

Winter 2020-21 Mid-Season Review



January 19, 2021

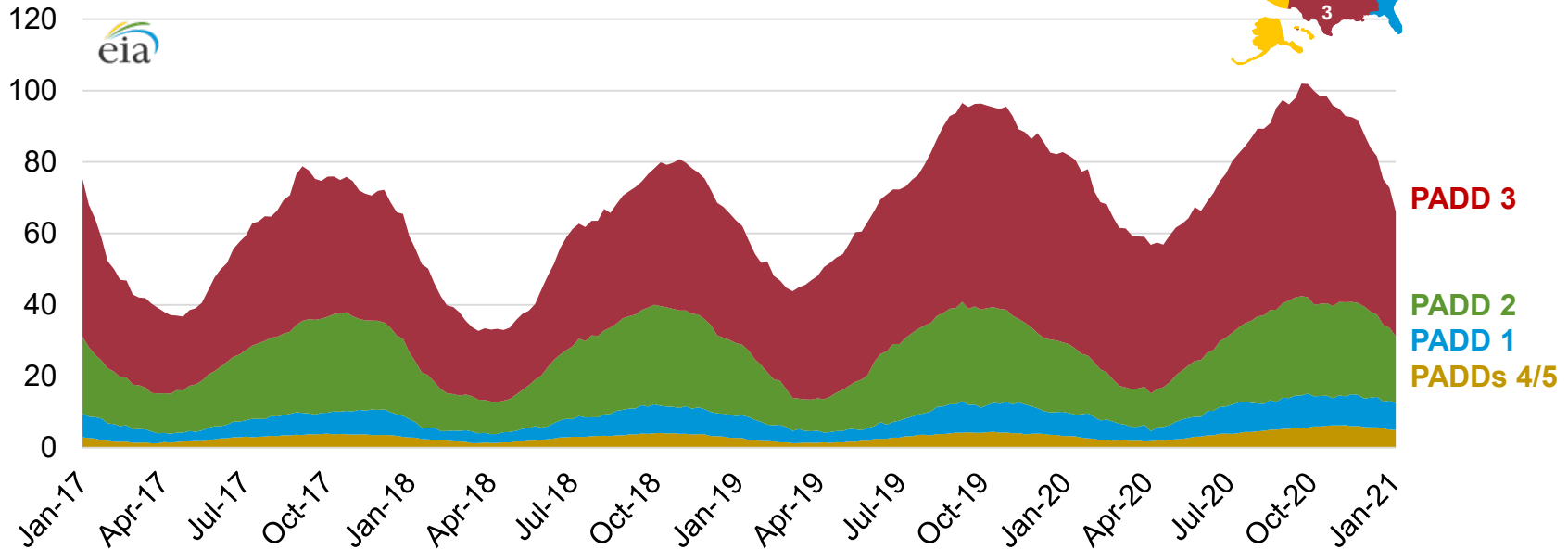
(Inventory data as of 1/8/21; residential heating fuel prices as of 1/11/21)

By

U.S. Energy Information Administration

U.S. propane inventories are dropping in PADDs 2 and 3, while inventories in PADDs 1, 4, and 5 are holding relatively flat

U.S. propane* inventories
million barrels



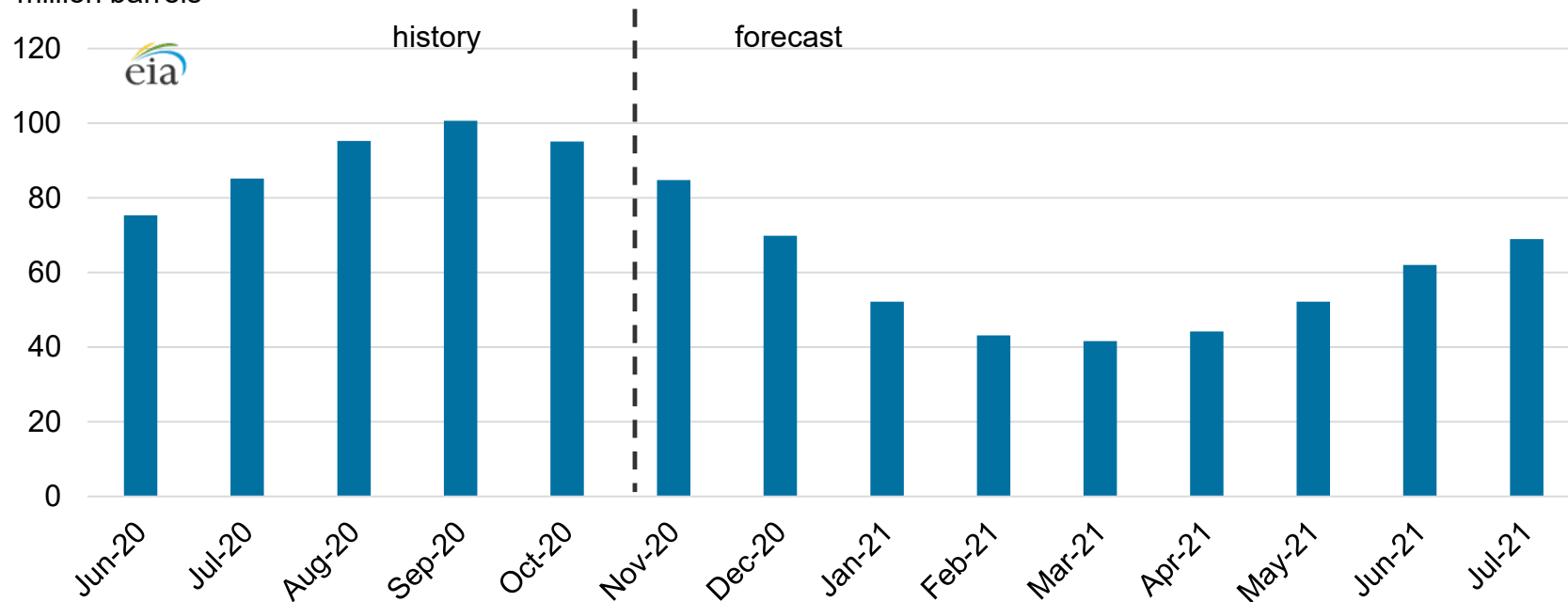
Note: PADD = Petroleum Administration for Defense District

Source: EIA, Weekly Petroleum Status Report, data through January 8, 2021

*propane/propylene for fuel use only

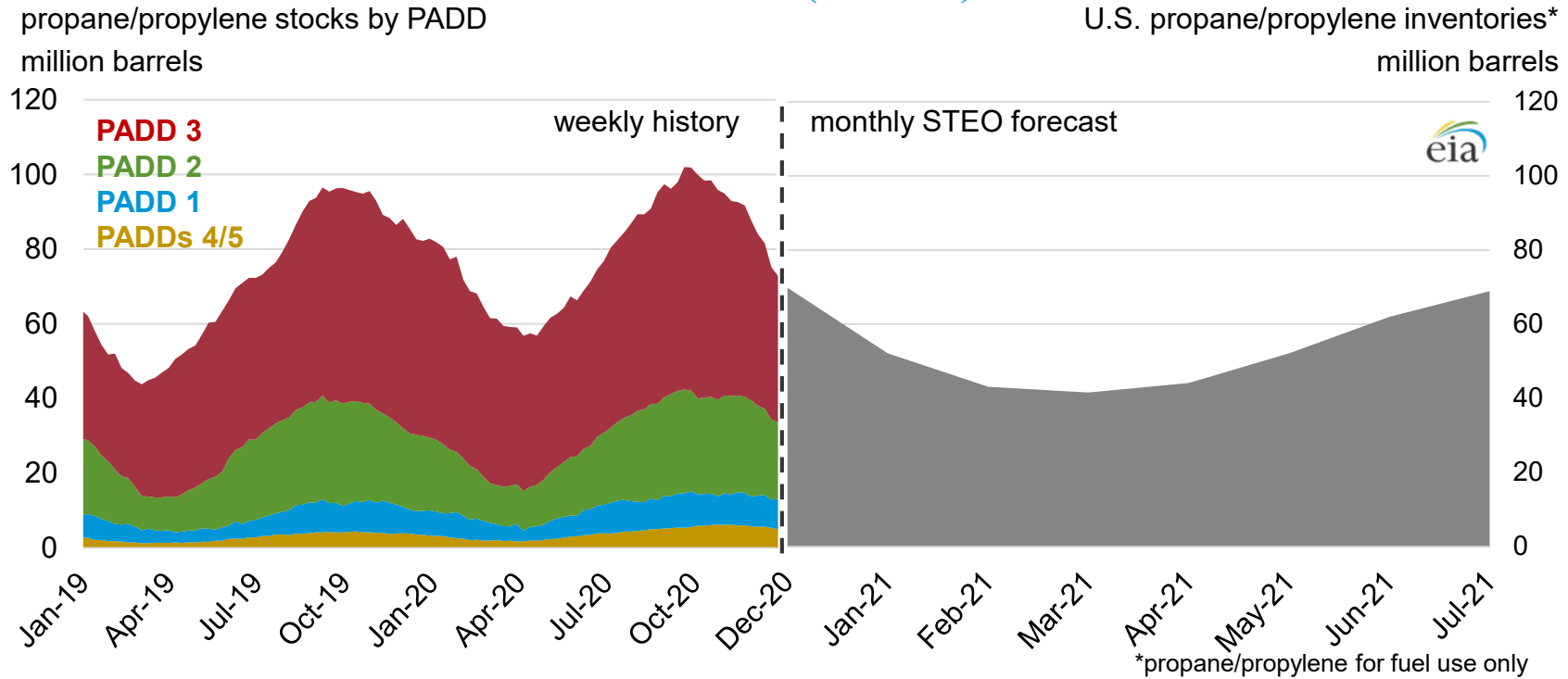
EIA's *Short-Term Energy Outlook* forecasts continuing stock draws through March and end-of-season levels equal to 2017

U.S. propane/propylene inventories
million barrels



Source: EIA, [Short Term Energy Outlook](#) (STEO), January 2021

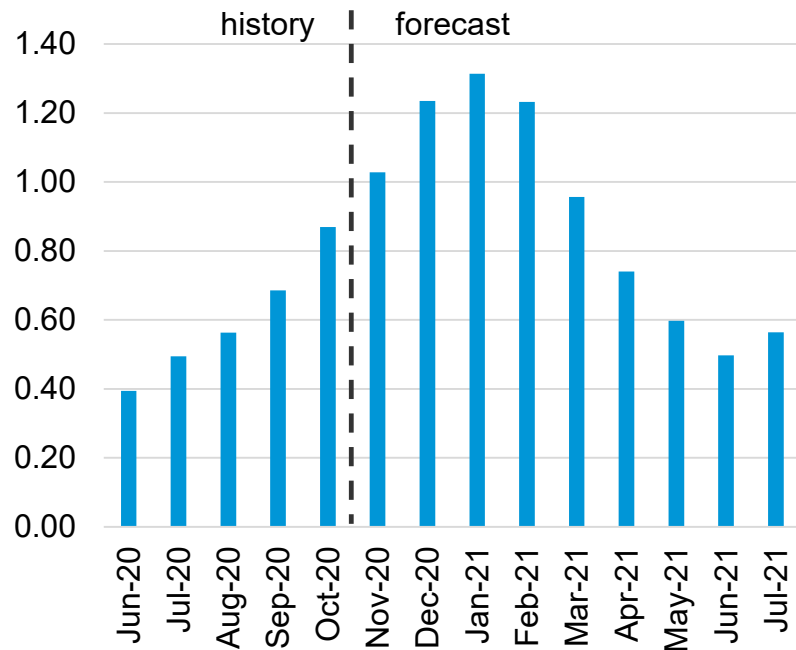
PADD 3 accounts for the most current propane inventories. EIA's STEO does not break out forecasted inventories by Petroleum Administration for Defense District (PADD)



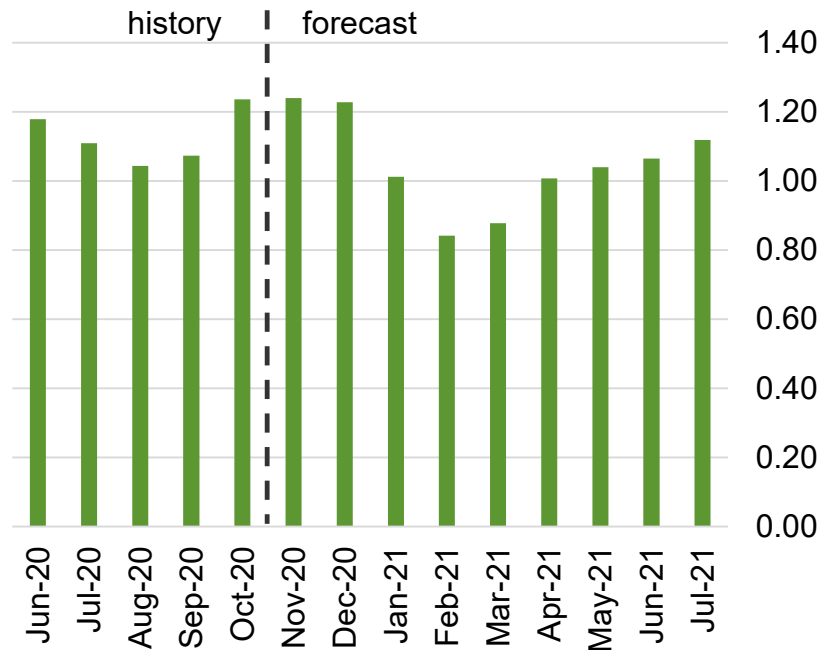
Source: EIA, Weekly Petroleum Status Report, data through January 8, 2021; [Short Term Energy Outlook](#), January 2021

STEO projects higher domestic consumption than the previous year, while exports are expected to ramp down starting this month

propane domestic consumption
million b/d



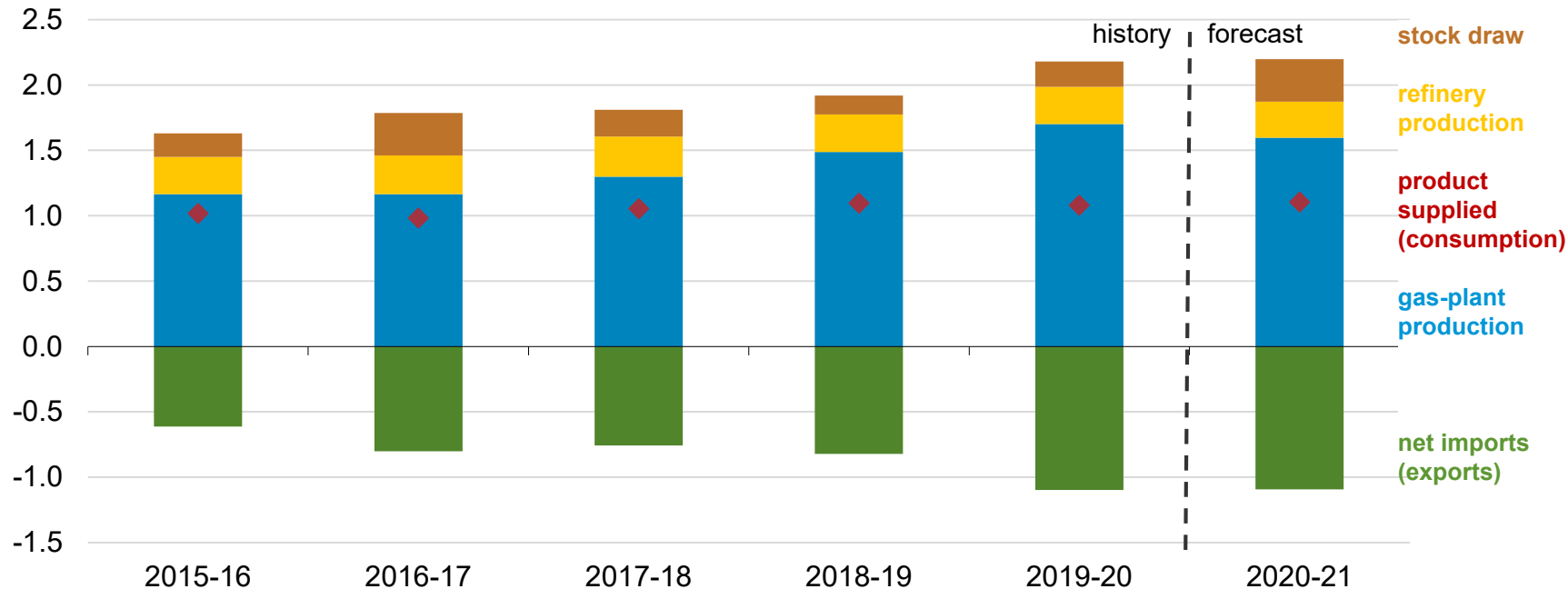
propane net exports
million b/d



Source: EIA, [Short Term Energy Outlook](#) (STEO), January 2021

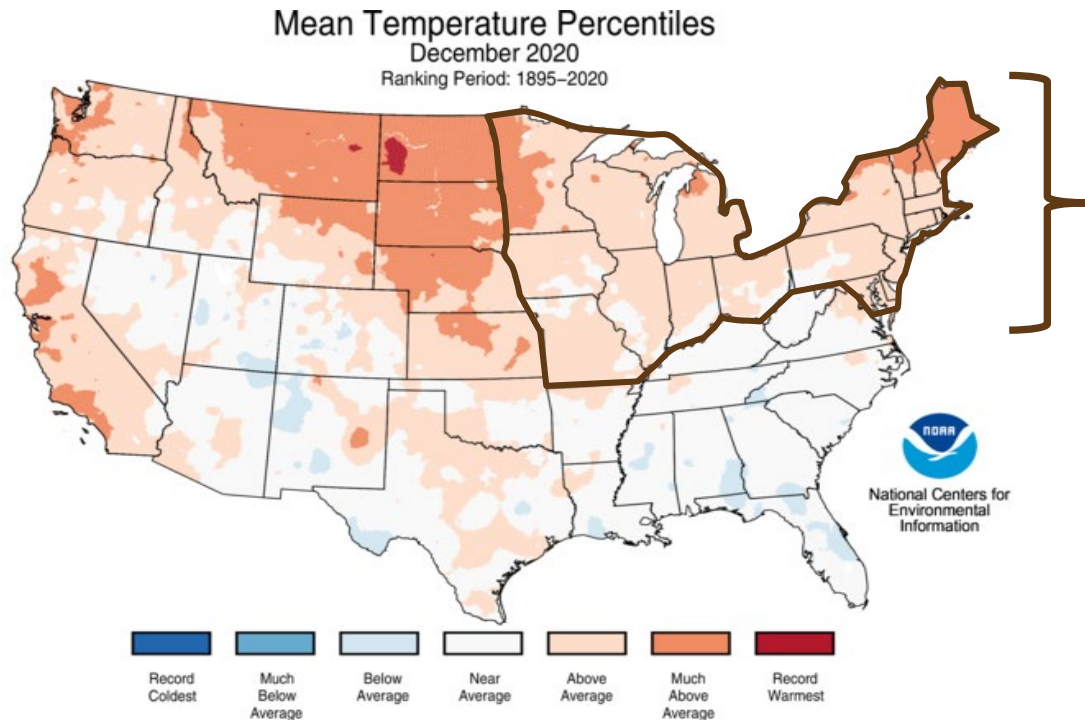
The STEO forecasts more propane product supplied, less production, and similar exports volumes as the previous winter

Winter heating season propane supply/disposition
million b/d



Source: EIA, [Short Term Energy Outlook](#) (STEO), January 2021

Much of the lower-48 U.S. experienced above-average temperatures in December relative to the historical average



This area accounts for ~3/4 of propane heated households in the U.S.

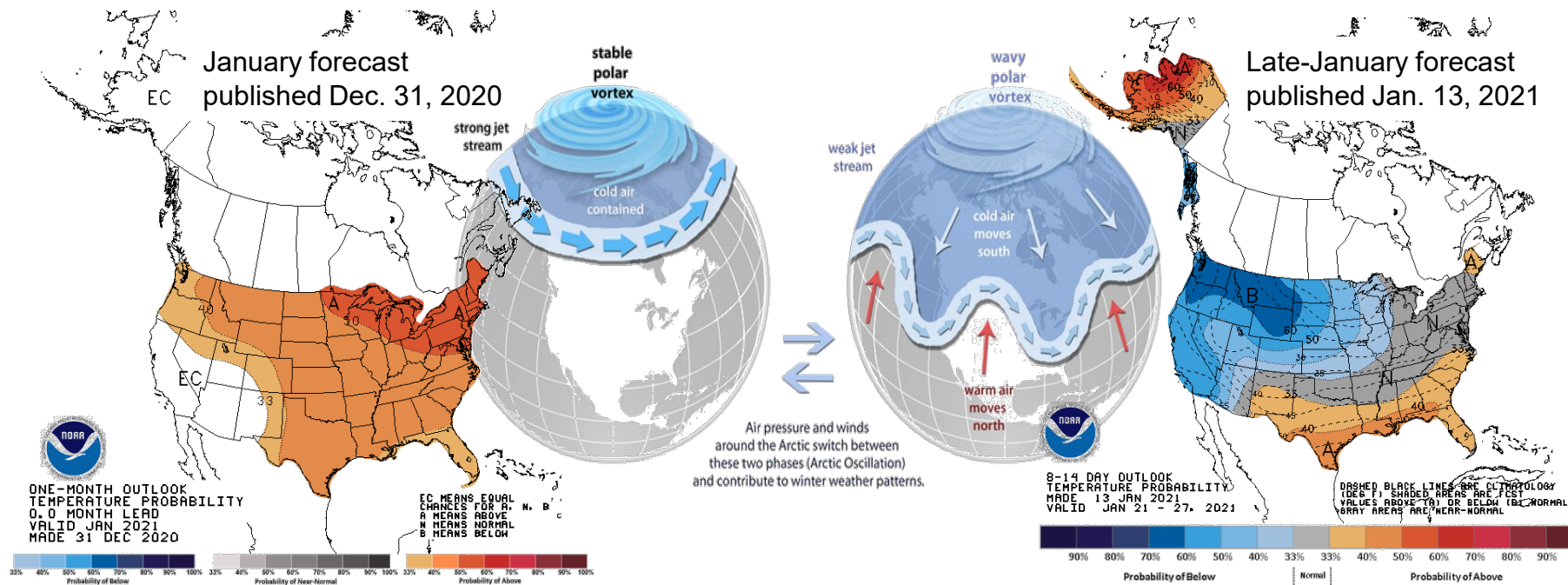
Lower heating demand relieved pressure on regional inventories and wholesale prices

Created: Wed Jan 06 2021

Data Source: 5km Gridded Dataset (nClimGrid)

Source: National Oceanic and Atmospheric Administration, [National Centers for Environmental Information](#)

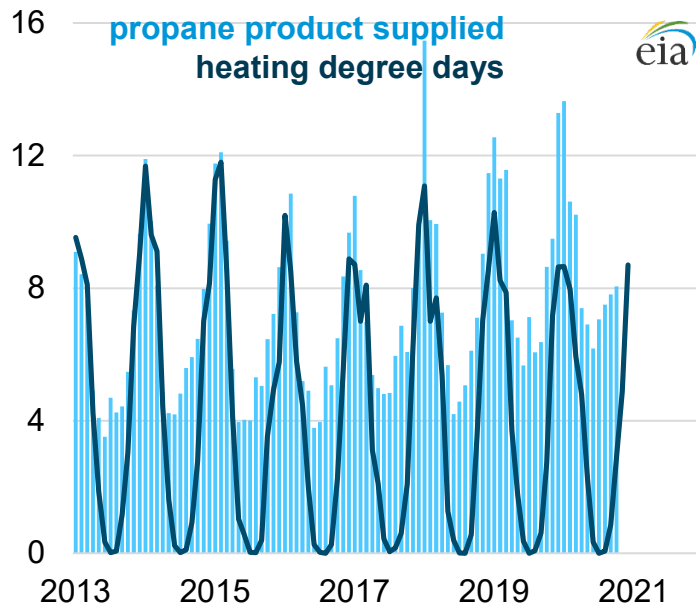
Developing polar vortex has upended the weather forecast for the remainder of January



Source: National Oceanic and Atmospheric Administration [Global Climate Report](#) and [Climate Prediction Center](#)

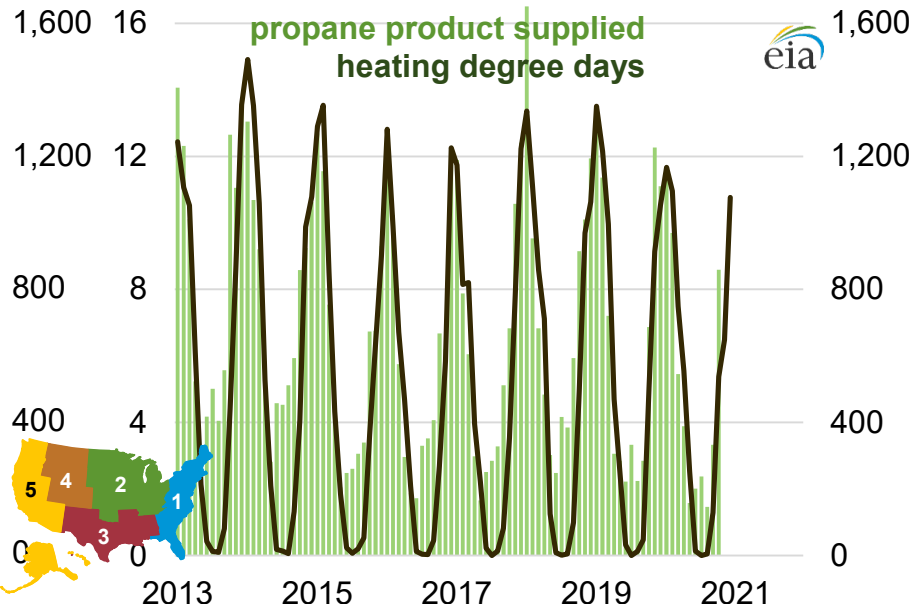
Weather, in terms of heating degree days (HDDs), is the primary determinant of winter-season propane demand in PADDs 1 and 2

PADD 1 propane product supplied
million barrels/month



PADD 2 propane product supplied

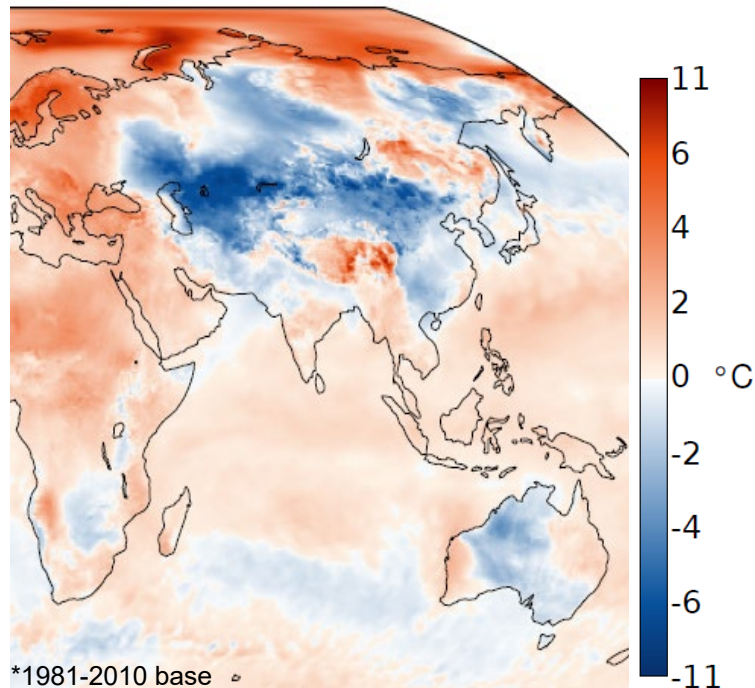
HDDs million barrels/month



Source: EIA, [Propane Product Supplied](#); National Oceanic and Atmospheric Administration, [Weighted Heating Degree Days](#)

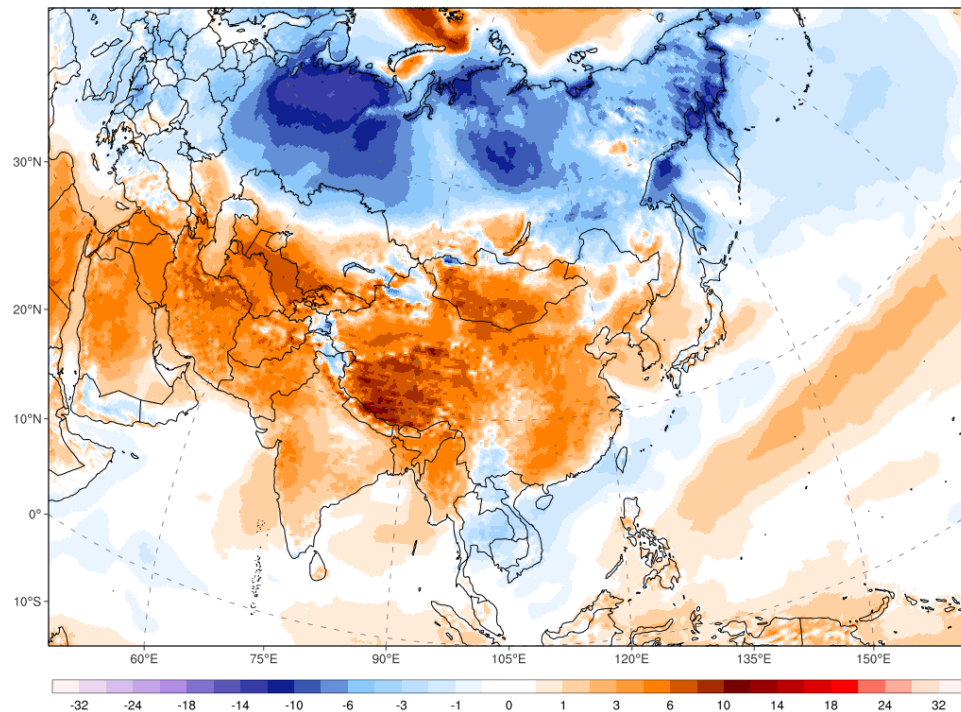
Well-below-normal December 2020 and early January 2021 temperatures drove up demand in E. Asia, pulling in high U.S. export volumes

Surface air temperature anomaly* for December 2020



GFS/CFSR 10-day Avg 2m T Anomaly (°C) [1979-2000 base]
Monday, Jan 11, 2021

ClimateReanalyzer.org
Climate Change Institute | University of Maine

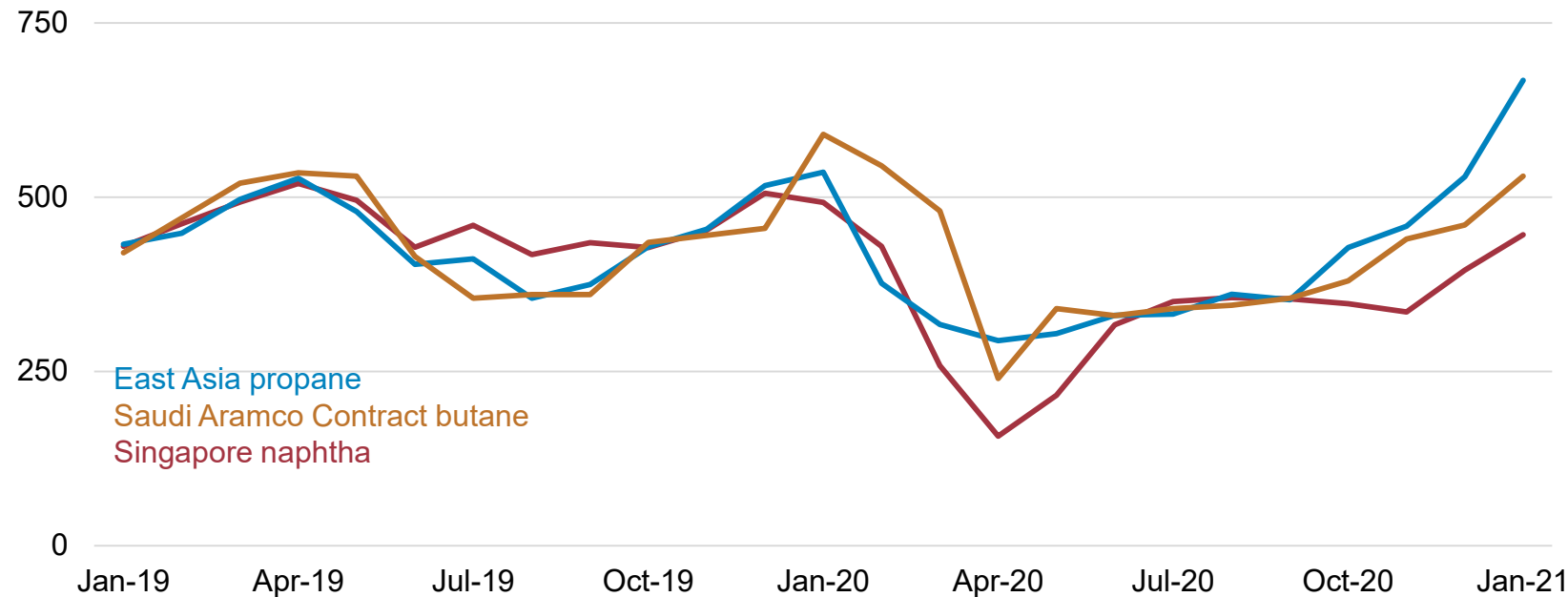


Source: [Copernicus Program](#), University of Maine [Climate Reanalyzer](#)

Increases in propane price in E. Asia currently outpacing rise in prices of competing fuels/feedstocks

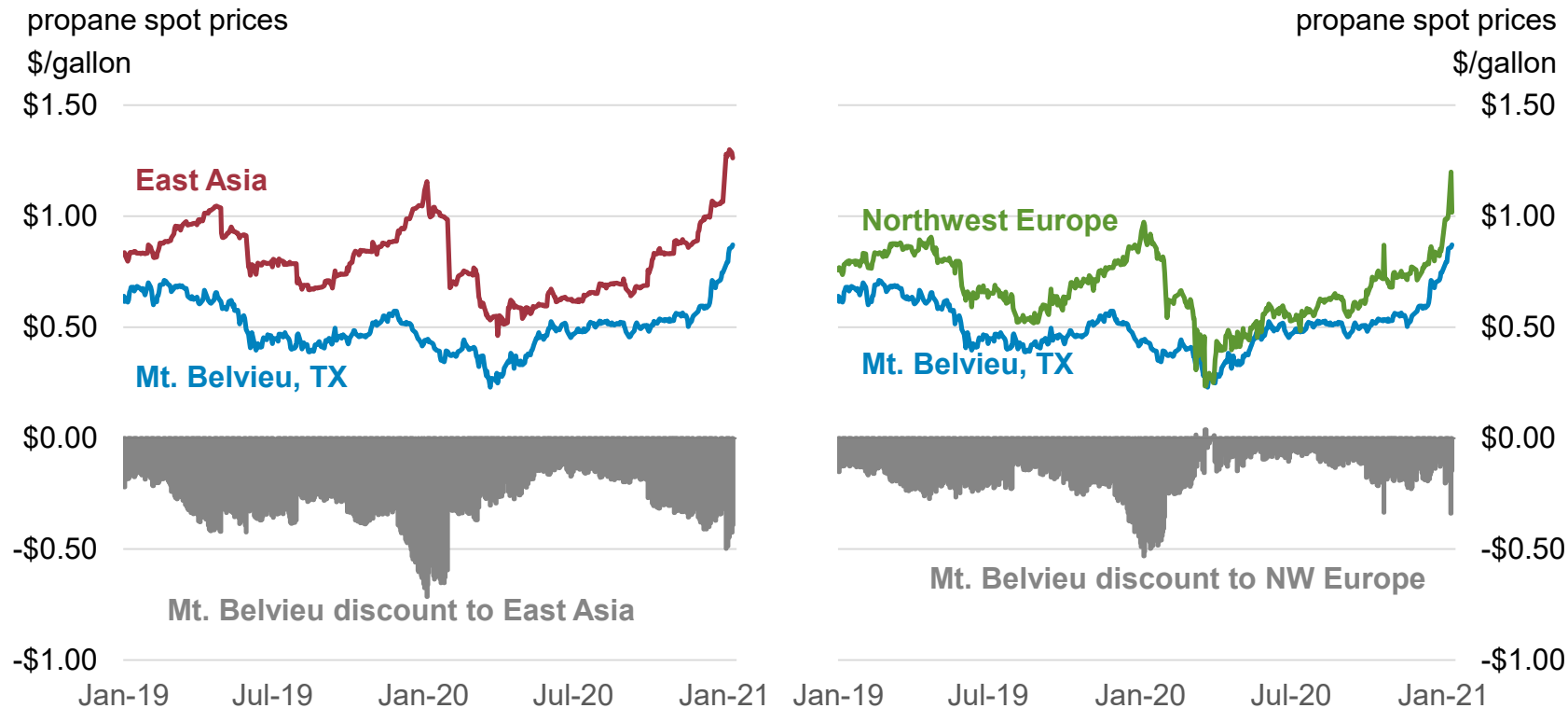
East Asia feedstock prices

\$/metric ton



Source: EIA, Bloomberg, data through January 12, 2021

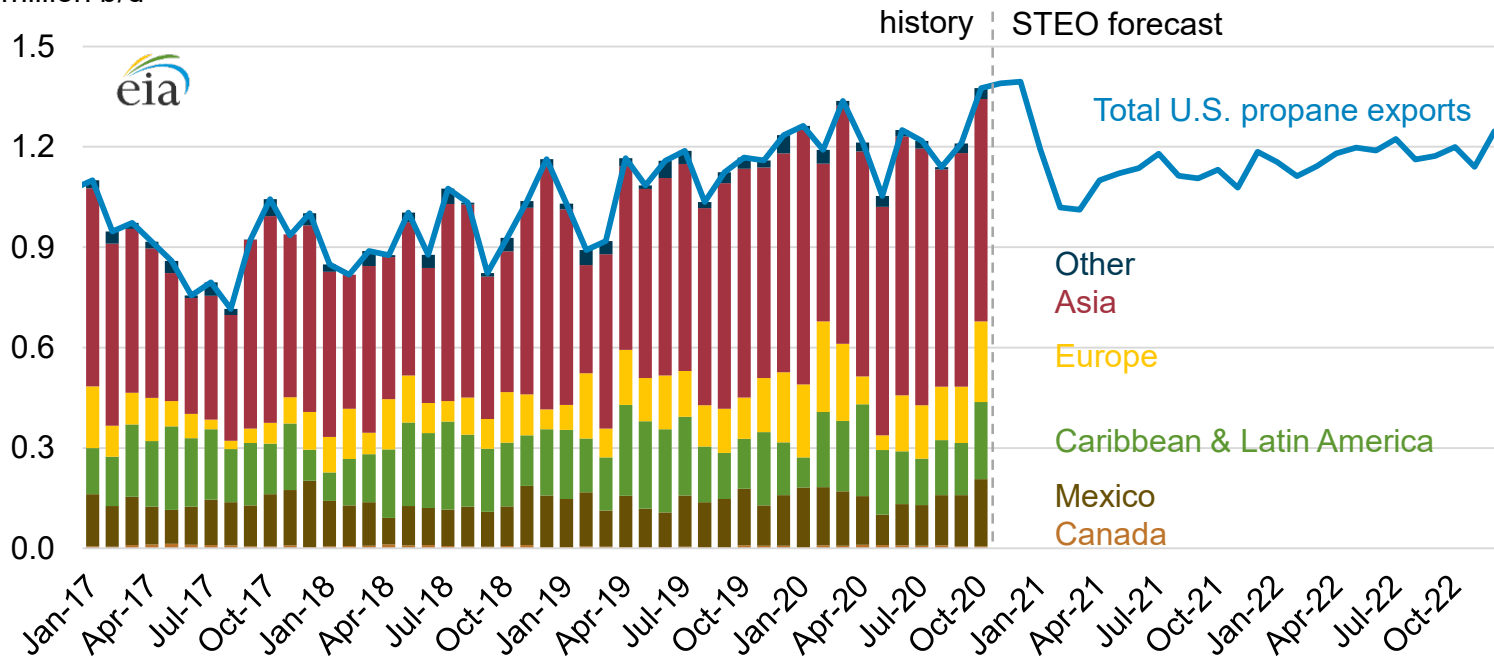
Strong international prices pulling U.S. propane exports and driving domestic prices higher



Source: EIA, Bloomberg, data through January 16, 2021

Since April, Asian destinations accounted for 60% of exported volumes. EIA expects future exports to show similar trend

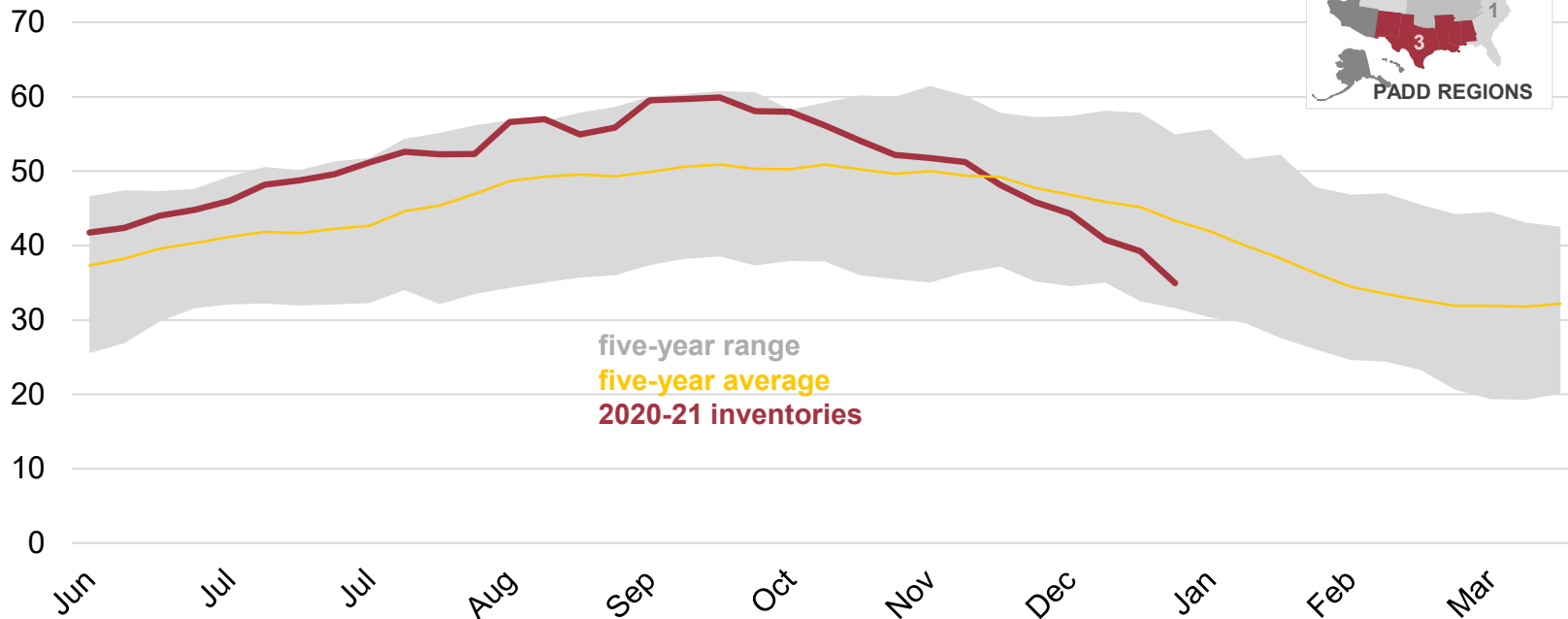
U.S. propane exports by destination
million b/d



Source: EIA, Petroleum Supply Monthly and [Short-Term Energy Outlook](#) (STEO), January 2021

PADD 3 propane inventory draws at accelerated pace as exports from Gulf Coast terminals remain strong

PADD 3 propane* inventories
million barrels

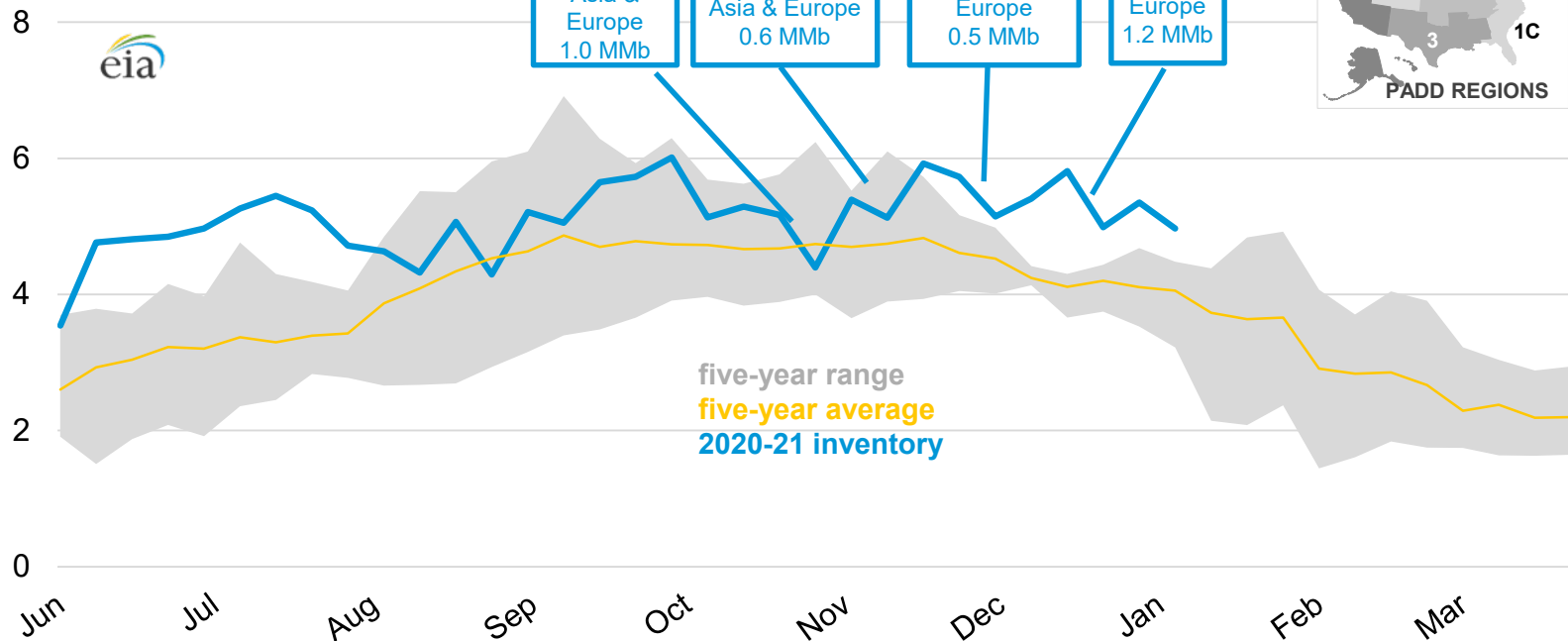


Source: EIA, Weekly Petroleum Status Report, January 13, 2021

*propane/propylene for fuel use only

Integration of the Mid-Atlantic (PADD 1B) with global propane markets results in change in seasonal inventory movements

PADD 1B propane* inventories
million barrels (MMb)



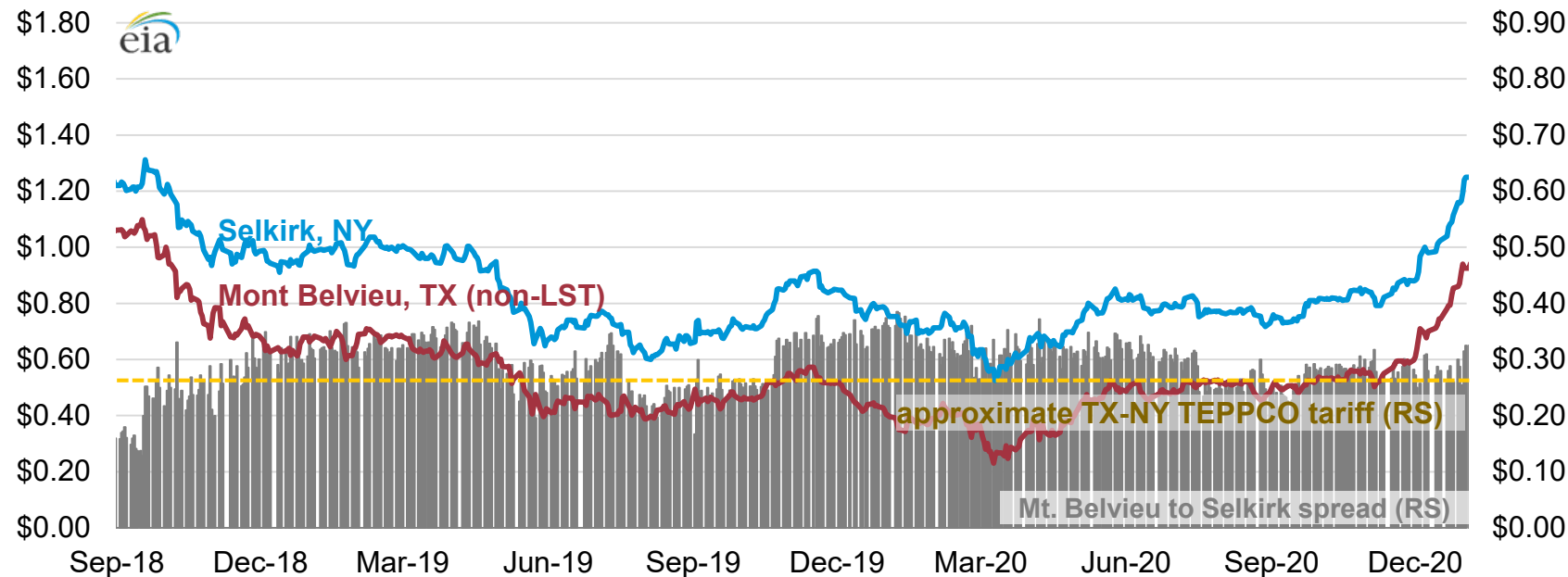
Source: Customs and Border Protection; EIA, Weekly Petroleum Status Report, Jan. 13, 2021; Clipper

*propane/propylene for fuel use only

New England (Selkirk, NY) wholesale prices reflect premium over Gulf Coast spot prices required to move propane into the region

propane spot prices
dollars per gallon

propane price spread
dollars per gallon

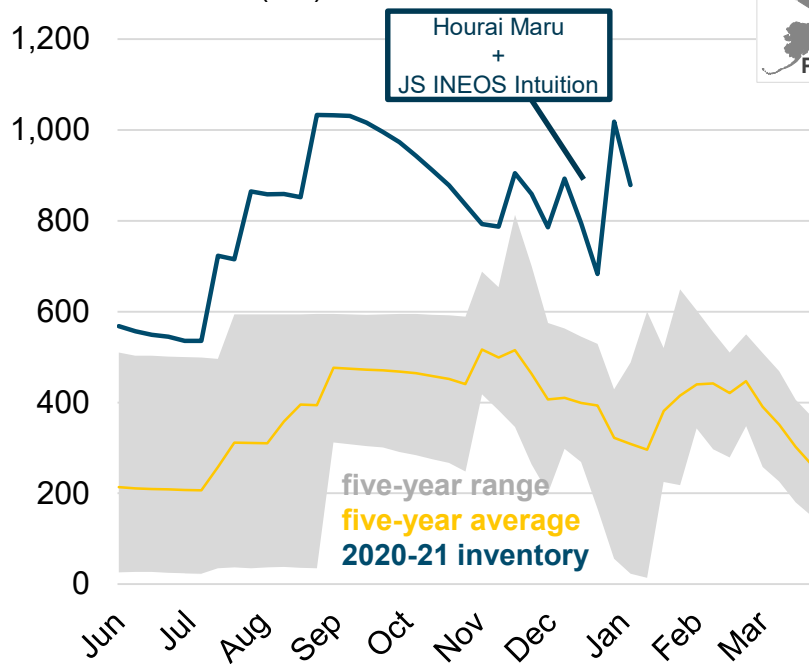


TEPPCO = Enterprise TE Products Pipeline Company LLC

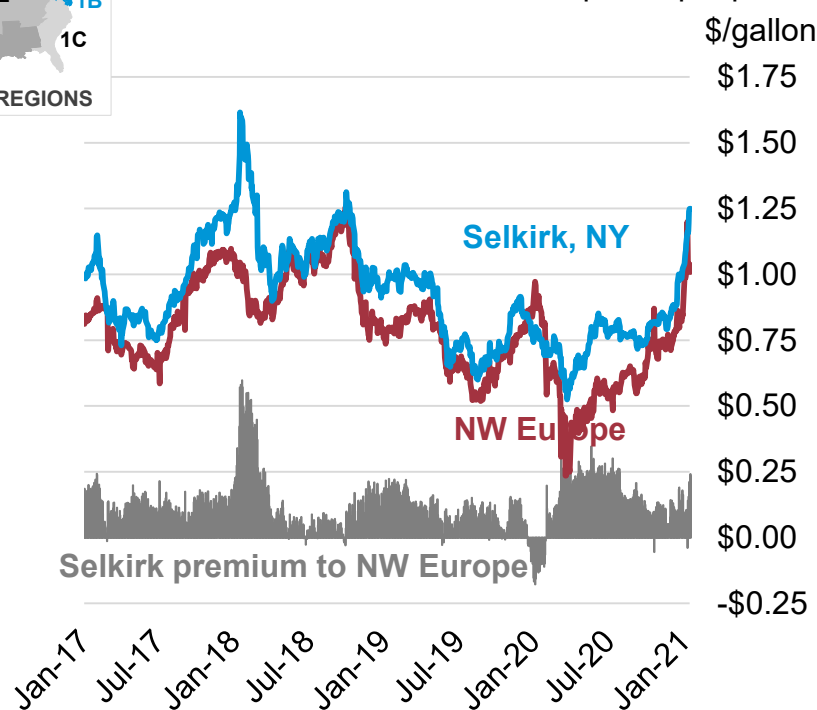
Source: EIA, Bloomberg, data through January 16, 2021; Enterprise Products Partners L.P., [Effective Tariffs](#), FERC No. 54.54.0

In addition to pipeline deliveries from the Gulf Coast, New England continues to rely on propane imports from overseas

PADD 1A propane* inventories
thousand barrels (Mb)



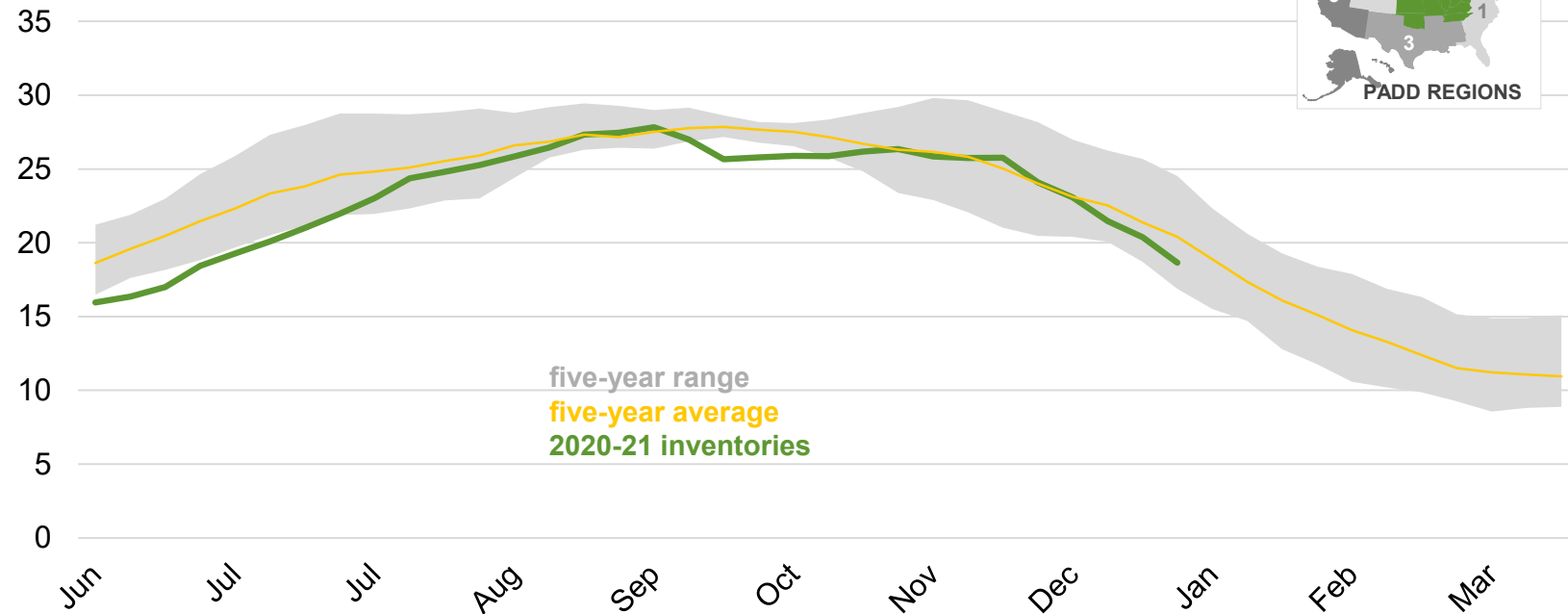
Propane spot prices
\$/gallon



Source: Weekly Petroleum Status Report, January 16, 2021; Clipper; Bloomberg

PADD 2 propane inventories, now below the five-year average, follow a clear seasonal pattern

PADD 2 propane* inventories
million barrels

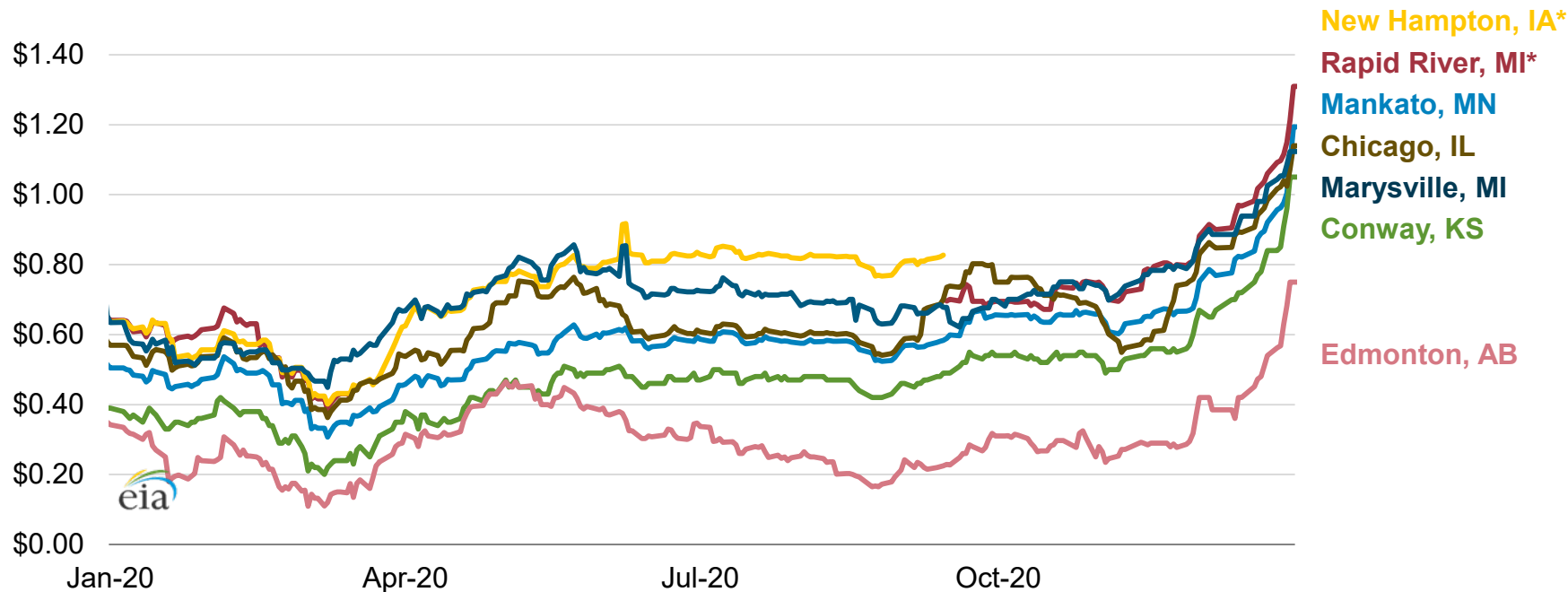


Source: EIA, Weekly Petroleum Status Report, January 13, 2021

*propane/propylene for fuel use only

Prices at major Midwest market centers increasing in tandem with Conway and Edmonton wholesale prices

propane spot prices
dollars per gallon

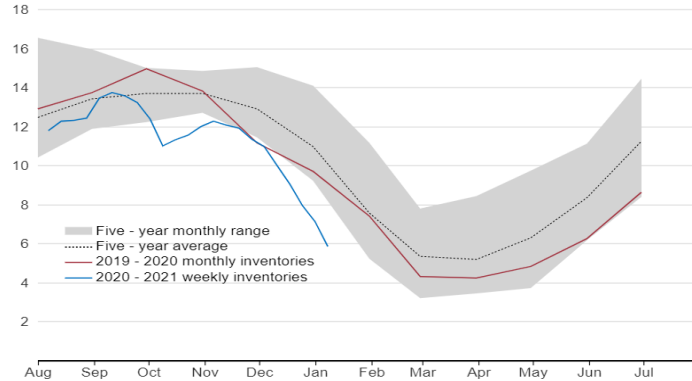


Source: EIA, Bloomberg, data through January 16, 2021

*New Hampton, IA prices not available from October 1 onwards;
Rapid River, MI rack prices unavailable for Apr. 1 through Sep. 30, 2020

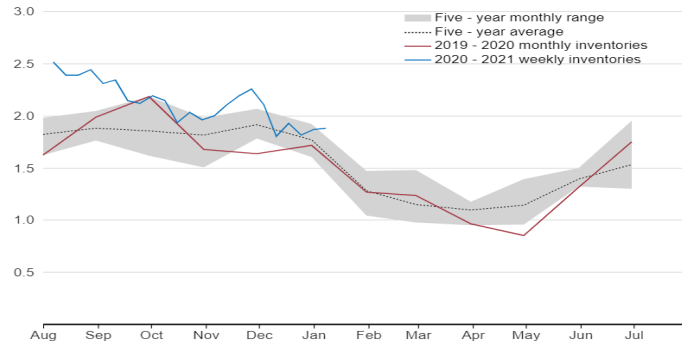
PADD 2 selected state propane* inventories

Kansas propane/propylene stock at refineries, terminals, and natural gas plants (not pipelines)
million barrels



Source: U.S. Energy Information Administration, *Petroleum Supply Monthly and Weekly Petroleum Status Report*

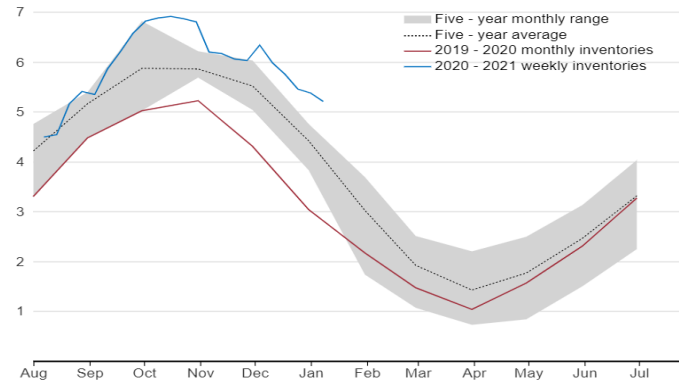
Illinois, Indiana, Ohio propane/propylene stock at refineries, terminals, and natural gas plants (not pipelines)
million barrels



Source: U.S. Energy Information Administration, *Petroleum Supply Monthly and Weekly Petroleum Status Report*

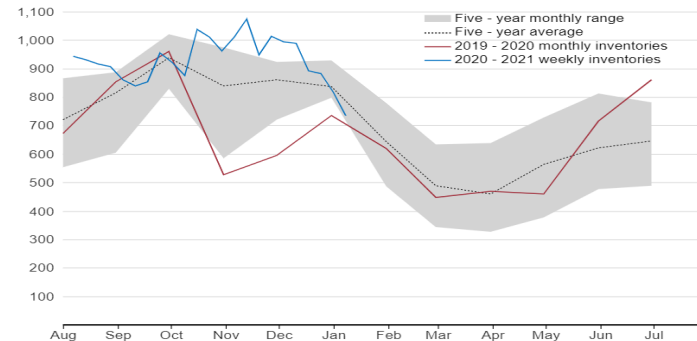
Source: EIA, *Weekly Petroleum Status Report*, January 13, 2021

Michigan propane/propylene stock at refineries, terminals, and natural gas plants (not pipelines)
million barrels



Source: U.S. Energy Information Administration, *Petroleum Supply Monthly and Weekly Petroleum Status Report*

Iowa, Minnesota, Wisconsin propane/propylene stock at refineries, terminals, and natural gas plants (not pipelines)
thousand barrels

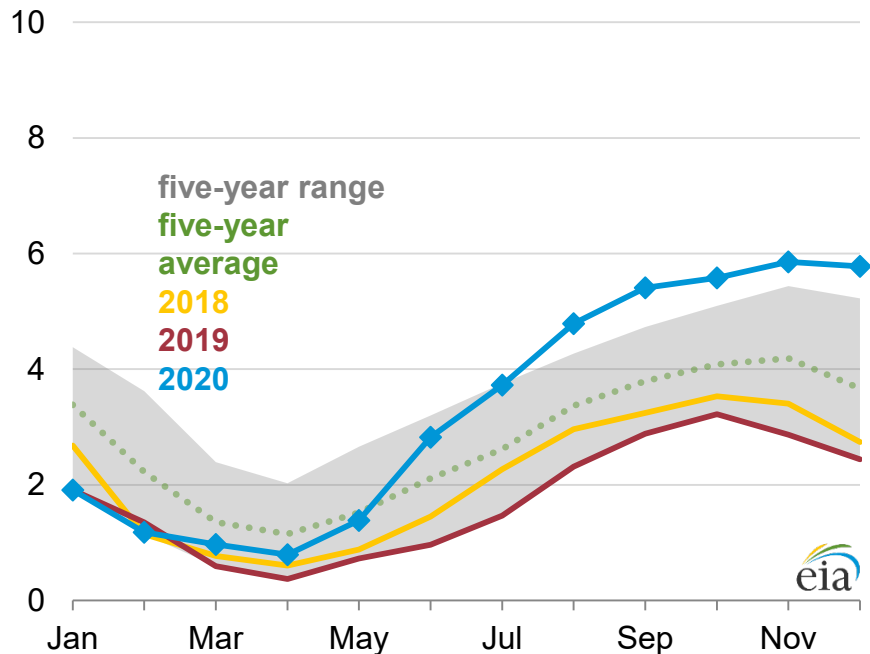


Source: U.S. Energy Information Administration, *Petroleum Supply Monthly and Weekly Petroleum Status Report*

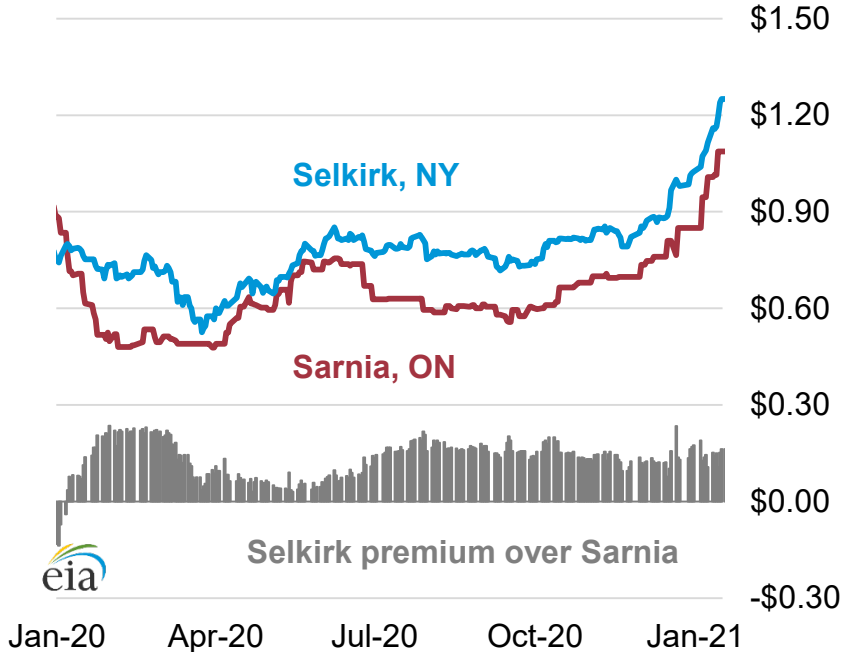
*propane/propylene for fuel use only

Eastern Canada propane inventories remain above five-year range; Sarnia, ON spot prices moving in tandem with Selkirk, NY rack prices

propane inventories in Eastern Canada
million barrels



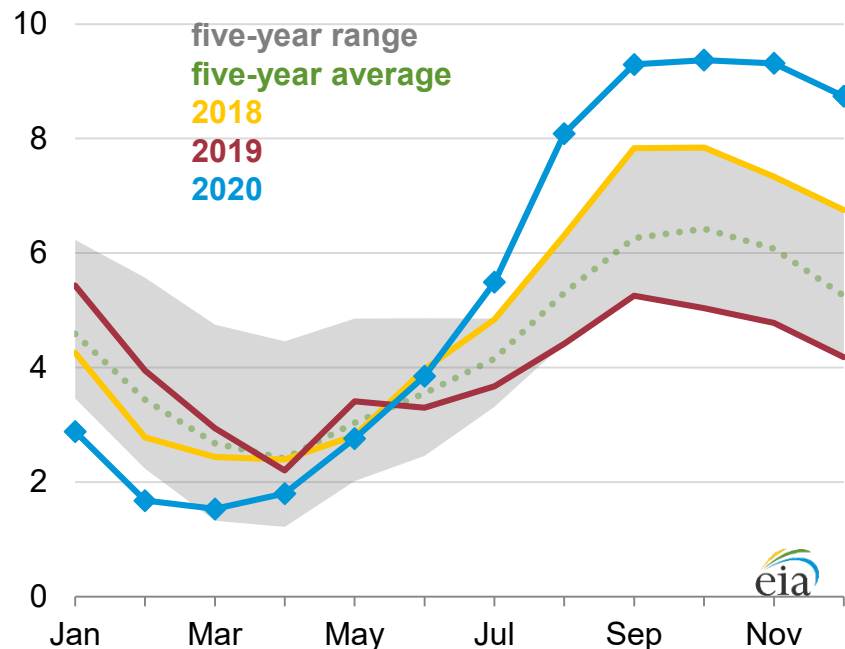
propane spot prices
\$/gallon



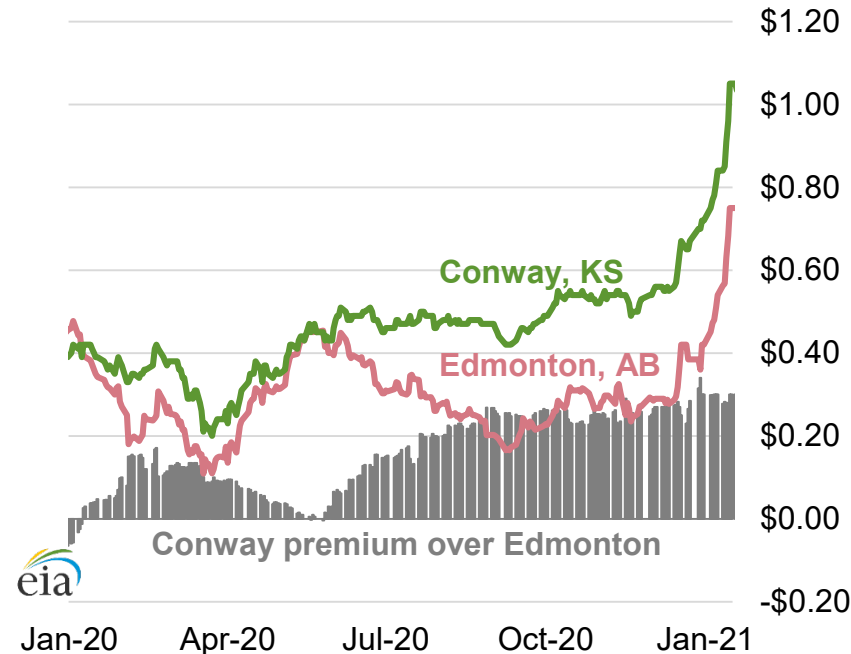
Source: EIA; Canada's [National Energy Board](#), December 22, 2020; Bloomberg, data through January 16, 2021

Western Canada inventories starting to draw down after record highs Sept. – Nov., as exports move by water to Asia and by rail to Midwest

propane inventories in Western Canada
million barrels



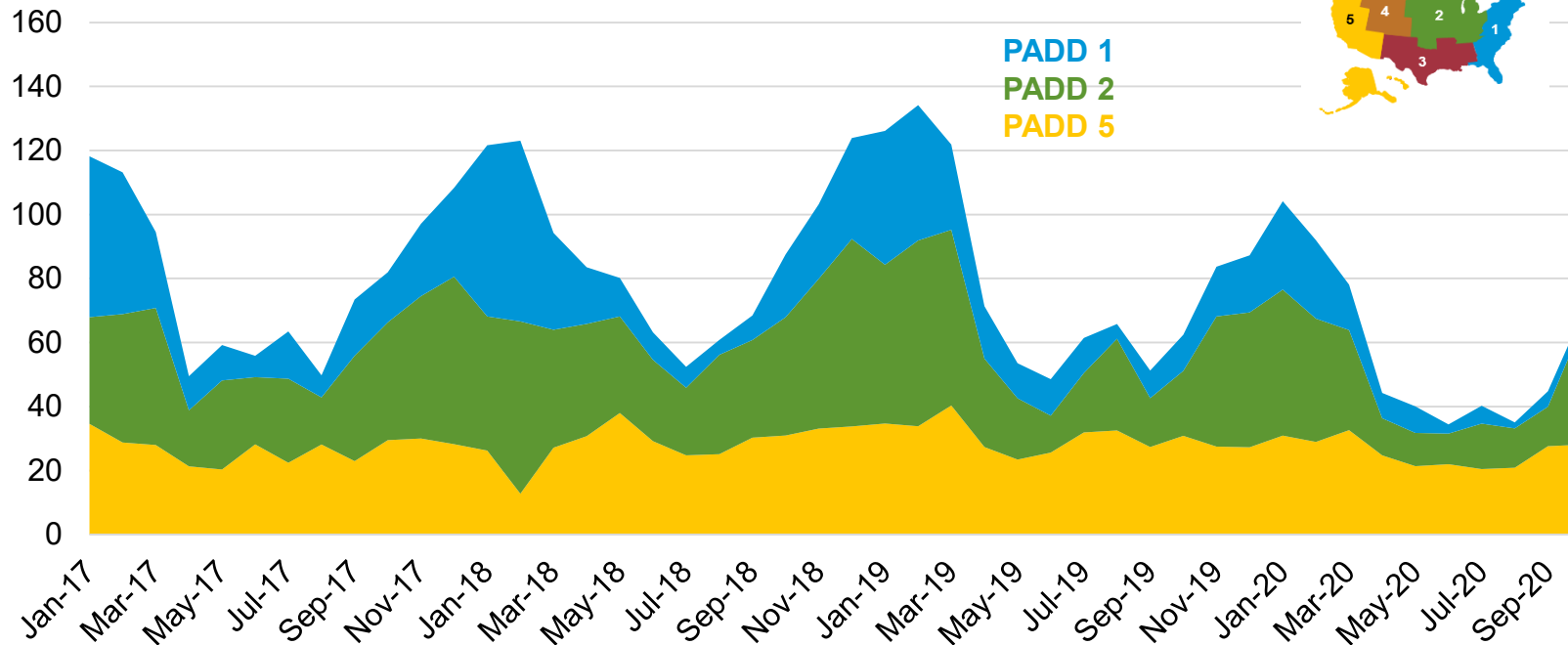
propane spot prices
\$/gallon



Source: EIA; Canada's [National Energy Board](#), December 22, 2020; Bloomberg, data through January 12, 2021

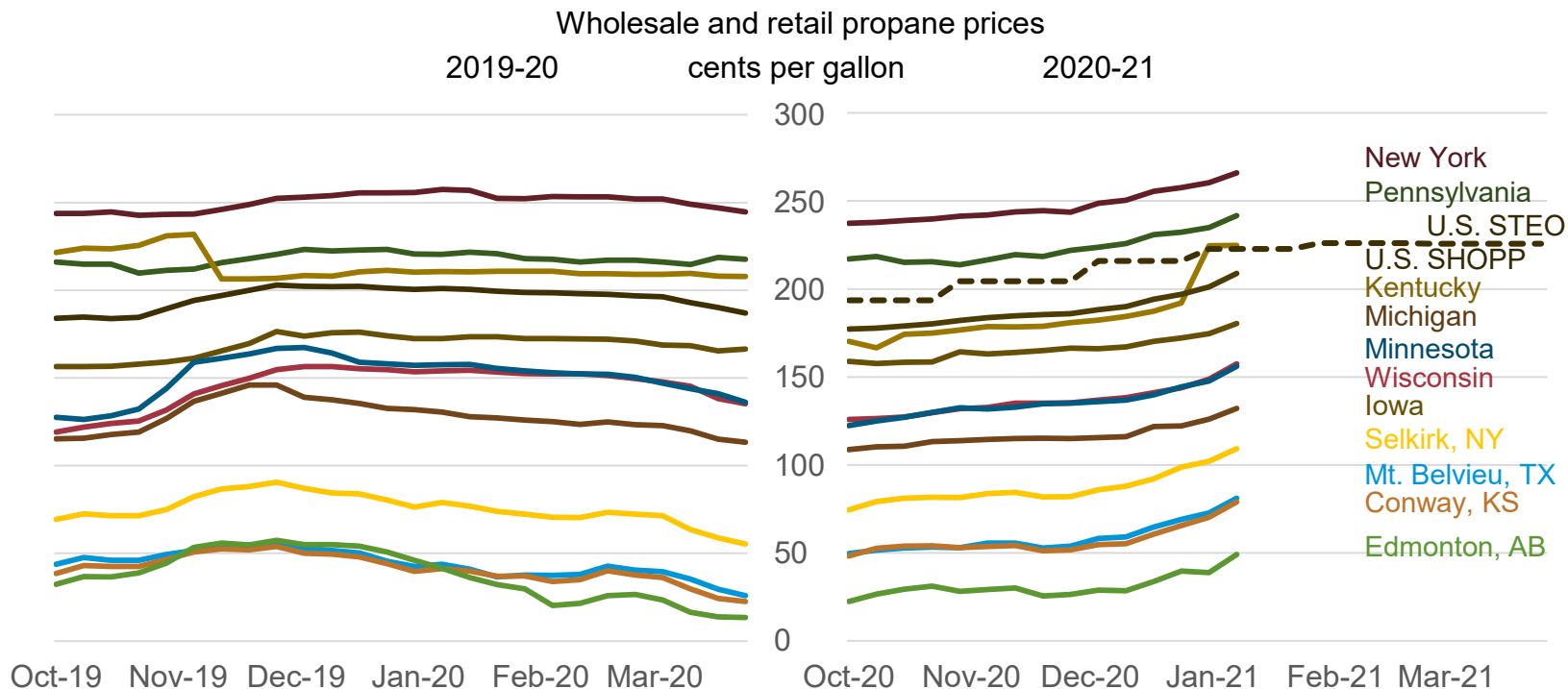
Canadian propane imports by rail have been decreasing in the past two years as Canada increasingly exports more from the West Coast

propane imports by rail from Canada
thousand b/d



Source: EIA, [Movements of Crude Oil and Selected Products by Rail](#)

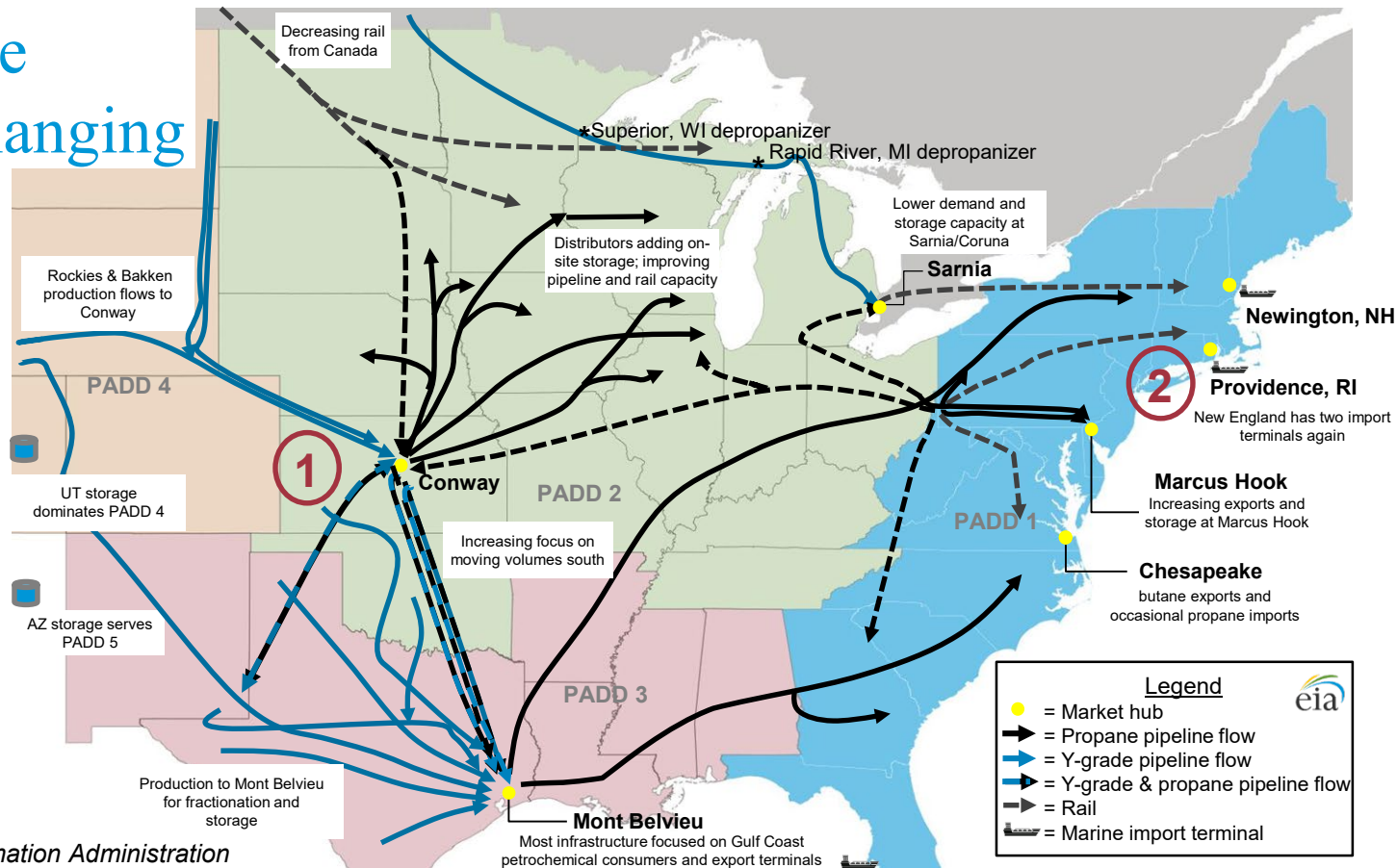
Current-year retail prices close to parity with 2019-20 residential delivered prices, even as wholesale prices reach multi-year highs



Source: EIA SHOPP survey, January 11, 2021; Bloomberg, January 12, 2021

Propane-focused infrastructure continues changing

1. Increased connectivity from PADD 2 to PADD 3 allows more y-grade to pass Conway and flow directly to Gulf Coast fractionators
2. Additional import terminal in New England has improved supply to that region



Source: U.S. Energy Information Administration

For more information

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

State Energy Portal | www.eia.gov/state

Winter Heating Fuels Site | www.eia.gov/special/heatingfuels/

Movements of Propane by Rail |
http://www.eia.gov/dnav/pet/pet_move_railNA_a_EPLLPA_RAIL_mbbi_m.htm

Today in Energy | www.eia.gov/todayinenergy

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

Energy Explained – Hydrocarbon Gas Liquids |
http://www.eia.gov/energyexplained/index.cfm?page=hgls_home

Annual Energy Outlook | www.eia.gov/aeo

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