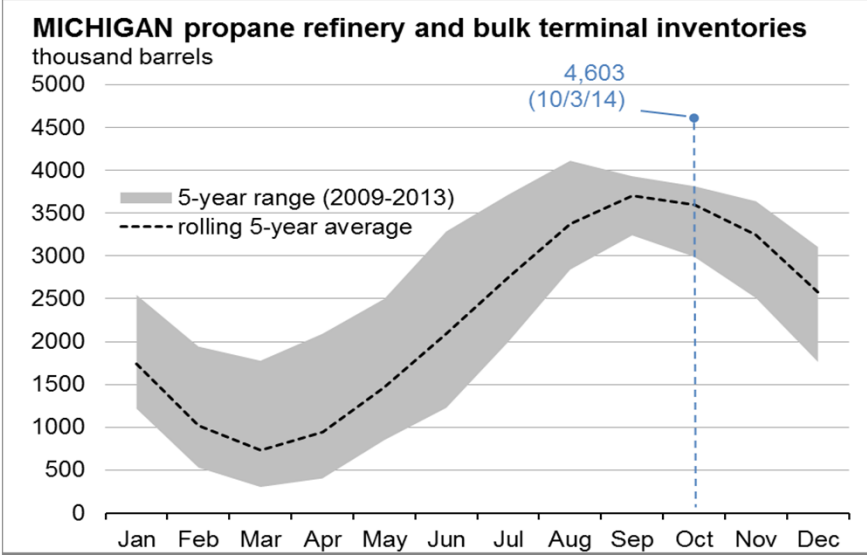
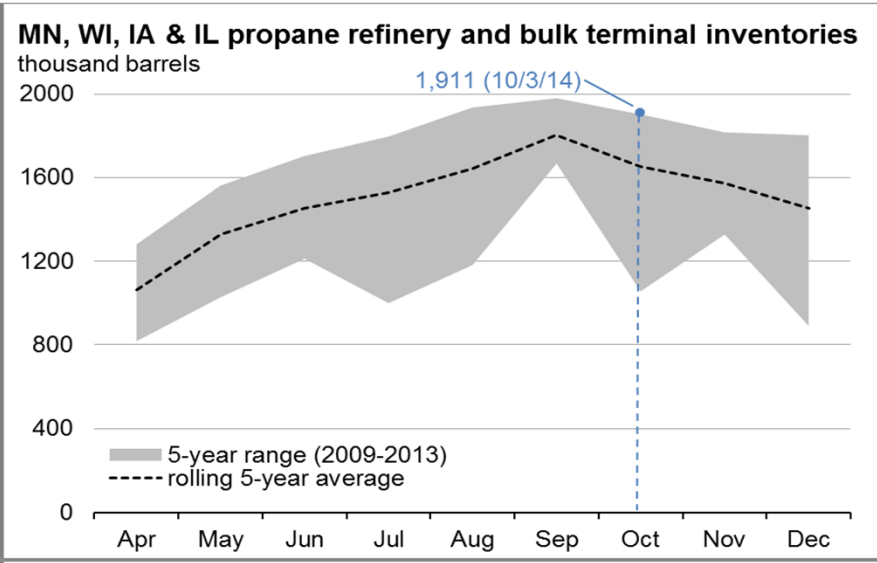
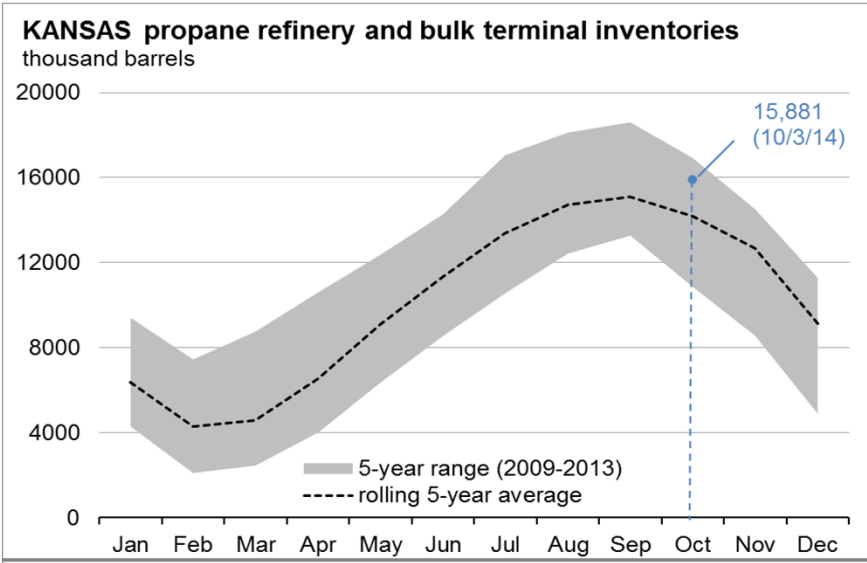
Price premium in Conway (KS) has encouraged inventory building in PADD2

Weekly average propane price spreads: Conway - Mt. Belvieu (April-October)
dollars per gallon



Source: U.S. Energy Information Administration, Thomson Reuters, data through October 3, 2014

Propane inventories for key individual states



EIA actions to improve winter fuels information

- **More Detailed Weekly Propane Stock Data** – In addition to weekly PADD-level propane stocks, EIA will publish figures for Kansas (Conway hub), Michigan, Ohio, and a 4-state total for MN, WI, IA, and IL.
- **Notification to Governors of Low Stock Levels** – Pursuant to the Reliable Home Heating Act, EIA will notify state Governors when stocks of heating oil, natural gas, or propane in their PADD fall below the 5-year average for more than 3 weeks.
- **Expanded State Participation in EIA Weekly Price Reporting (Oct 8)** - The State Heating Oil and Propane Program (SHOPP) will add 14 more states for a total of 38. A workshop will be held on October 8 to share perspectives and best practices for data quality.
- **Increased Visibility on EIA Website and Targeted Communication with State Officials** - EIA is creating a special winter fuels webpage showcasing stock and price data. Beyond this, EIA will proactively reach out to both industry and public stakeholders in the states.

Expenditures are expected to be lower this winter (October 1 – March 31) unless there is a repeat of last winter’s cold weather

Percent change in fuel bills from last winter (forecast)

Fuel bill	Base case forecast	If 10% warmer than forecast	If 10% colder than forecast
Heating oil	-15	-24	-5
Natural gas	-5	-12	6
Propane *	-27	-37	-15
Electricity	-2	-5	2

*Note: Weather has been colder than our 10% colder than forecast case in 6 of the last 25 winters. Propane expenditures are a volume-weighted average of the Northeast and Midwest regions. All others are U.S. volume-weighted averages. Propane prices do not reflect prices locked in before the winter heating season starts.
Source: EIA Short-Term Energy Outlook, October 2014*

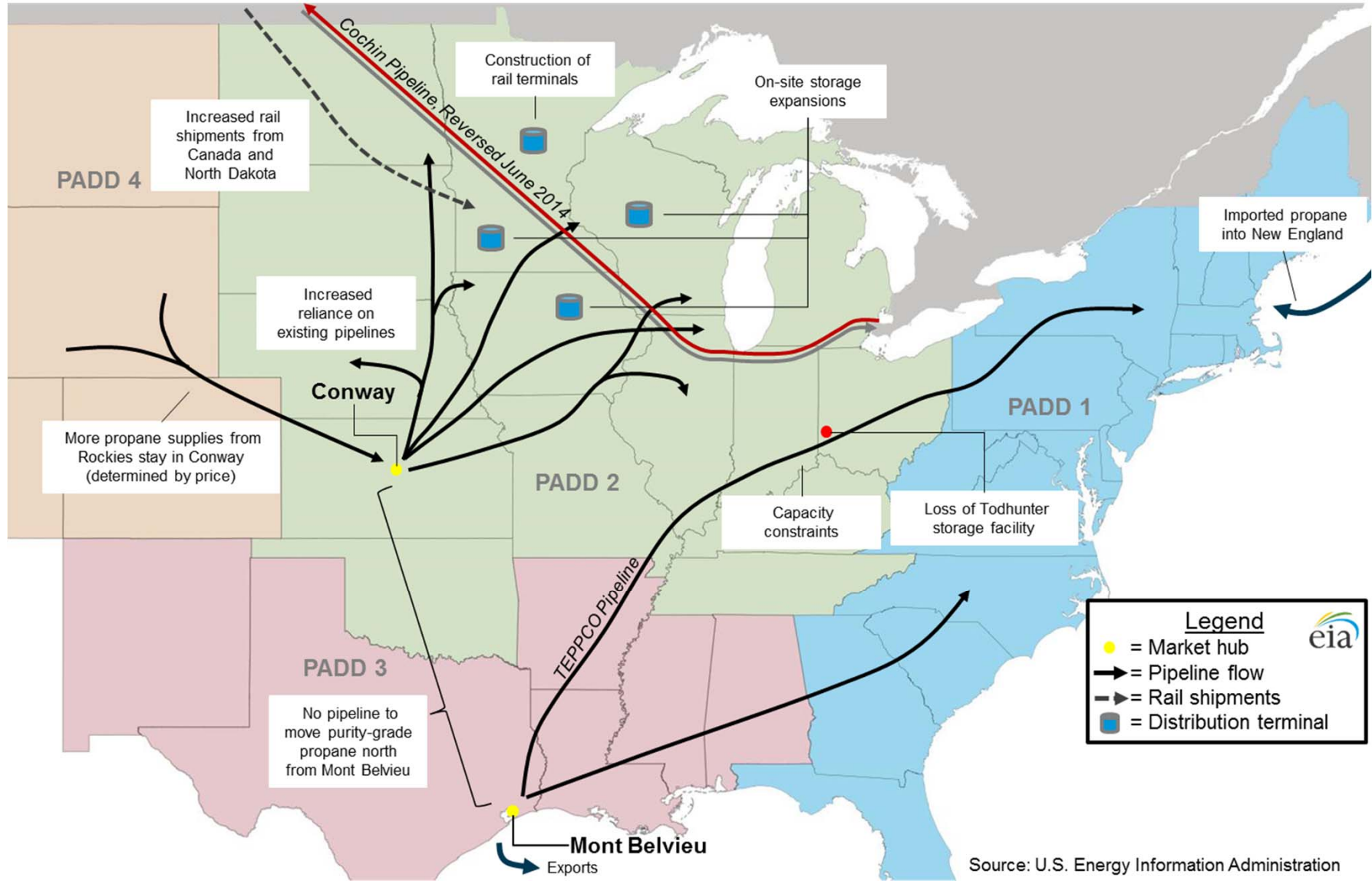
Supplemental Slides

Evolving Midwest Propane Supply Situation

- **Markets**
 - **Prices**
 - Summer price premium at Conway incented storage builds in Midwest and indicated off season buying
 - **Secondary and tertiary storage**
 - Distributors promoting early fills for customers
- **Supply situation**
 - **Bakken**
 - Currently no pipeline to move purity propane from gas processors in North Dakota to the rest of Midwest
 - **Canada**
 - Rail loading facilities under construction to move propane out of Alberta to Midwest in response to Cochin
 - **Rockies**
 - Production must first be fractionated at Conway or Mont Belvieu, prices determine destination
- **Cochin pipeline alternatives**
 - **Pipelines**
 - Limited remaining capacity on existing pipelines
 - Regulation currently prevents prioritization of propane shipments over other products
 - **Rail**
 - New and expanded propane by rail unloading terminals
 - Limited pressurized railcar availability
 - Fallible in cold weather and prone to delays
 - Limited rail loading capacity
 - **Truck**
 - Costly when done over long distances
 - Limited by hours of service and weight limitations

*(Y-Grade) = Unprocessed mix of natural gas liquids (propane, butane, ethane etc.)

Winter 2014-15 propane supply diagram

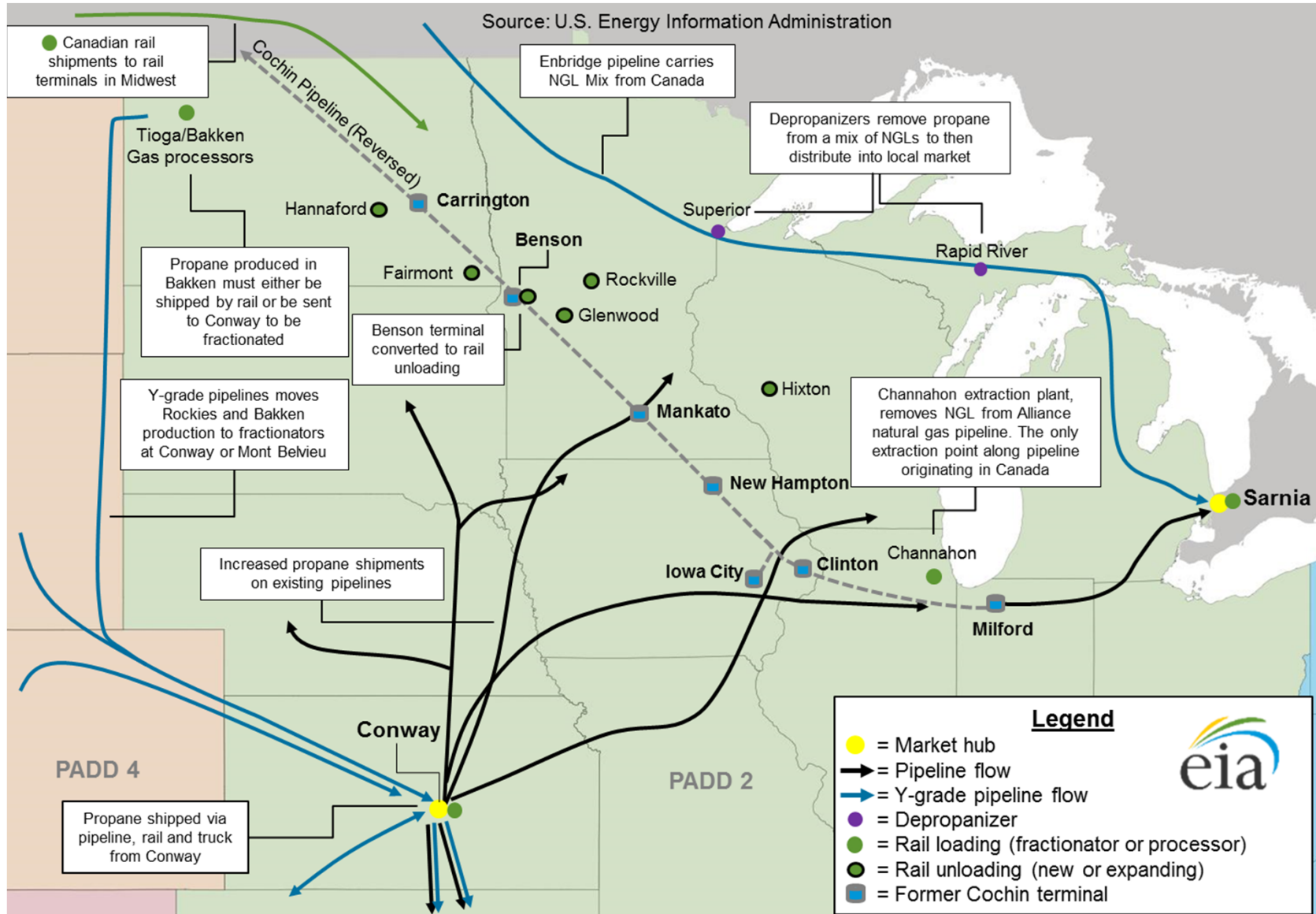


Legend

- = Market hub
- = Pipeline flow
- ▶ = Rail shipments
- = Distribution terminal

Source: U.S. Energy Information Administration

Evolving Propane Supply Situation



For more information

U.S. Energy Information Administration home page | www.eia.gov

Short-Term Energy Outlook | www.eia.gov/steo

Monthly Energy Review | www.eia.gov/mer

This Week in Petroleum | www.eia.gov/petroleum/weekly

Today in Energy | www.eia.gov/todayinenergy

State Energy Portal | www.eia.gov/state

Drilling Productivity Report | www.eia.gov/petroleum/drilling

Annual Energy Outlook | www.eia.gov/aeo

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