ENERGY LOGISTICS & DISTRIBUTION

Industry In-Sight™

FALL / WINTER 2020




JORDAN KNAUFF & COMPANY

ENERGY EQUIPMENT & INFRASTRUCTURE ALLIANCE

The Voice of the Energy Supply Chain

ENERGYBUILDERS

IN THIS REPORT

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All charts in this report are updated to the latest information available at the time of publication. Due to differing reporting dates for various data used throughout the report, all charts are not updated to the same ending period.

INTRODUCTION ... About This Report

We are pleased to offer this periodic report which provides a comprehensive compilation of energy information, insights and data. It aggregates critical planning and forecasting information from a myriad of sources into one resource for energy supply chain analysts and decision-makers.

The energy supply chain is an increasingly complex network of upstream, midstream and downstream providers of construction, equipment, materials and services. As shale gas-oil and renewable energy continue to expand in the U.S., additional infrastructure is needed to connect the new sources to the current network of pipelines, storage and transmission stations. Current and new members of the supply chain will need to expand in order to build and service the additional infrastructure.

We define the Energy Logistics & Distribution Industry as any energy production, transportation and storage activities that take place from the well-head to the refinery or gas processing plant through delivery to the end user. Industry members include: producers and distributors of oil and natural gas, natural gas liquids, refined fuels and propane; energy storage and pipeline operators; oil and gas field services; producers and distributors of lubricants, oils, greases and fluids; service contractors, capital equipment manufacturers; materials suppliers; as well as logistics, transportation and maintenance providers.

Segments covered in this Industry In-Sight™ include:

- Crude oil and refined products, natural gas, liquefied natural gas (LNG), natural gas liquids including propane and heating/fuel oil, as well as drilling activity.
- Renewables, including solar, wind, hydropower and ethanol.
- Logistics, including storage and terminals, pipelines, trucking, shipping and rail.
- Economic and financial data pertinent to the Energy Logistics & Distribution Industry.

It is our intention that this publication will provide value in the following areas:

- **Aggregate Information** – The Data Center provides comprehensive statistics on the Energy Logistics & Distribution Industry including, among others: prices (domestic and international), production, consumption, inventory, imports/exports, LNG terminals, drilling activity, solar and wind capacities, energy consumption by sector and source, tank and underground storage capacities and utilization, pipeline mileage and trucking conditions. In all, the report offers more than 70 individual charts covering these topics and more. All charts in this report are updated to the latest information available at the time of publication.
- **Input to Business Decisions** – As a relevant and informative reference for use when contemplating decisions that will have a meaningful impact on your business. Accordingly, we welcome any input, feedback and suggestions to help us include meaningful and timely topical content in future publications. We especially would like to receive suggestions for ideas on Hot Topics in the Energy Logistics & Distribution Industry.
- **Identification of Opportunities** – The breadth of information provided will enable owners and operators of energy logistics businesses to track developments in energy segments outside of their day-to-day focus.
- **Public and Transaction Comparables by Segment** – This section provides the tracking of a cross-section of publicly-traded companies and transactions in various segments of the Energy Logistics & Distribution Industry. The data include operating metrics, such as revenues and EBITDA (earnings before interest, taxes, depreciation and amortization); and valuation analyses such as total enterprise value / latest twelve months revenues and total enterprise value / latest twelve months EBITDA.

Thank you for taking the time to review this Energy Logistics & Distribution Industry In-Sight™. Our goal is to provide the most comprehensive and beneficial information possible. Please forward your feedback and suggestions to any member of the Jordan Knauff & Company or Energy Equipment and Infrastructure Alliance team members listed on the last two pages of this report.

INTRODUCTION

Who is the Energy Equipment & Infrastructure Alliance (EEIA)?

EEIA ... The Voice of the Energy Supply Chain

The energy supply chain is over 120,000 companies in sixty industries, annually contributing more than $170 billion to the U.S. economy, with hundreds of thousands of workers in communities throughout every state of the union. They provide construction, well services, capital equipment, supplies, logistics, professional services and technology in support of energy operations. They build energy infrastructure including production sites, transmission infrastructure, pipelines, storage facilities, processing plants and export terminals.

The shale energy revolution is transforming prosperity, security and quality of life in America. In a few short years, it has brought rising employment, income and opportunity to workers and businesses of all sizes and in all fifty states, often to communities that until recently have known limited prospects for growth. It has given Americans a cleaner environment, lower energy costs, renewed national competitiveness and energy security.

Creating a supportive public and policymaker environment for this miracle depends on active public engagement by energy supply chain stakeholders -- the non-oil and gas companies where energy-driven jobs and opportunities are greatest.

EEIA is that voice. We mobilize and lead the North American supply chain in pursuit of government policies that support full development of our energy resources, while protecting public health, safety and the environment. We also work for widespread public support for energy development.

The Energy Equipment & Infrastructure Alliance (EEIA) is active on all fronts: federal and state legislative, regulatory, judicial and public opinion. Our strength is based upon the supply chain's enormous fifty-state contributions to jobs, economic growth and community prosperity. We conduct economic research that measures and reports the facts about the energy supply chain's tremendous contributions to the American economy.

We are an organization of leading supply chain companies, trade associations and labor organizations. We are the voices of the businesses and workers of America's energy miracle.




INTRODUCTION

Who is Jordan Knauff & Company (JKC)?

JKC was founded in 2001 to undertake a distinct mission: to assemble and maintain a staff of top-notch investment banking personnel and offer their knowledge and experience to provide the best available investment banking services to middle-market companies, the entrepreneurs that lead them and the financial entities that transact with them. JKC has been active within the Energy Logistics & Distribution Industry as operators, investors, board members and investment bankers prior to the firm's founding in 2001.

On a combined basis, over the course of their careers our employees have completed over 200 transactions as investors, owners, operators, buyers, sellers and investment bankers of middle-market businesses across a variety of industries. The majority of our firm's broad transaction experience has been with private companies owned by one shareholder, a partnership, a family or private equity investors.

Experience has taught us that the owners and executives of middle-market businesses tend to have very different needs and goals in capital transactions from those that are common to capital events related to larger companies. Our personnel apply their considerable expertise to accomplish important goals: delivery of successful outcomes for our clients. Pursuant to that, we direct and manage all aspects of the capital transaction process, assist our clients with the management of important constituents (employees, customers, vendors and lenders), act as a teammate to other important client advisors (legal counsel, accountant, tax advisor) and collaborate with transaction counsel in the negotiations with the parties on the other side of the transaction.

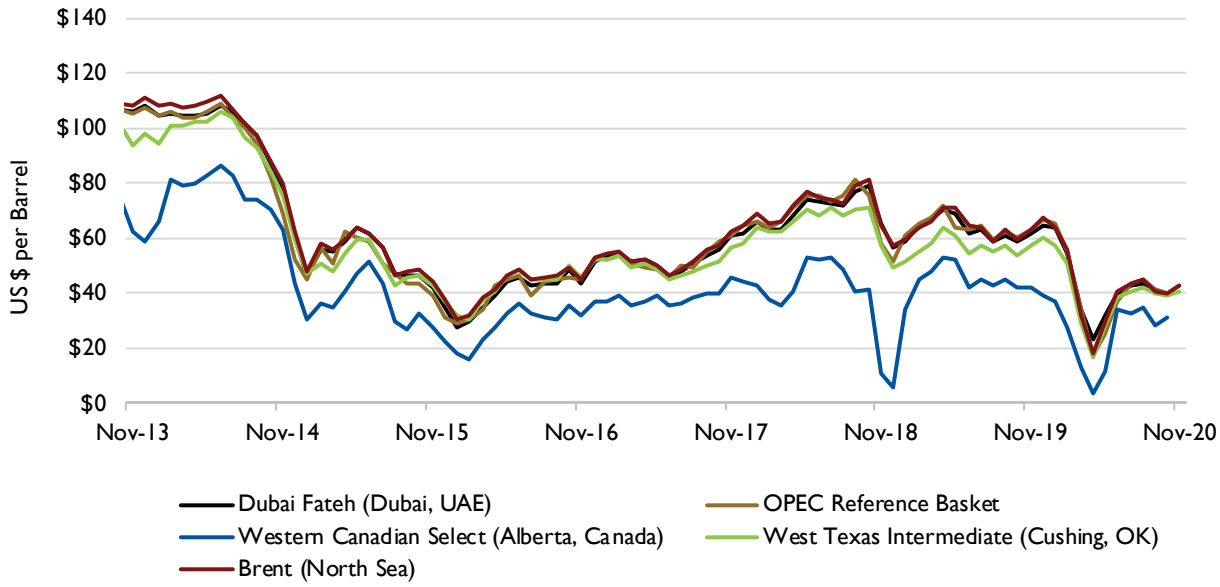
The Services We Provide

- Sell Companies: Generate a liquidity event on behalf of the owner(s) through whole, majority, or minority sale of assets, stock or units.
- Raise Capital: Representation of companies, management teams and entrepreneurs in the raising of senior debt, mezzanine debt or equity capital. Proceeds may be used for a variety of reasons, including, among others, recapitalizations, funding of growth, funding of acquisitions or liquidity for owners and investors.
- Acquisition Advisory: Assistance in sourcing and closing acquisitions -- whether it be a single transaction or a series of acquisitions as part of a consolidation strategy in an Industry Development Project™ (IDP) - a proprietary method for assisting private equity groups, companies or private investors that want to pursue multiple non-auction transactions within a single industry.
- Strategic Business Services: A suite of services for middle-market business owners and executives. Comprised of three components – Company Specific Valuation, Capital Road Map® and Strategic Industry Analysis – these services can be packaged together or used on an à la carte basis.

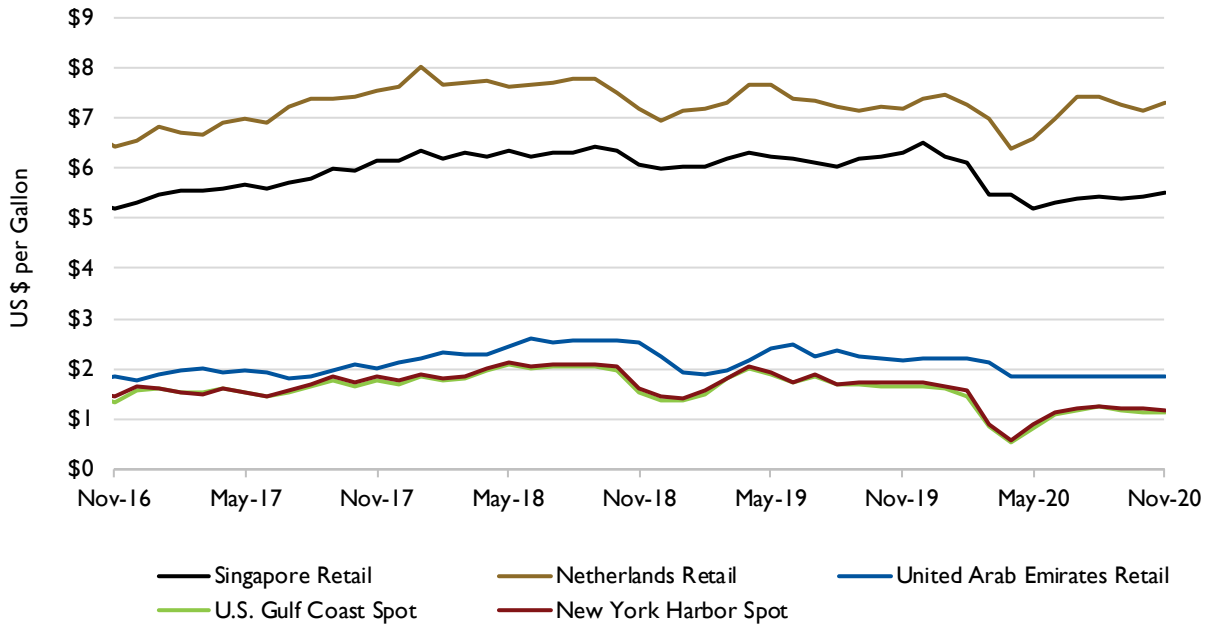
DATA CENTER

OIL

CRUDE OIL PRICES (MONTHLY AVERAGE) (1)



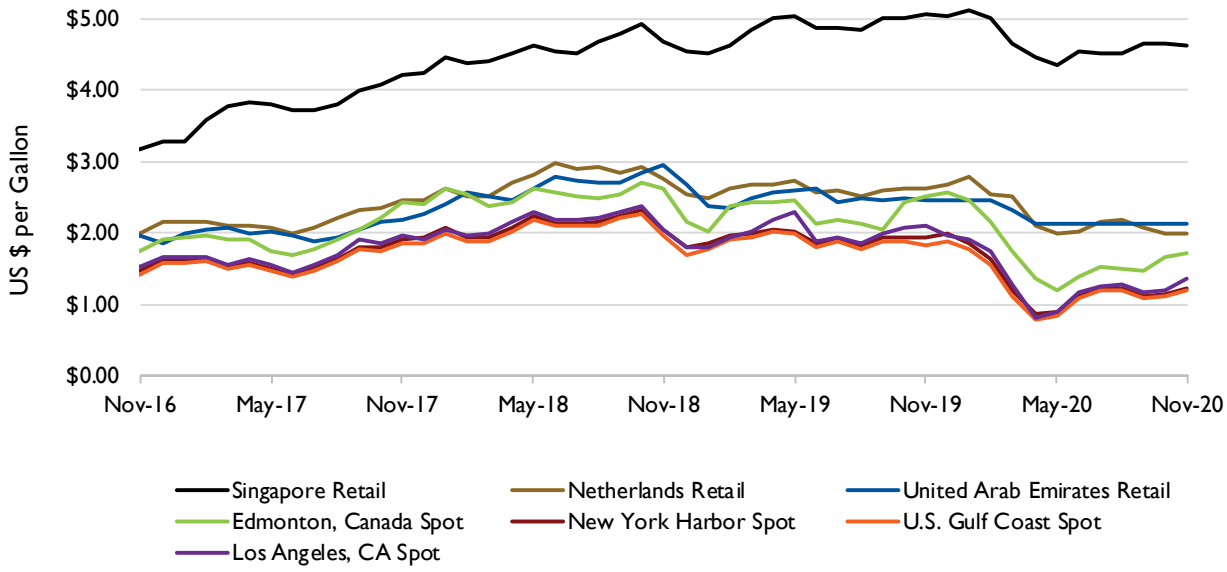
GASOLINE PRICES (MONTHLY AVERAGE) (2)



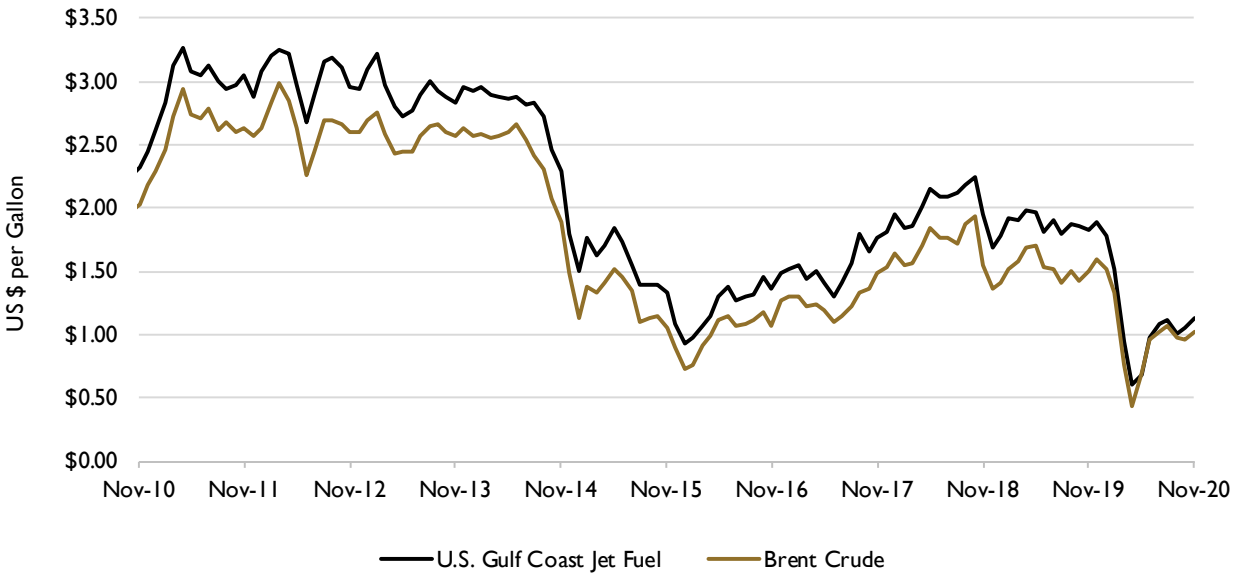
DATA CENTER

OIL

DIESEL PRICES (MONTHLY AVERAGE) (3)



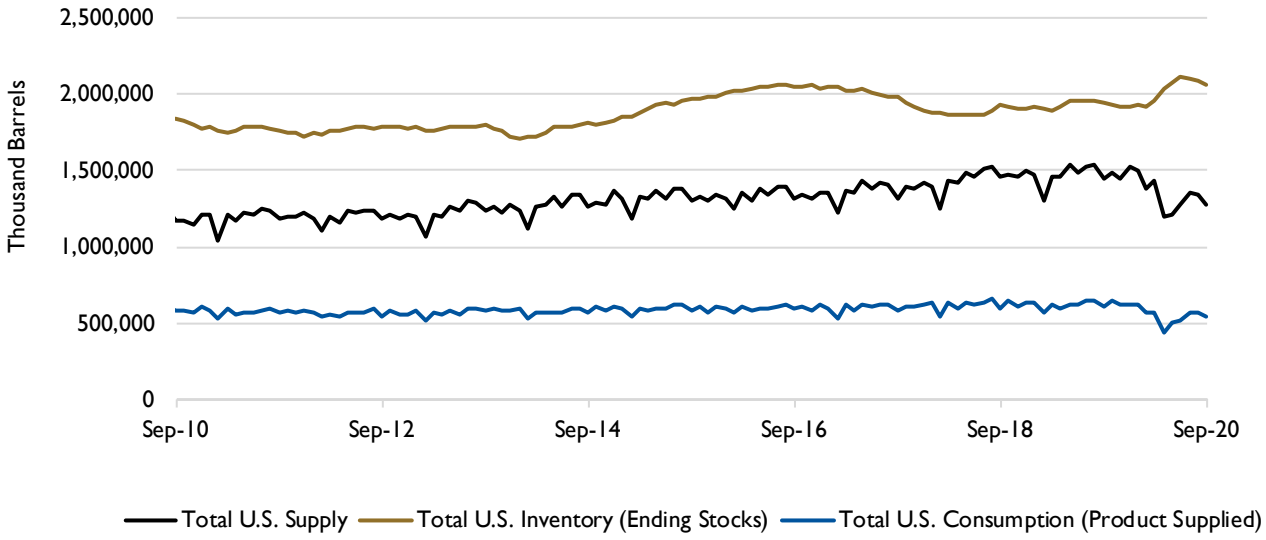
JET FUEL PRICES (MONTHLY AVERAGE) (4)



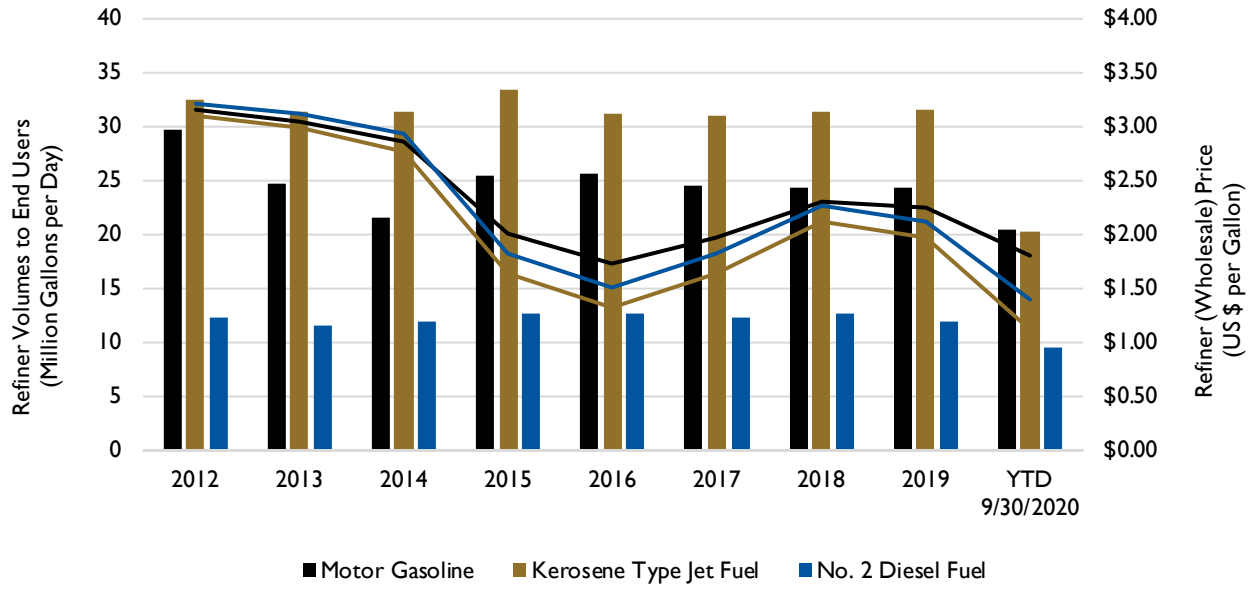
DATA CENTER

OIL

U.S. Crude Oil and Petroleum Products Supply, Inventory and Consumption (Monthly) (5)



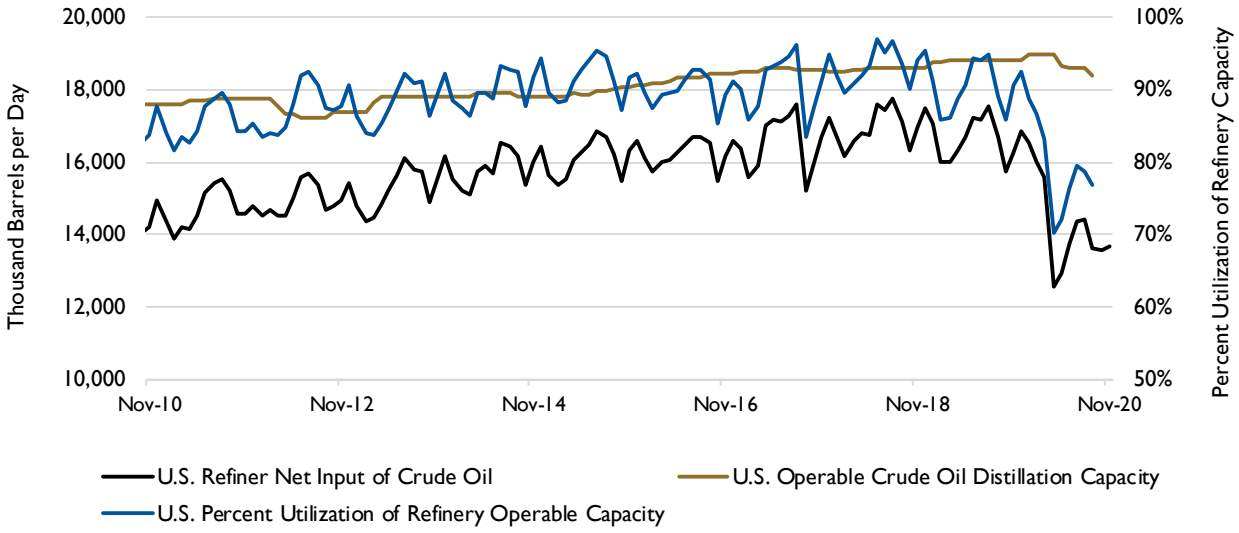
U.S. Refinery Volumes and Wholesale Prices of Petroleum Products (Annual Average) (6)



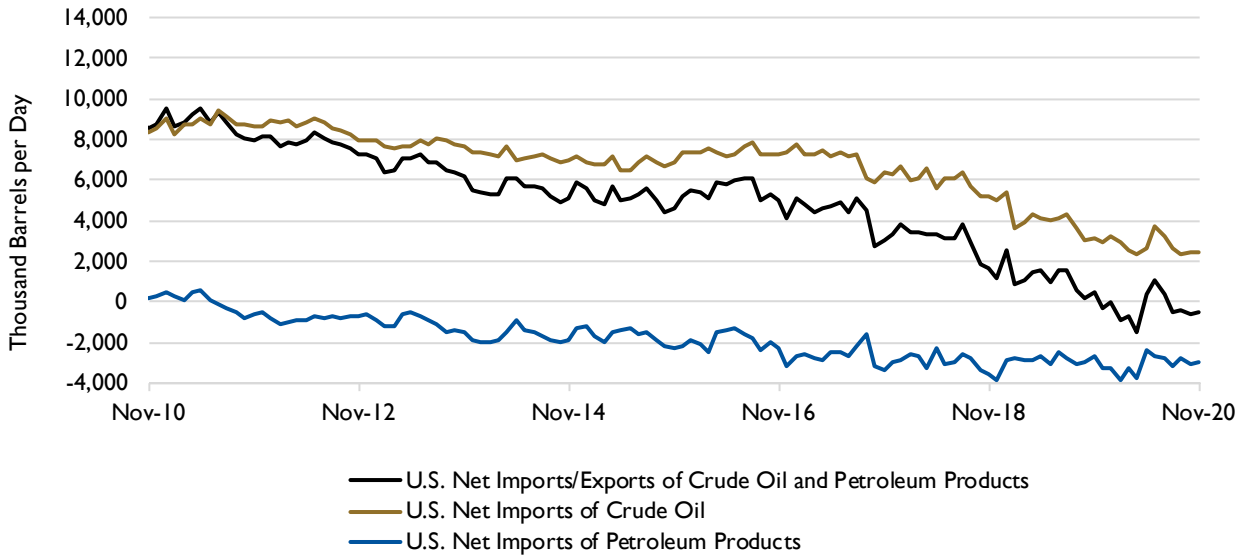
DATA CENTER

OIL

U.S. Crude Oil Refinery Input, Distillation Capacity and Refinery Utilization (Monthly Average) (7)



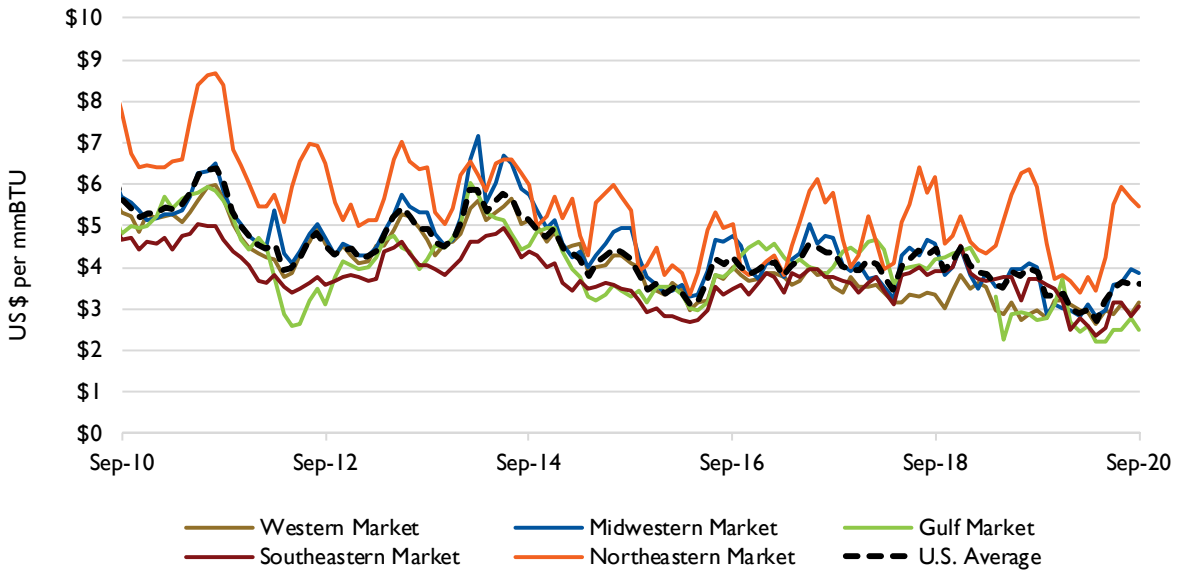
U.S. Crude Oil and Petroleum Products Imports and Exports (Monthly Average) (8)



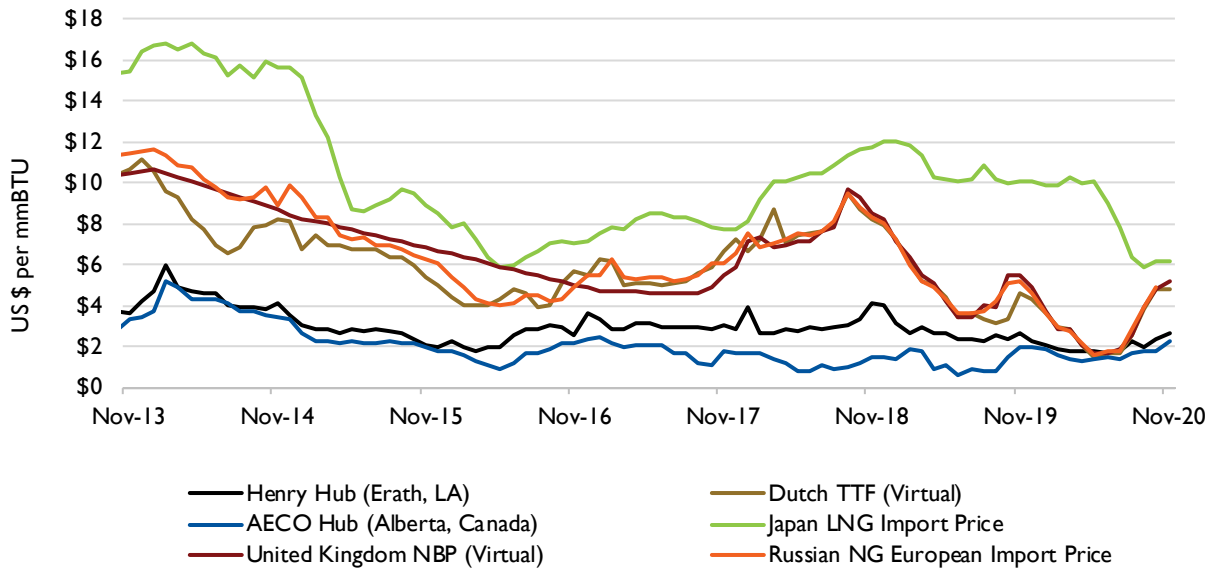
DATA CENTER

NATURAL GAS

DOMESTIC NATURAL GAS CITYGATE PRICES PER REGION (MONTHLY AVERAGE) (9)



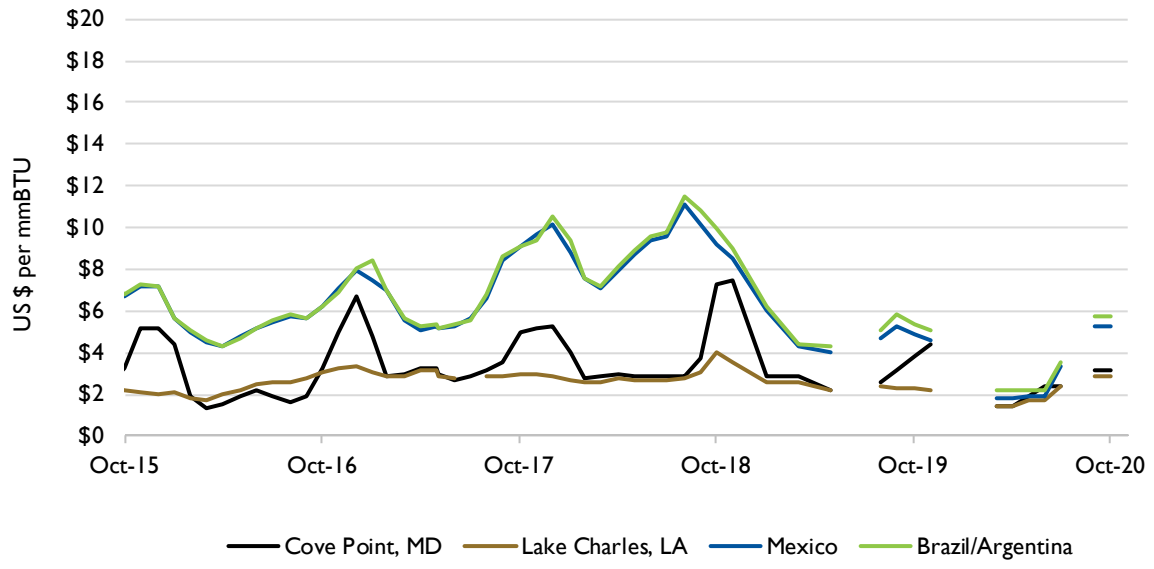
INTERNATIONAL NATURAL GAS PRICES (MONTHLY AVERAGE) (10)



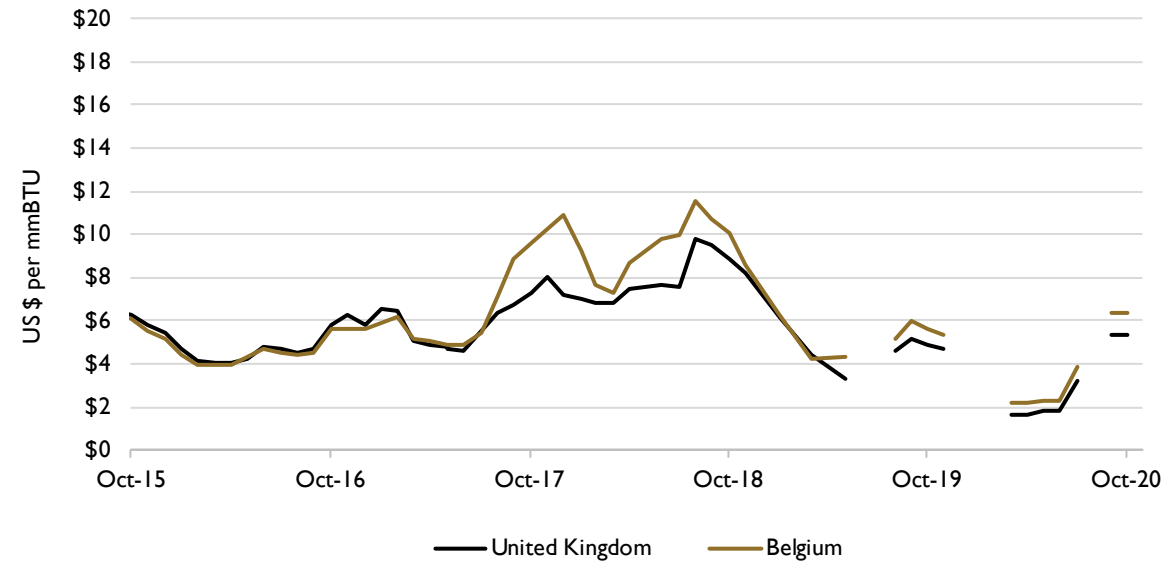
DATA CENTER

NATURAL GAS

AMERICAS LIQUEFIED NATURAL GAS PRICES (MONTHLY AVERAGE) (11)



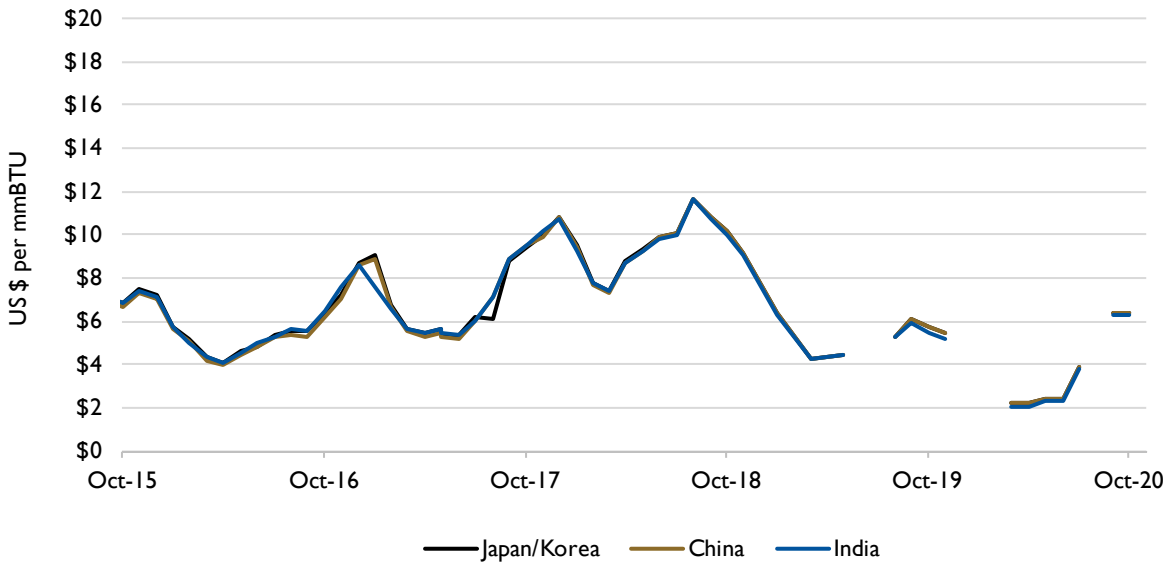
WESTERN EUROPE LIQUEFIED NATURAL GAS PRICES (MONTHLY AVERAGE) (12)



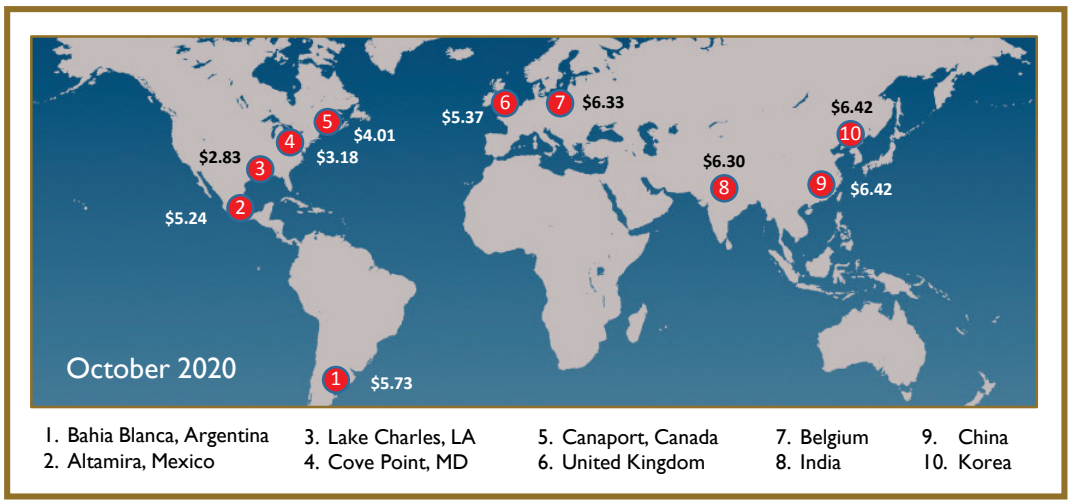
DATA CENTER

NATURAL GAS

ASIA LIQUEFIED NATURAL GAS PRICES (MONTHLY AVERAGE) (13)



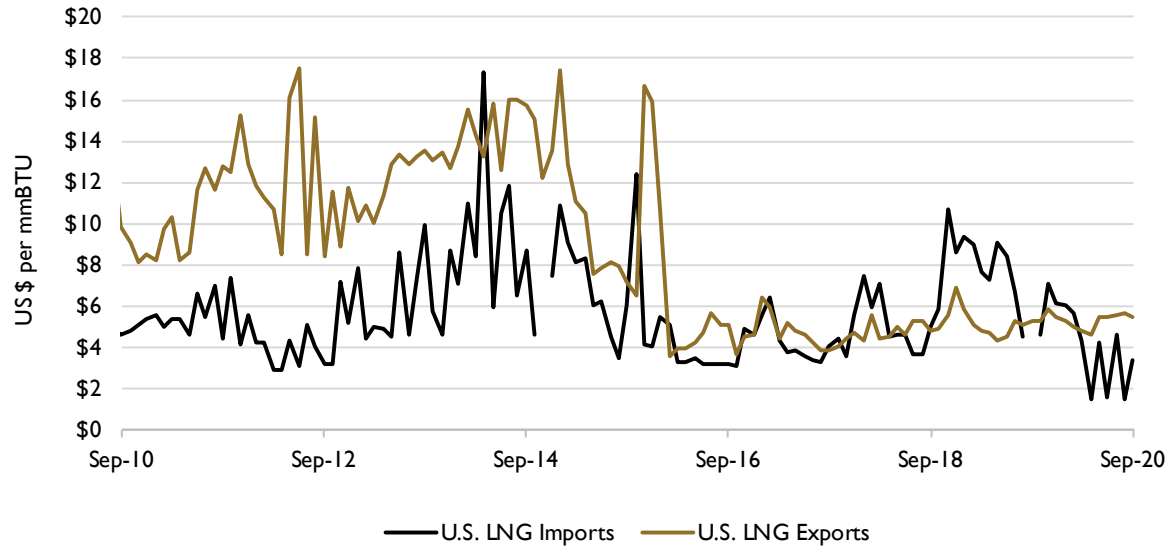
WORLD LIQUEFIED NATURAL GAS PRICES MAP (MONTHLY AVERAGE) (14)



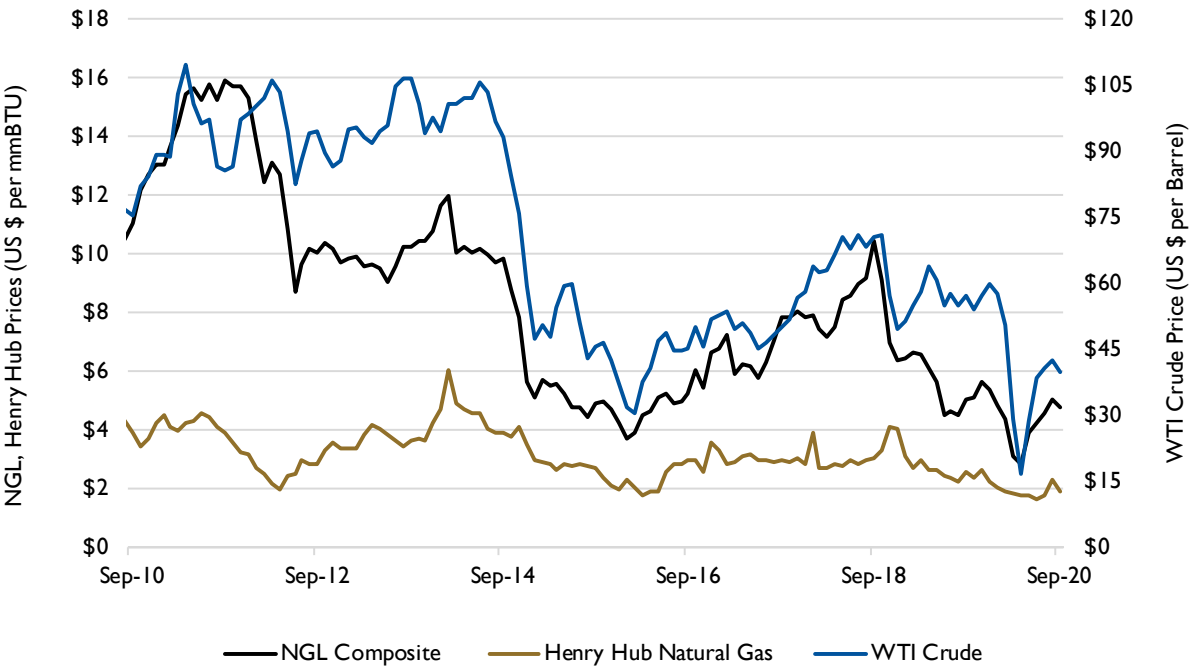
DATA CENTER

NATURAL GAS

U.S. IMPORT / EXPORT LIQUEFIED NATURAL GAS PRICES (MONTHLY AVERAGE) (15)



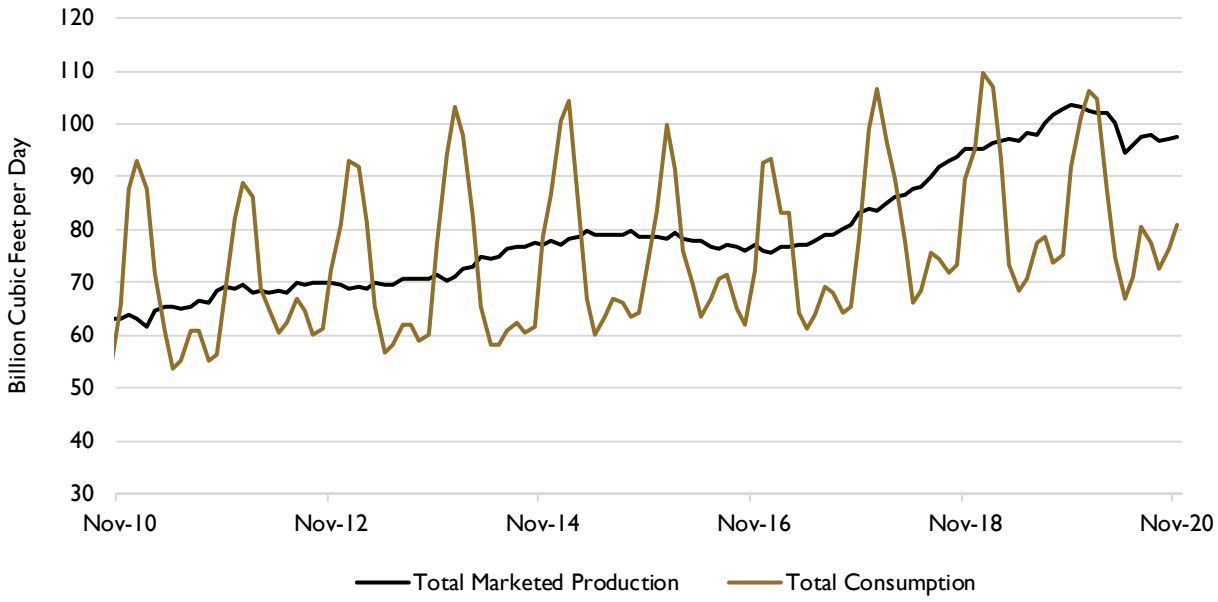
NATURAL GAS PLANT LIQUIDS PRICES (MONTHLY AVERAGE) (16)



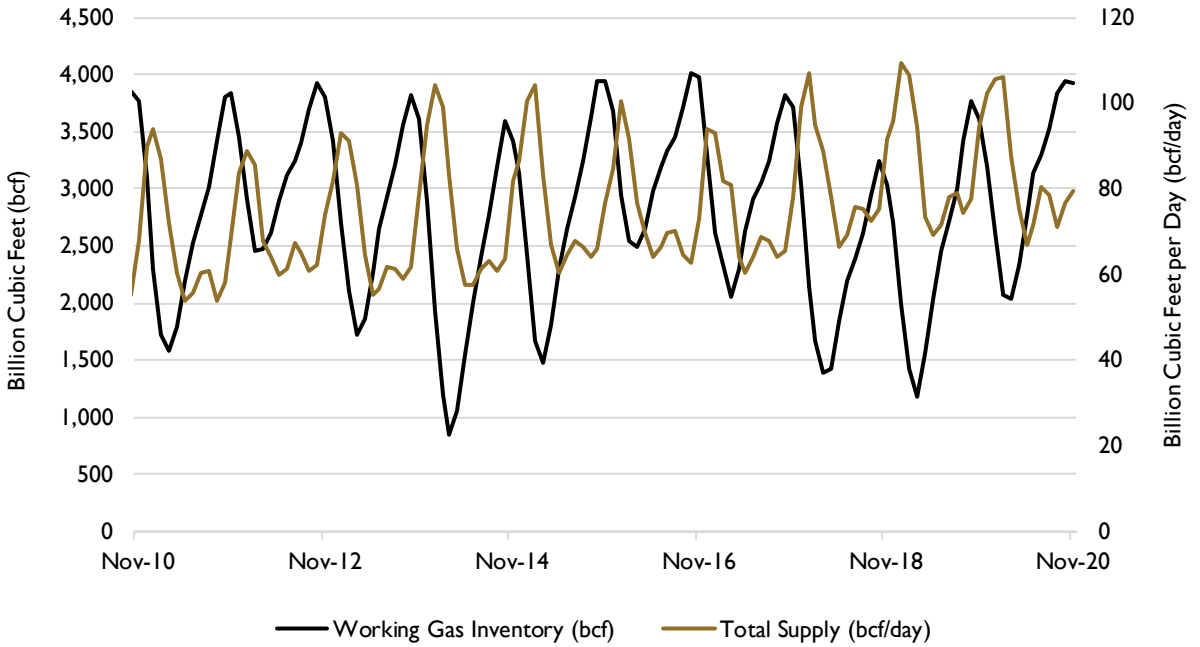
DATA CENTER

NATURAL GAS

U.S. Natural Gas Production and Consumption (Monthly) (17)



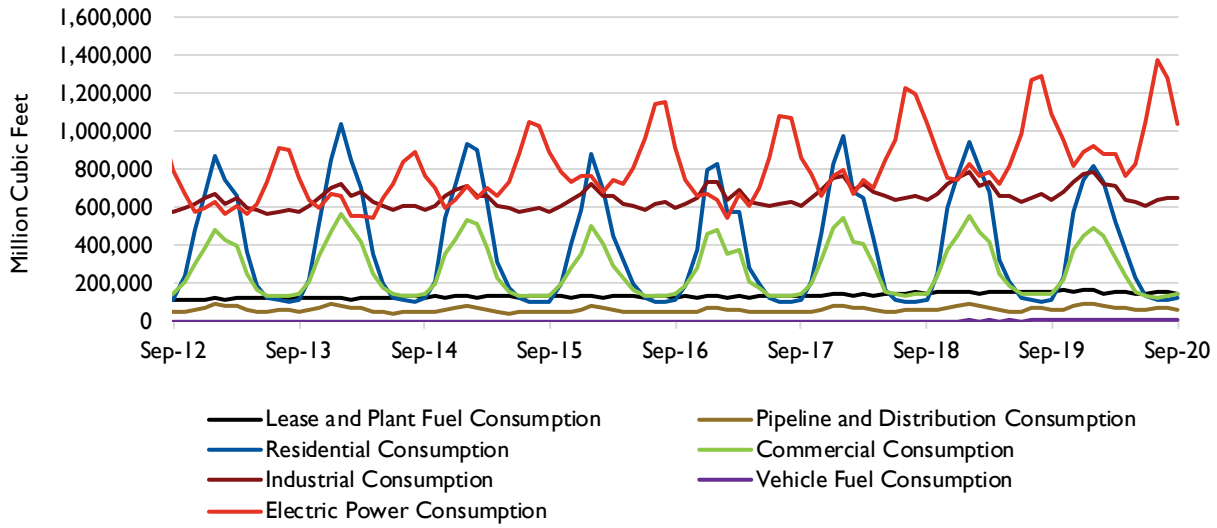
U.S. Natural Gas Supply and Inventory (Monthly) (18)



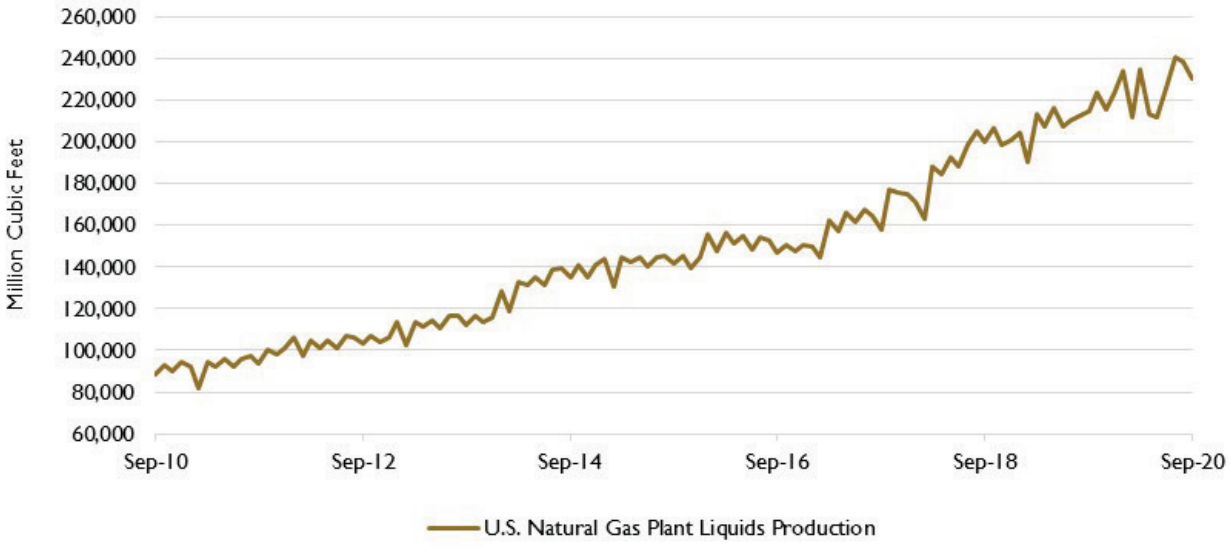
DATA CENTER

NATURAL GAS

U.S. Natural Gas Consumption by End Use (Monthly) (19)



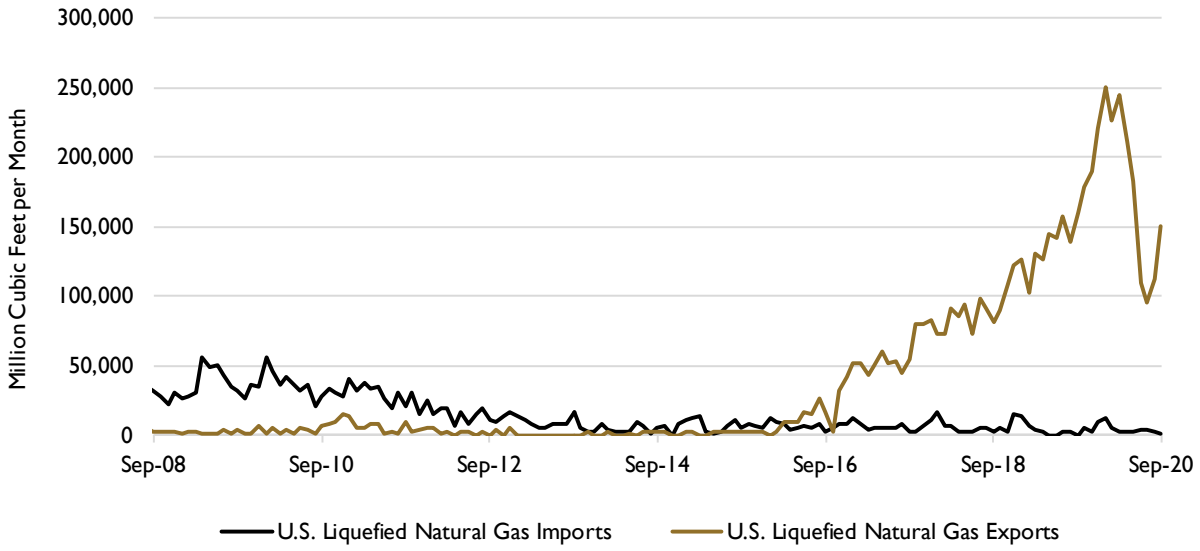
U.S. Natural Gas Plant Liquids Production (Monthly) (20)



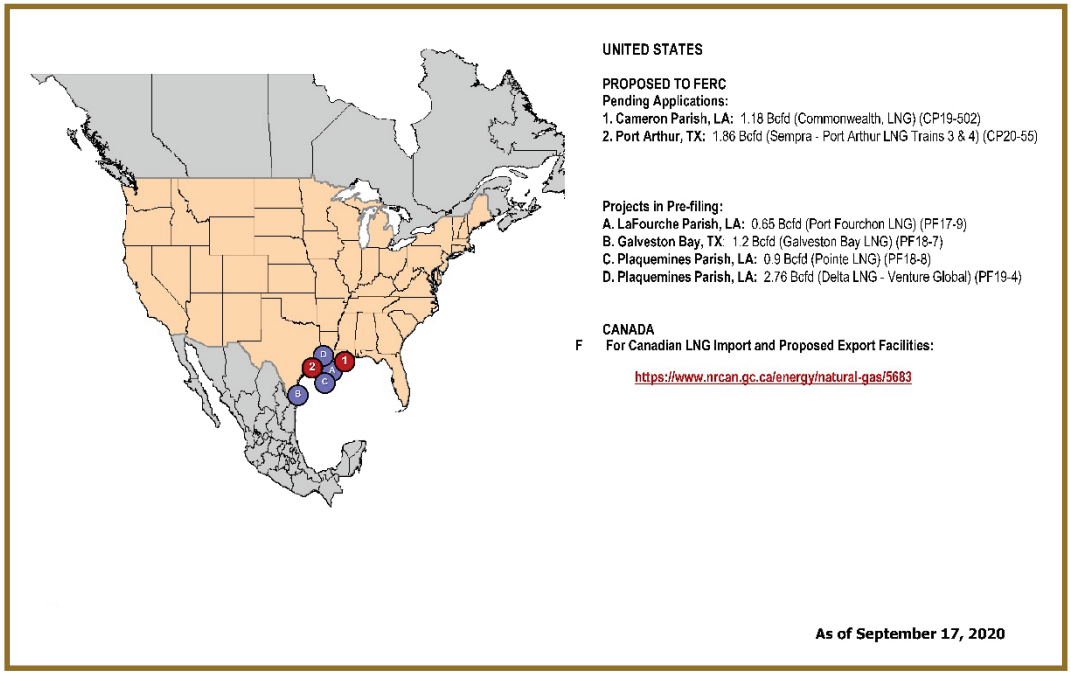
DATA CENTER

NATURAL GAS

U.S. LIQUEFIED NATURAL GAS IMPORT AND EXPORT VOLUMES (MONTHLY) (21)



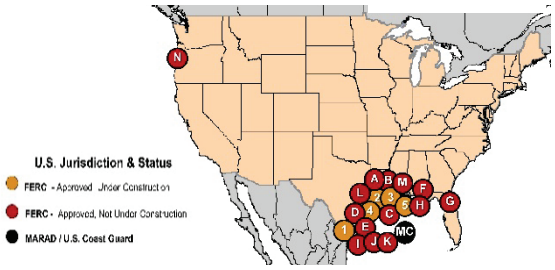
NORTH AMERICAN LNG EXPORT TERMINALS – *PROPOSED* (22)



DATA CENTER

NATURAL GAS

NORTH AMERICAN LNG IMPORT/EXPORT TERMINALS – *APPROVED* (23)



Import Terminals (Not Shown on Map)

UNITED STATES As of September 17, 2020

APPROVED - UNDER CONSTRUCTION - FERC
None

APPROVED – NOT UNDER CONSTRUCTION – FERC
1. Corpus Christi, TX: 0.4 Bcfd (Cheniere – Corpus Christi LNG) (CP12-507)

APPROVED - NOT UNDER CONSTRUCTION - MARAD/Coast Guard
2. Gulf of Mexico: 1.0 Bcfd (Main Pass Energy Hub)
3. Gulf of Mexico: 1.4 Bcfd (TORP Technology-Bienville LNG)

CANADA
For Canadian LNG Import and Proposed Export Facilities go to:
https://www.nrcan.gc.ca/energy/natural-gas/5683

★ Trains 2 & 3

Export Terminals (Shown on Map)

UNITED STATES As of September 17, 2020

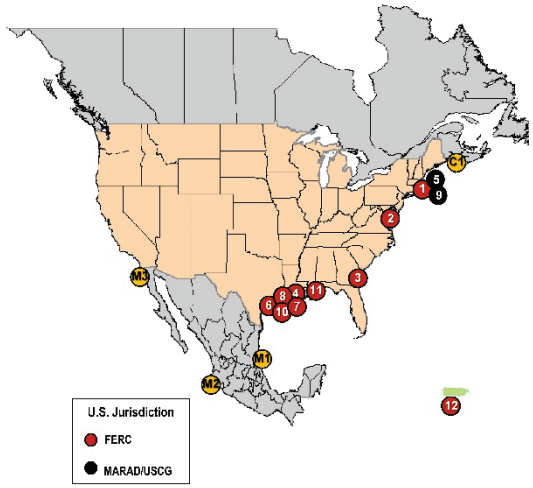
FERC – APPROVED, UNDER CONSTRUCTION
1. Corpus Christi, TX: 0.72 Bcfd (Cheniere–Corpus Christi LNG Train 2) (CP12-507)
2. Sabine Pass, LA: 0.7 Bcfd (Sabine Pass Liquefaction Train 6) (CP13-552)
3. Cameron Parish, LA: 1.41 Bcfd (Venture Global Calcasieu Pass) (CP15-550)
4. Sabine Pass, TX: 2.1 Bcfd (ExxonMobil – Golden Pass) (CP14-517)
5. Calcasieu Parish, LA: 4.0 Bcfd (Driftwood LNG) (CP17-117)

FERC – APPROVED, NOT UNDER CONSTRUCTION
A. Lake Charles, LA: 2.2 Bcfd (Lake Charles LNG) (CP14-120)
B. Lake Charles, LA: 1. 186 Bcfd (Magnolia LNG) (CP14-347)
C. Hackberry, LA: 1.41 Bcfd (Sempra - Cameron LNG Trains 4 & 5) (CP15-560)
D. Port Arthur, TX: 1.86 Bcfd (Port Arthur LNG Trains 1 & 2) (CP17-20)
E. Freeport, TX: 0.72 Bcfd (Freeport LNG Dev Train 4) (CP17-470)
F. Pascagoula, MS: 1.5 Bcfd (Gulf LNG Liquefaction) (CP15-521)
G. Jacksonville, FL: 0.132 Bcf/d (Eagle LNG Partners) (CP17-41)
H. Plaquemines Parish, LA: 3.40 Bcfd (Venture Global LNG) (CP17-66)
I. Brownsville, TX: 0.55 Bcfd (Texas LNG Brownsville) (CP16-116)
J. Brownsville, TX: 3.6 Bcfd (Rio Grande LNG – NextDecade) (CP16-454)
K. Brownsville, TX: 0.9 Bcfd (Annova LNG Brownsville) (CP16-480)
L. Corpus Christi, TX: 1.86 Bcfd (Cheniere Corpus Christi LNG) (CP18-512)
M. Sabine Pass, LA: NA Bcfd (Sabine Pass Liquefaction) (CP19-11)
N. Coos Bay, OR: 1.08 Bcfd (Jordan Cove) (CP17-494)
O. Nikiski, AK: 2.63 Bcfd (Alaska Gasline) (CP17-178)

MARAD/USCG – APPROVED, NOT UNDER CONSTRUCTION
MC. Gulf of Mexico: 1.8 Bcfd (Delfin LNG)

CANADA - LNG IMPORT AND PROPOSED EXPORT FACILITIES
https://www.nrcan.gc.ca/energy/natural-gas/5683

NORTH AMERICAN LNG IMPORT/EXPORT TERMINALS – *EXISTING* (24)



★ Authorized to re-export delivered LNG
★ Added liquefaction and export capabilities

Import Terminals (Shown on Map)

UNITED STATES As of September 17, 2020
1. Everett, MA: 1.035 Bcfd (GDF SUEZ - DOMAC)
2. Cove Point, MD: 1.8 Bcfd (Dominion - Cove Point LNG) ★
3. Elba Island, GA: 1.6 Bcfd (El Paso - Southern LNG) ★
4. Lake Charles, LA: 2.1 Bcfd (Southern Union – Corpus Christi LNG) ★
5. Offshore MA: 0.8 Bcfd (Excelerate Energy – Northeast Gateway)
6. Freeport, TX: 1.5 Bcfd (Cheniere/Freeport LNG Dev.) ★★
7. Sabine, LA: 4.0 Bcfd (Cheniere/Sabine Pass LNG) ★★
8. Hackberry, LA: 1.8 Bcfd (Sempra - Cameron LNG) ★
9. Offshore MA: 0.4 Bcfd (GDF SUEZ – Neptune LNG)
10. Sabine Pass, TX: 2.0 Bcfd (ExxonMobil – Golden Pass) (Phase I & II)
11. Pascagoula, MS: 1.5 Bcfd (El Paso/Crest/Sonangol - Gulf LNG Energy)
12. Peñuelas, PR: 0.3 Bcfd (EcoElectrica)

CANADA
C1. Saint John, NB: 1.0 Bcfd (Repsol/Fort Reliance - Canaport LNG)

MEXICO
M1. Altamira, Tamulipas: 0.7 Bcfd (Shell/Total/Mitsui – Altamira LNG)
M2. Baja California, MX: 1.0 Bcfd (Sempra – Energia Costa Azul)
M3. Manzanillo, MX: 0.5 Bcfd (KMS GNL de Manzanillo)

Export Terminals (Not Shown on Map)

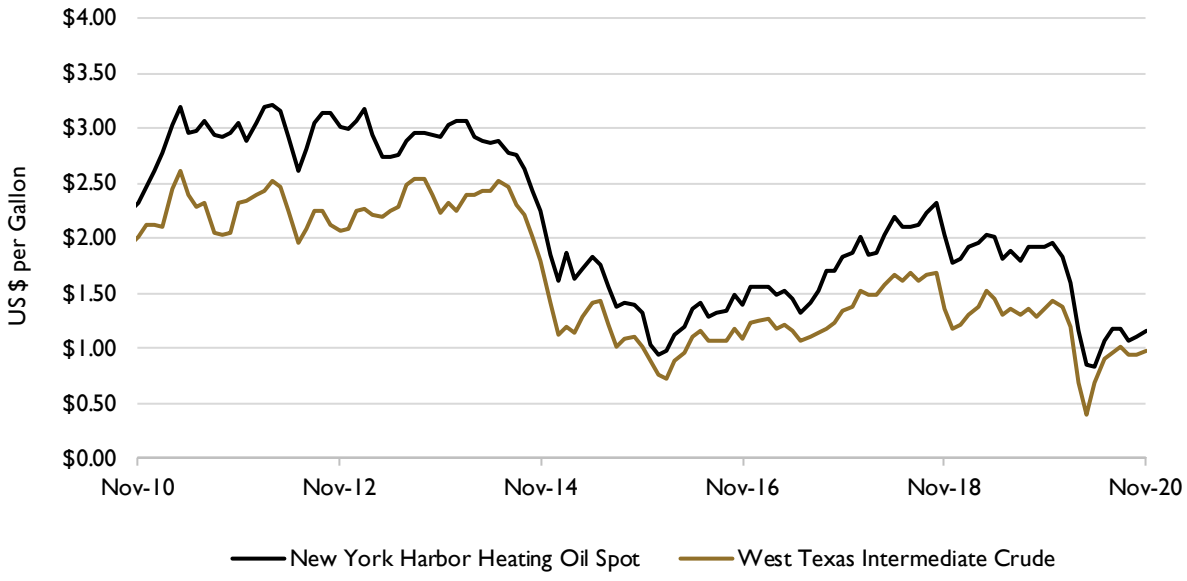
UNITED STATES As of September 17, 2020

1. Kenai, AK: 0.2 Bcfd (Trans-Foreland)
2. Sabine, LA: 3.5 Bcfd (Cheniere/Sabine Pass LNG – Trains 1-5)
3. Cove Point, MD: 0.82 Bcfd (Dominion–Cove Point LNG)
4. Corpus Christi, TX: 1.44 Bcfd (Cheniere – Corpus Christi LNG Trains 1, 2)
5. Hackberry, LA: 2.15 Bcfd (Sempra–Cameron LNG, Trains 1-3)
6. Elba Island, GA: 350 MMcfd (Southern LNG Company Units 1-10)
7. Freeport, TX: 2.13 Bcfd (Freeport LNG Dev/Freeport LNG Expansion/FLNG Liquefaction Trains 1-3)

DATA CENTER

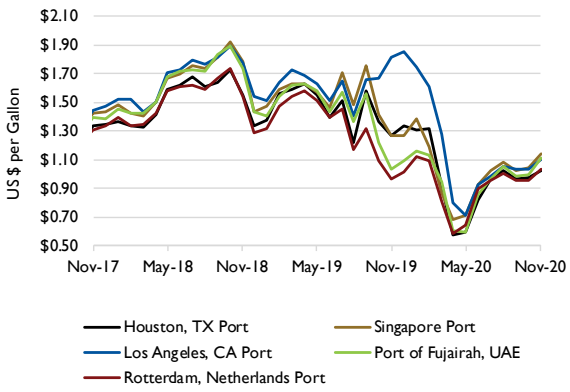
PROPANE AND HEATING/FUEL OIL

HEATING OIL PRICES (MONTHLY AVERAGE) (25)

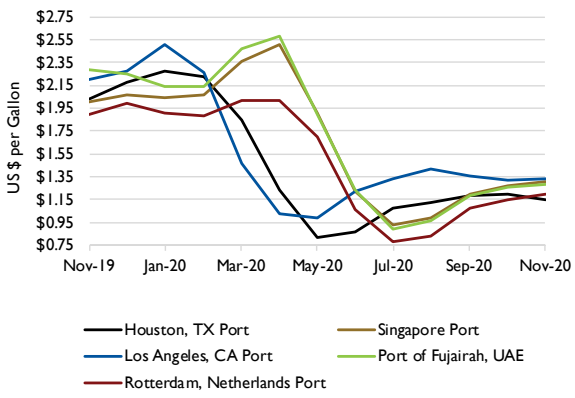


INTERMEDIATE FUEL OIL AKA "BUNKER FUEL" PRICES (MONTHLY AVERAGE) (26)

Intermediate Fuel Oil 380



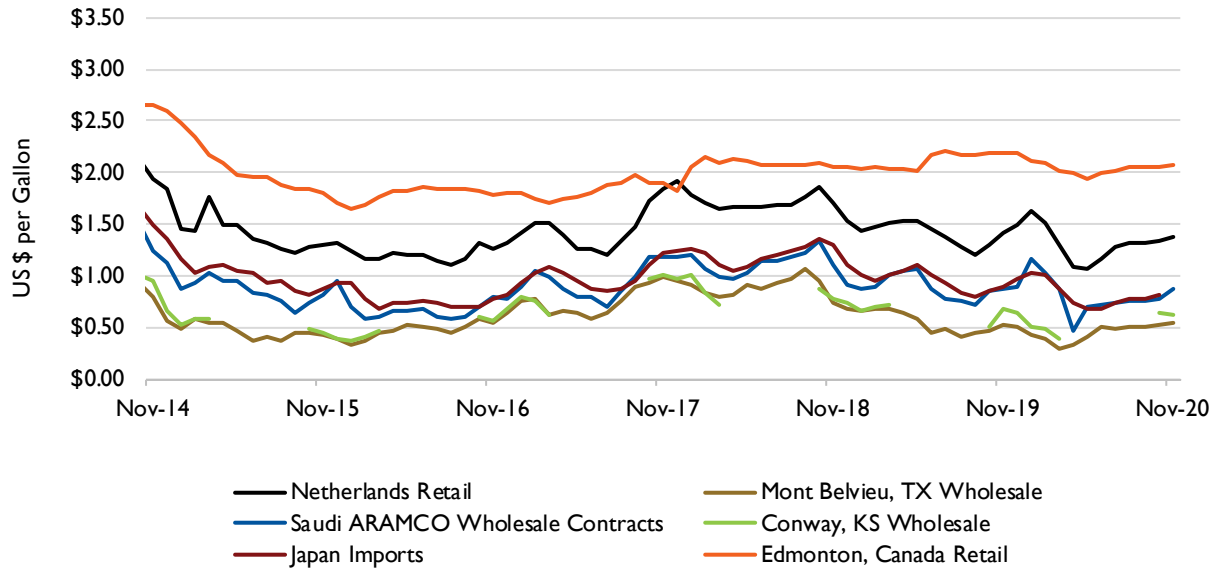
Very Low Sulfur Fuel Oil (VLSFO)



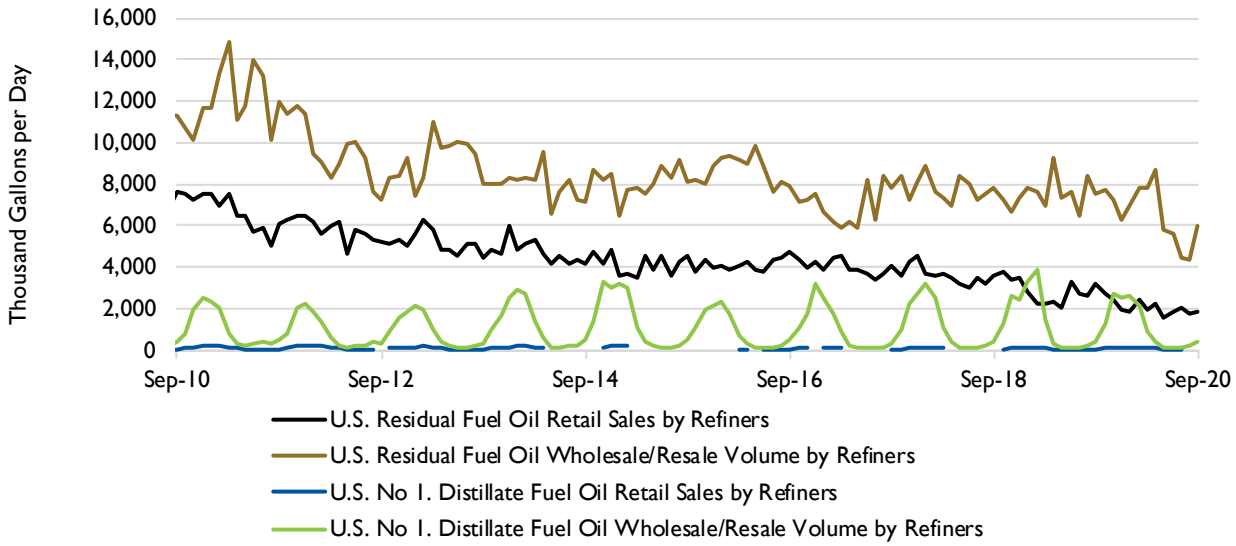
DATA CENTER

PROPANE AND HEATING/FUEL OIL

PROPANE PRICES (MONTHLY AVERAGE) (27)



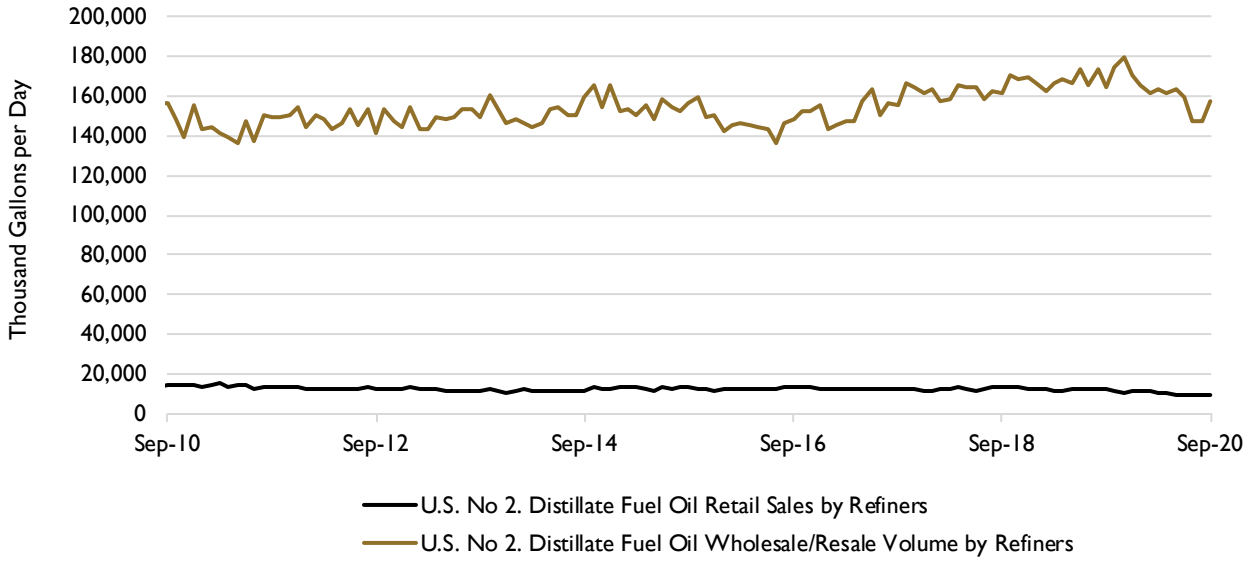
NO. 1 DISTILLATE FUEL OIL, RESIDUAL FUEL OIL WHOLESALE, RETAIL SALES VOLUME BY REFINERS (MONTHLY) (28)



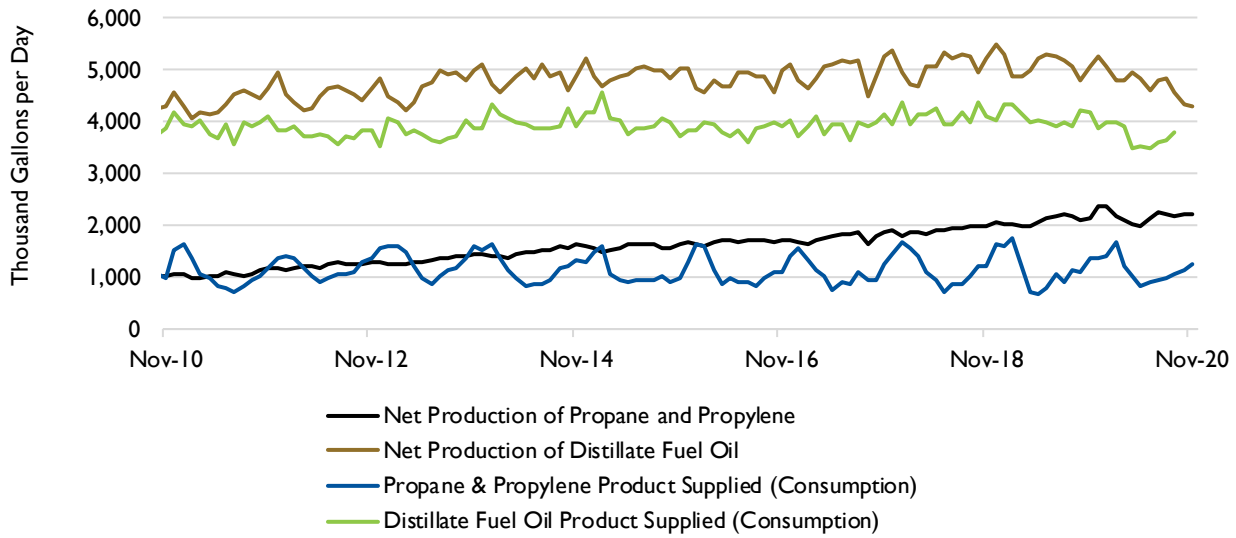
DATA CENTER

PROPANE AND HEATING/FUEL OIL

No. 2 Distillate Fuel Oil Wholesale, Retail Sales Volume by Refiners (Monthly) (29)



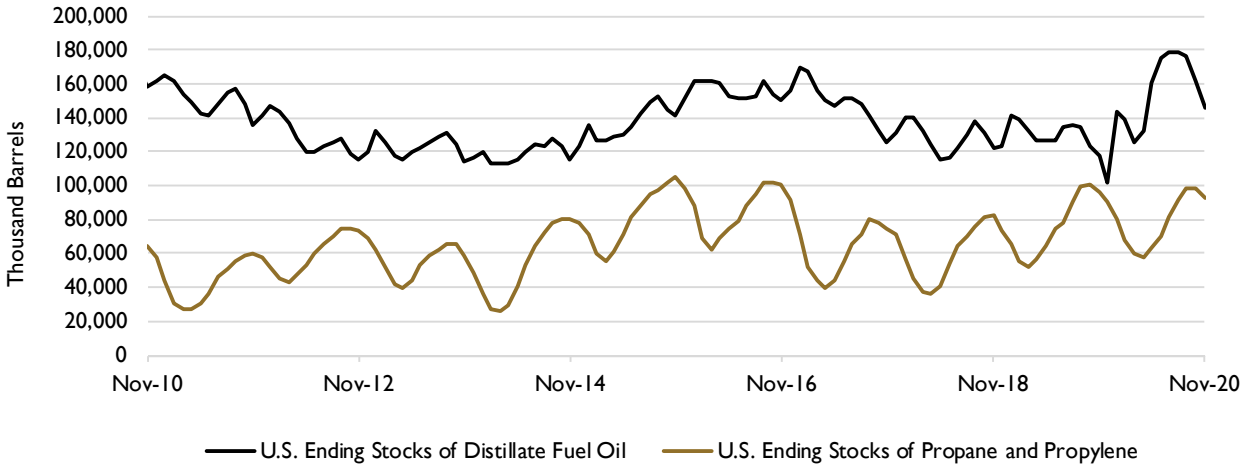
Propane & Propylene and Distillate Fuel Oil Production and Consumption (Monthly) (30)



DATA CENTER

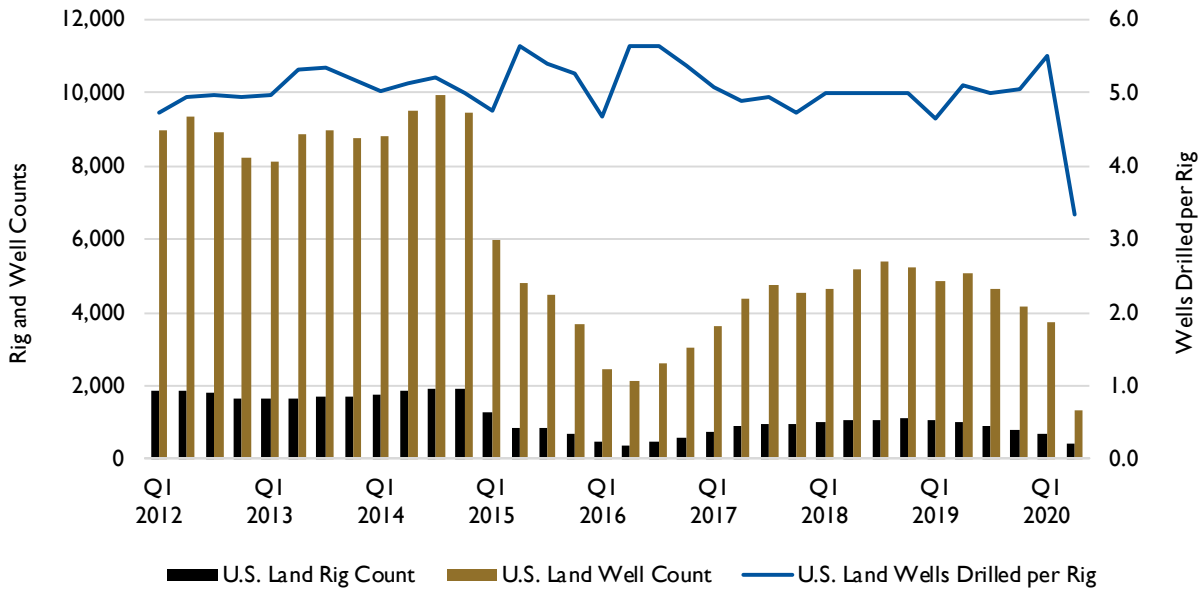
PROPANE AND HEATING/FUEL OIL

U.S. Ending Stocks of Propane & Propylene and Distillate Fuel Oil (Monthly Average) (31)



DRILLING ACTIVITY

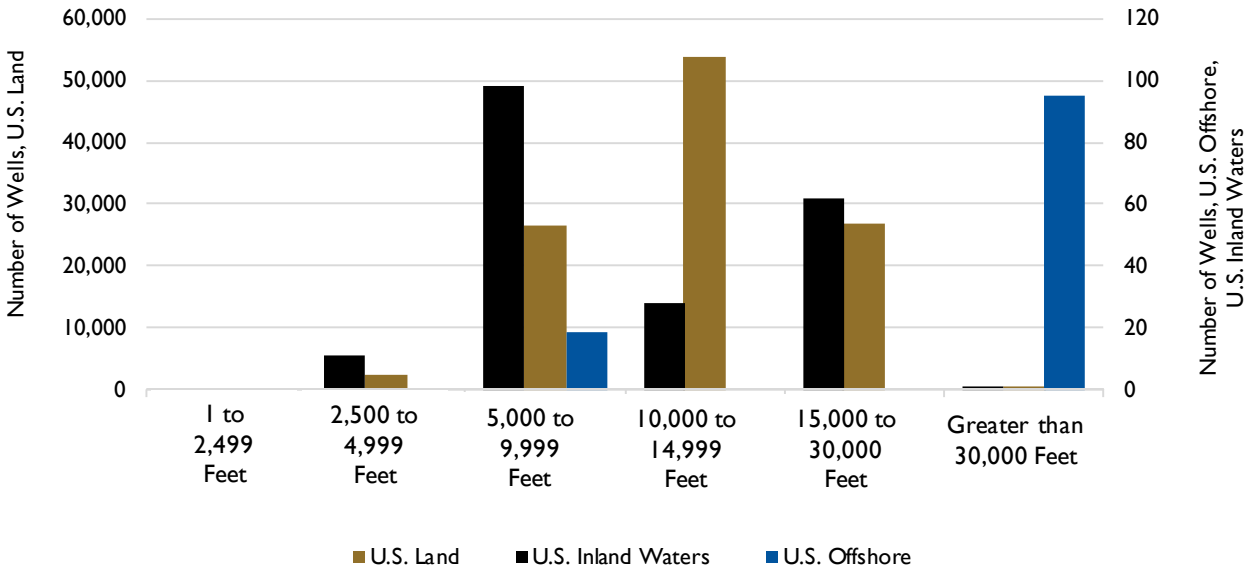
U.S. Land Well Count, Rig Count and Wells per Rig (Quarterly) (32)



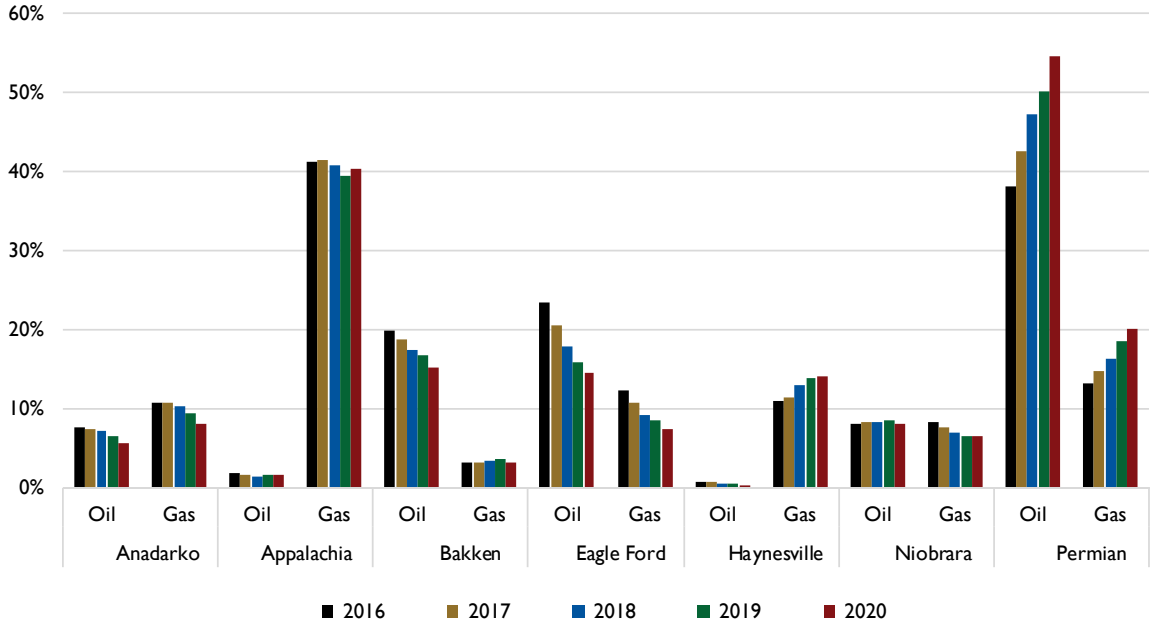
DATA CENTER

DRILLING ACTIVITY

U.S. WELL STARTS BY DEPTH (YEAR TO DATE DECEMBER 31, 2020) (33)



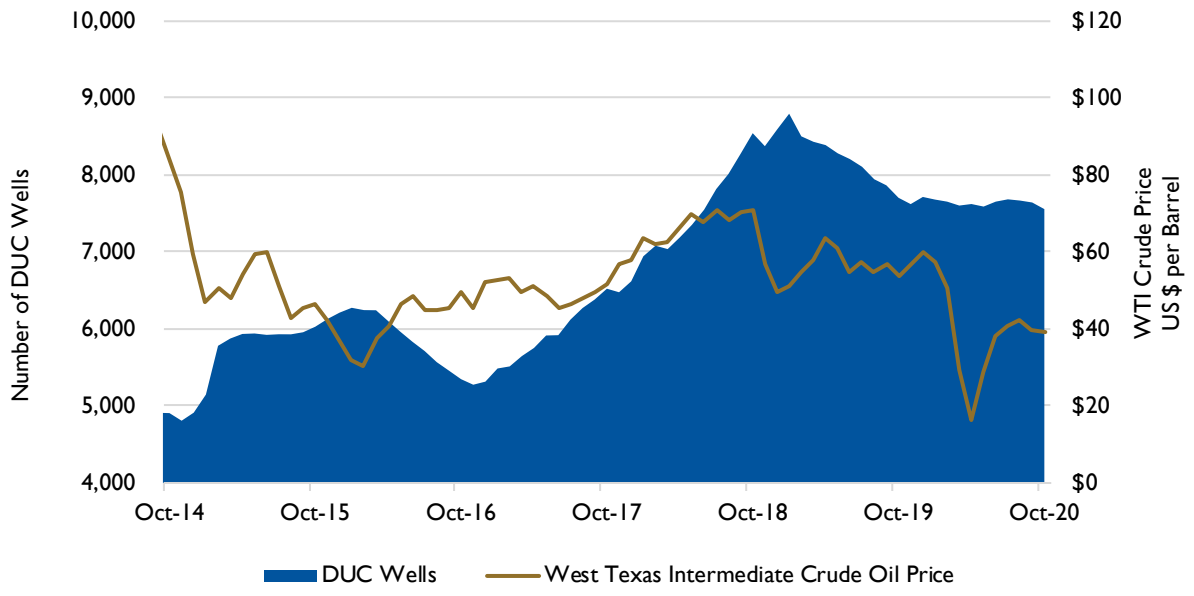
PERCENTAGE OF CRUDE OIL AND NATURAL GAS PRODUCTION PER SHALE REGION (ANNUAL) (34)



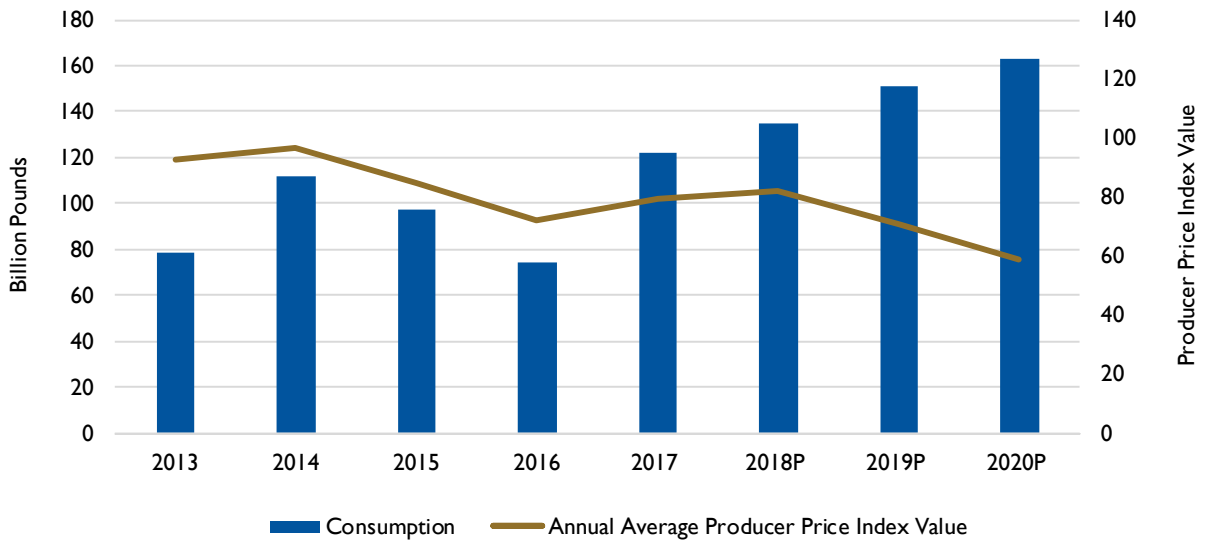
DATA CENTER

DRILLING ACTIVITY

DRILLED BUT UNCOMPLETED (DUC) WELLS VS. CRUDE OIL PRICE (MONTHLY) (35)



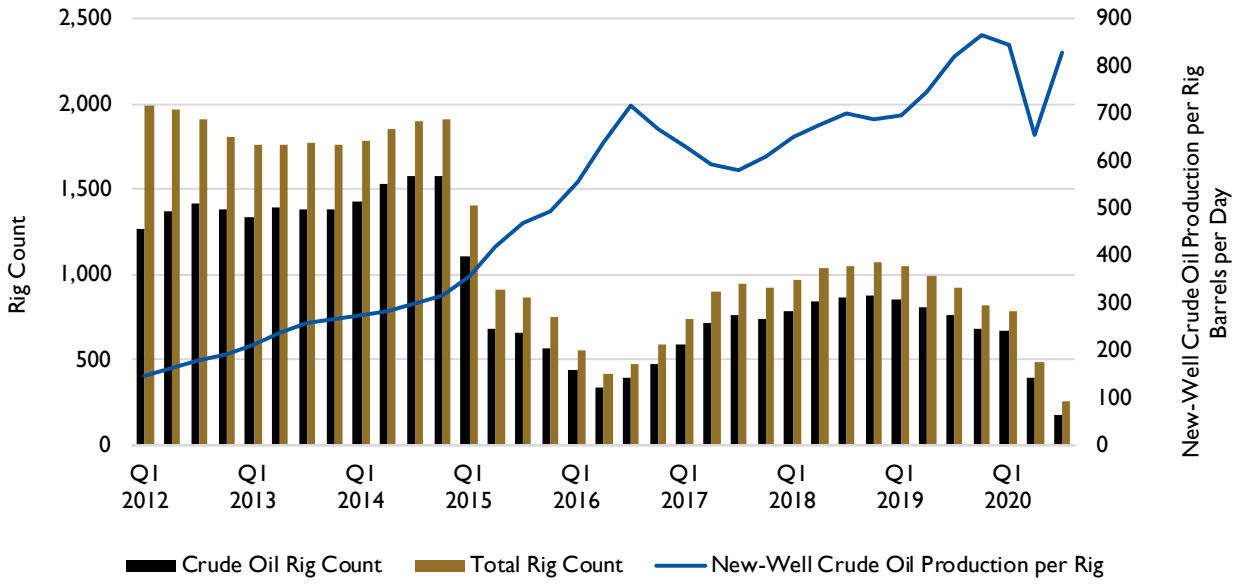
HYDRAULIC FRACTURING SAND CONSUMPTION AND PRODUCER PRICE INDEX (ANNUAL) (36)



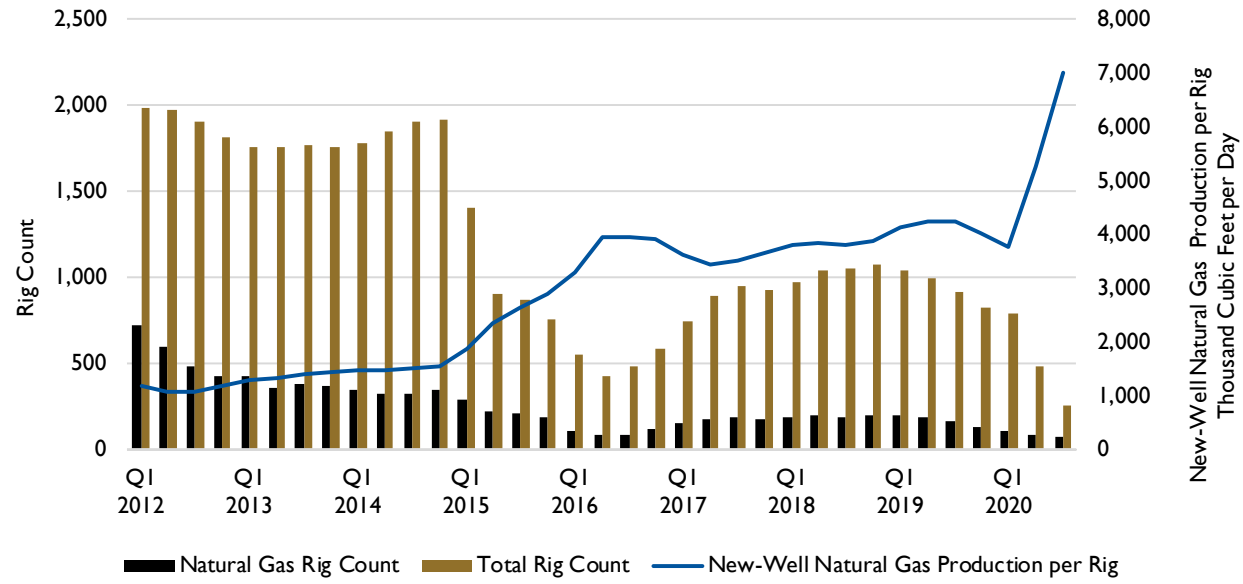
DATA CENTER

DRILLING ACTIVITY

CRUDE OIL PRODUCTION, RIG COUNT AND PRODUCTION PER RIG (QUARTERLY) (37)



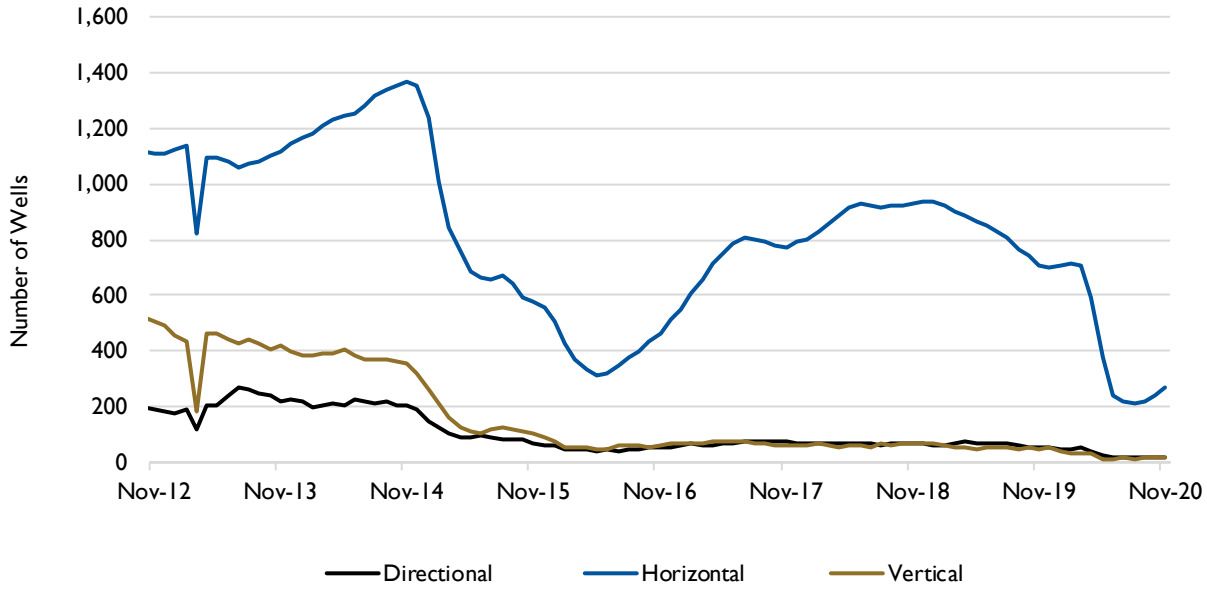
NATURAL GAS PRODUCTION, RIG COUNT AND PRODUCTION PER RIG (QUARTERLY) (38)



DATA CENTER

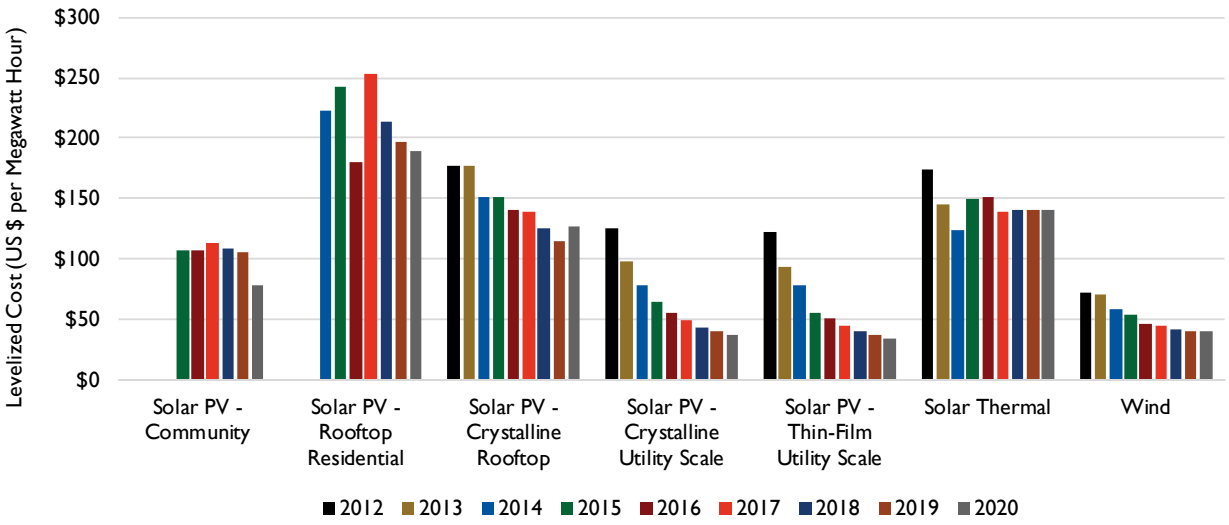
DRILLING ACTIVITY

U.S. DRILLING RIGS BY TYPE (MONTHLY) (39)



RENEWABLES

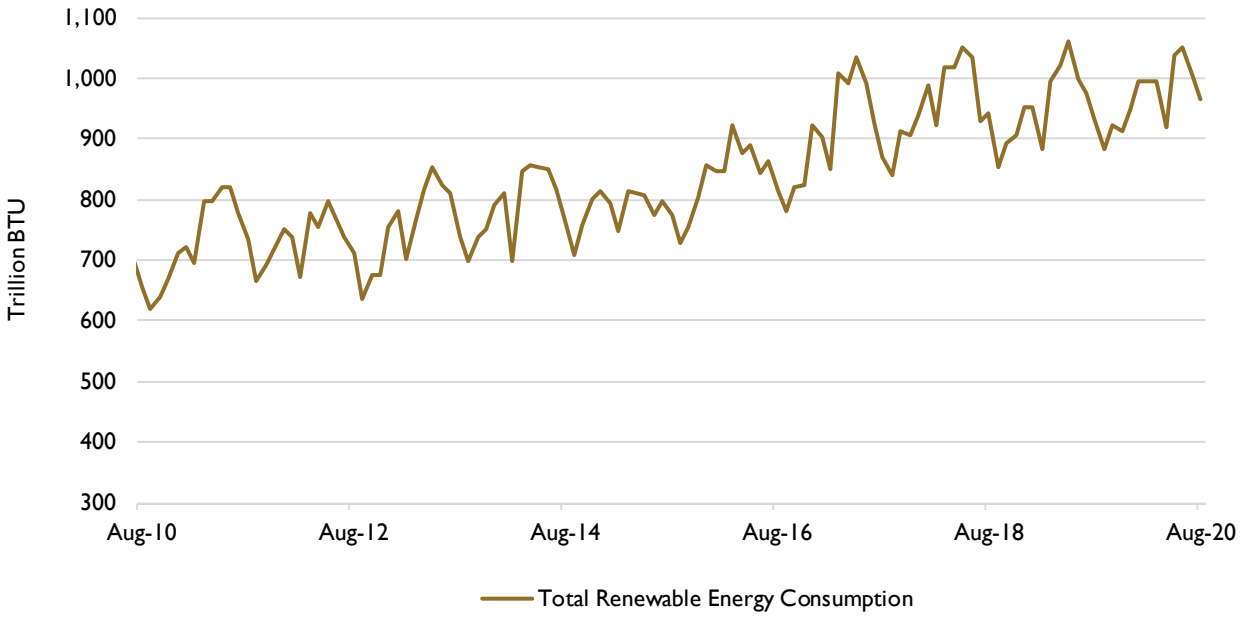
WIND AND SOLAR PRICES (ANNUAL AVERAGE) (40)



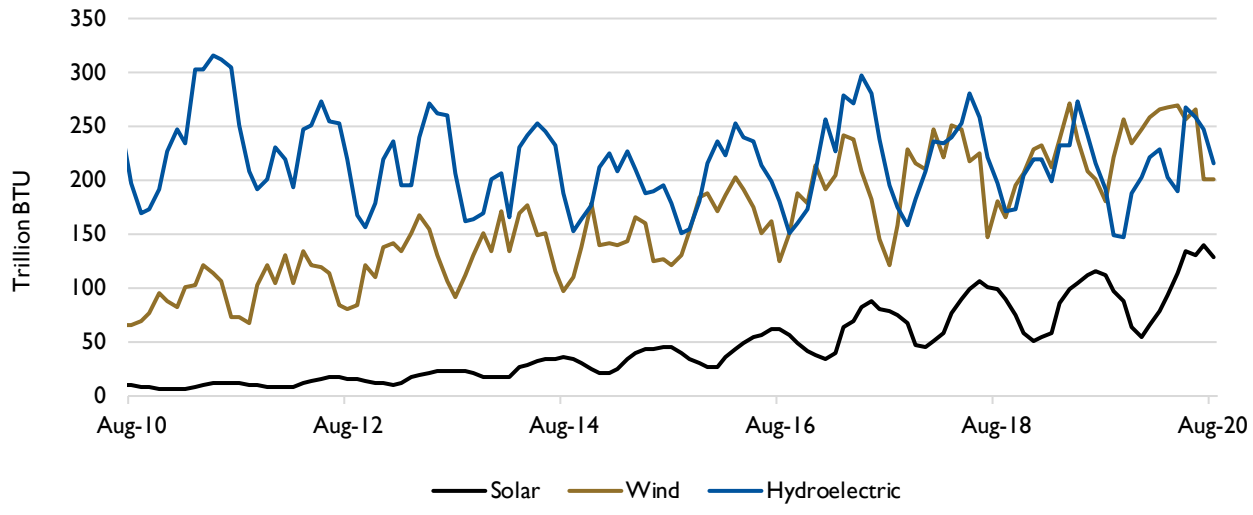
DATA CENTER

RENEWABLES

U.S. TOTAL RENEWABLE ENERGY CONSUMPTION (MONTHLY) (41)



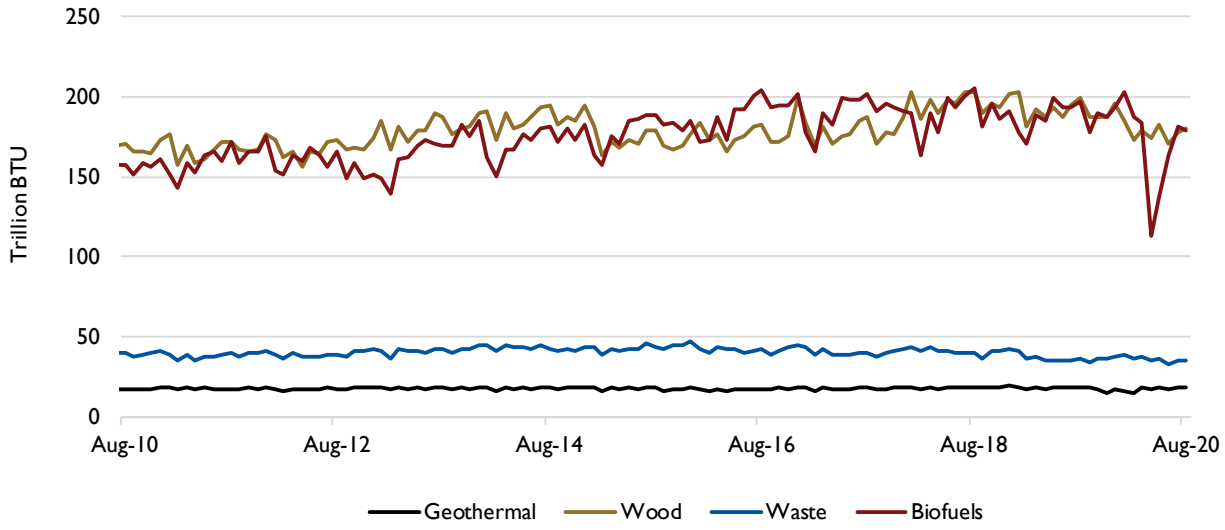
U.S. SOLAR, WIND AND HYRDOELECTRIC ENERGY CONSUMPTION (MONTHLY) (42)



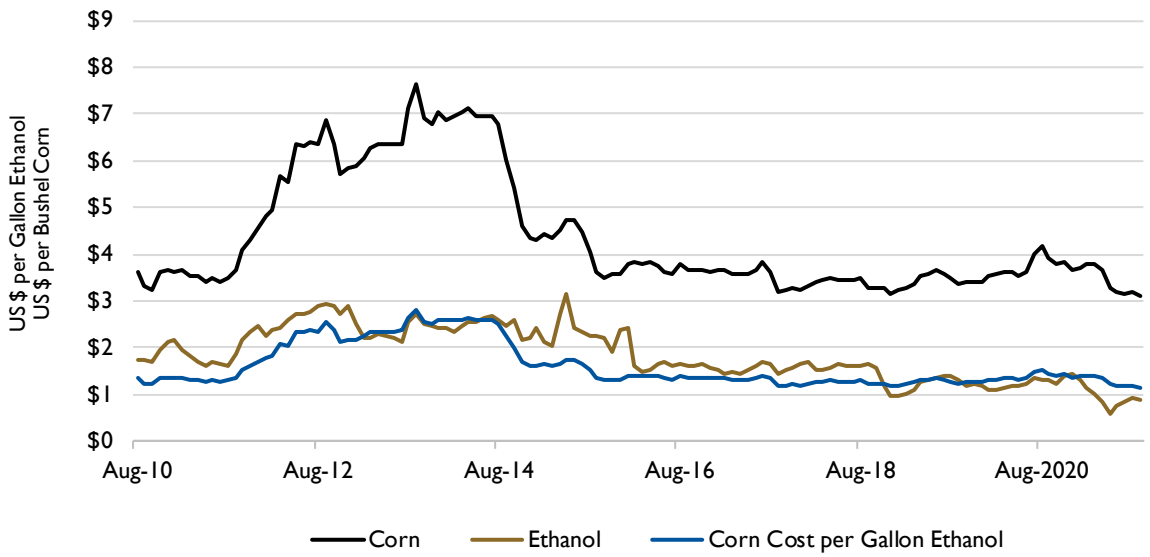
DATA CENTER

RENEWABLES

U.S. WOOD, WASTE, BIOFUELS AND GEOTHERMAL ENERGY CONSUMPTION (MONTHLY) (43)



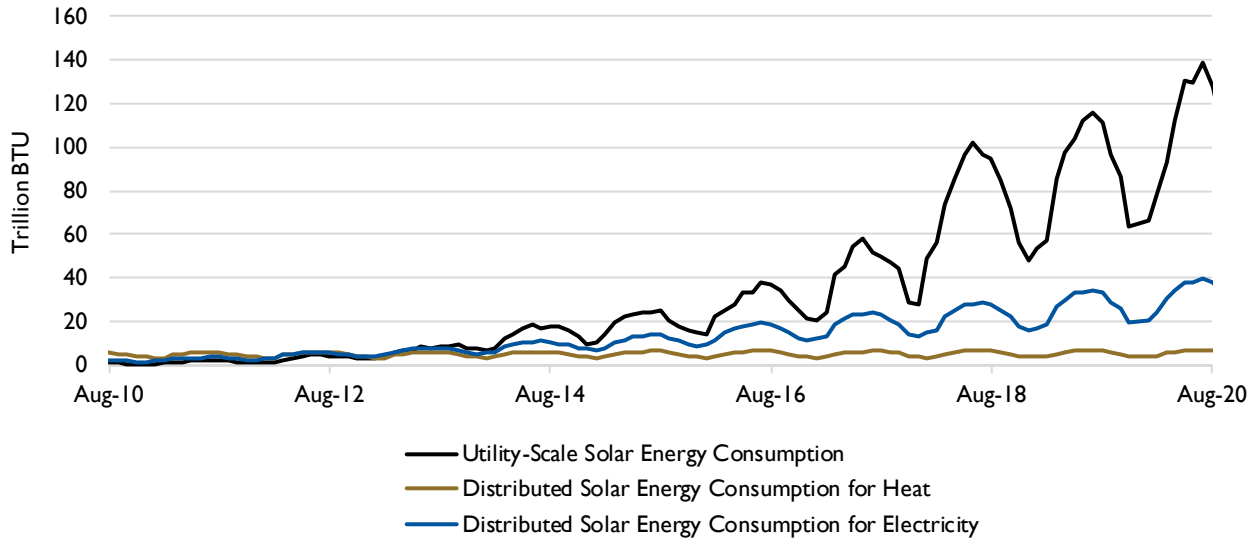
CORN AND ETHANOL PRICES AND CORN COST PER GALLON OF ETHANOL (QUARTERLY) (44)



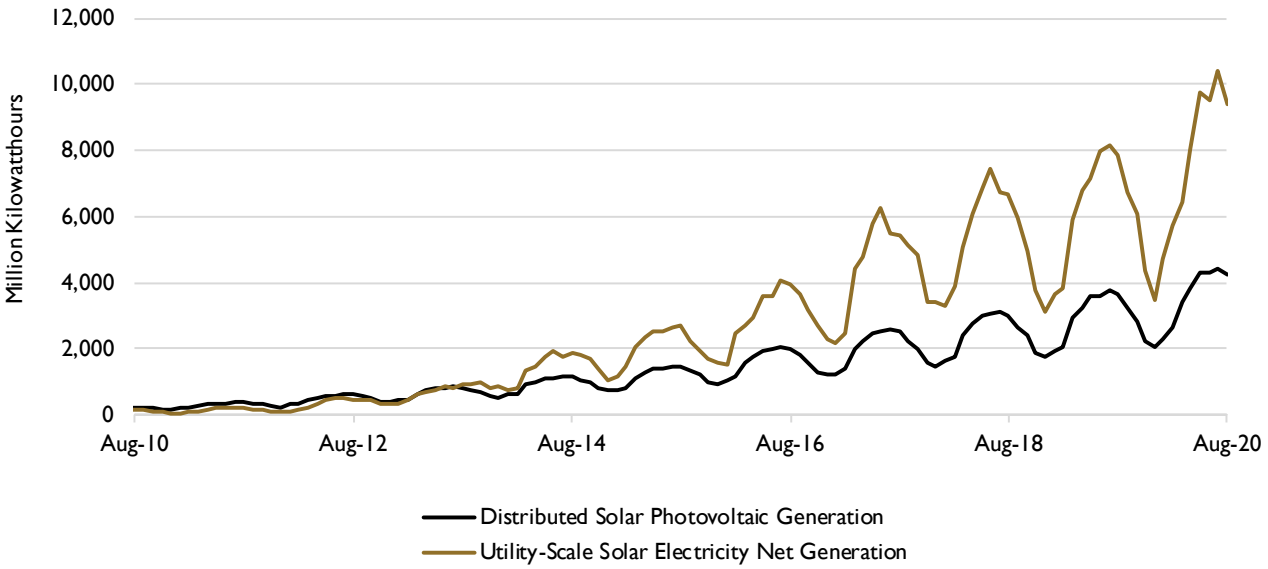
DATA CENTER

RENEWABLES

U.S. Solar Energy Consumption (Monthly) (45)



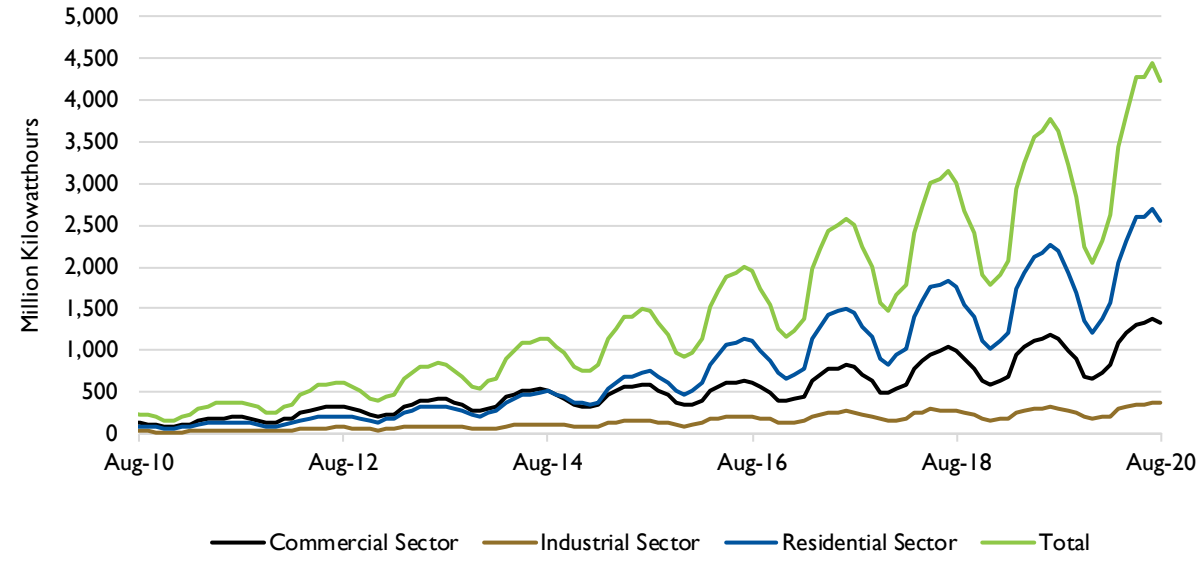
U.S. Solar Energy Net Generation (Monthly) (46)



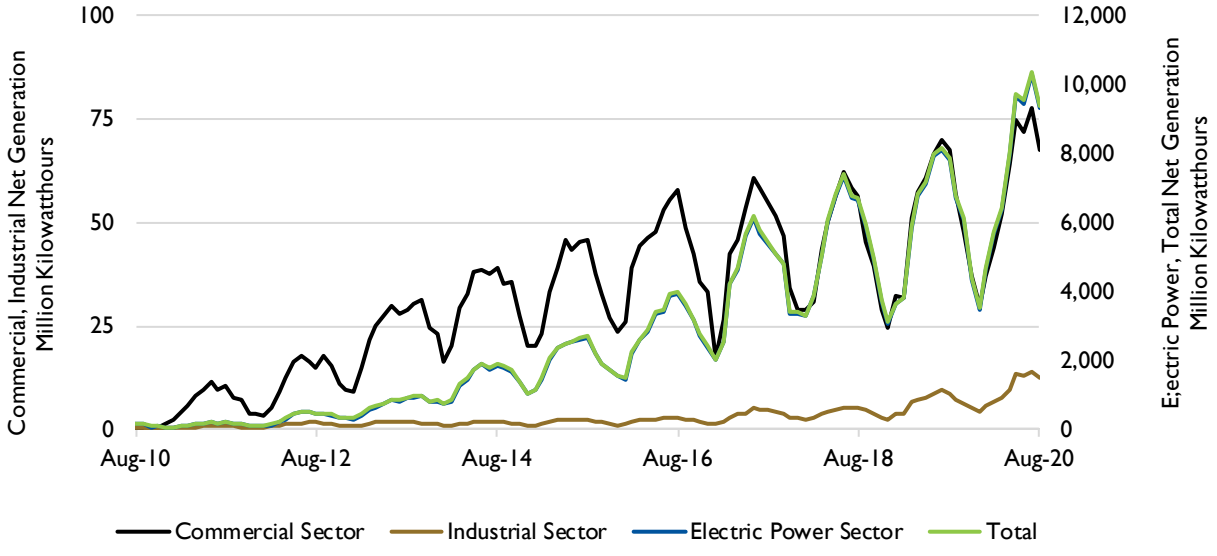
DATA CENTER

RENEWABLES

DISTRIBUTED SOLAR PHOTOVOLTAIC GENERATION BY SECTOR (MONTHLY) (47)



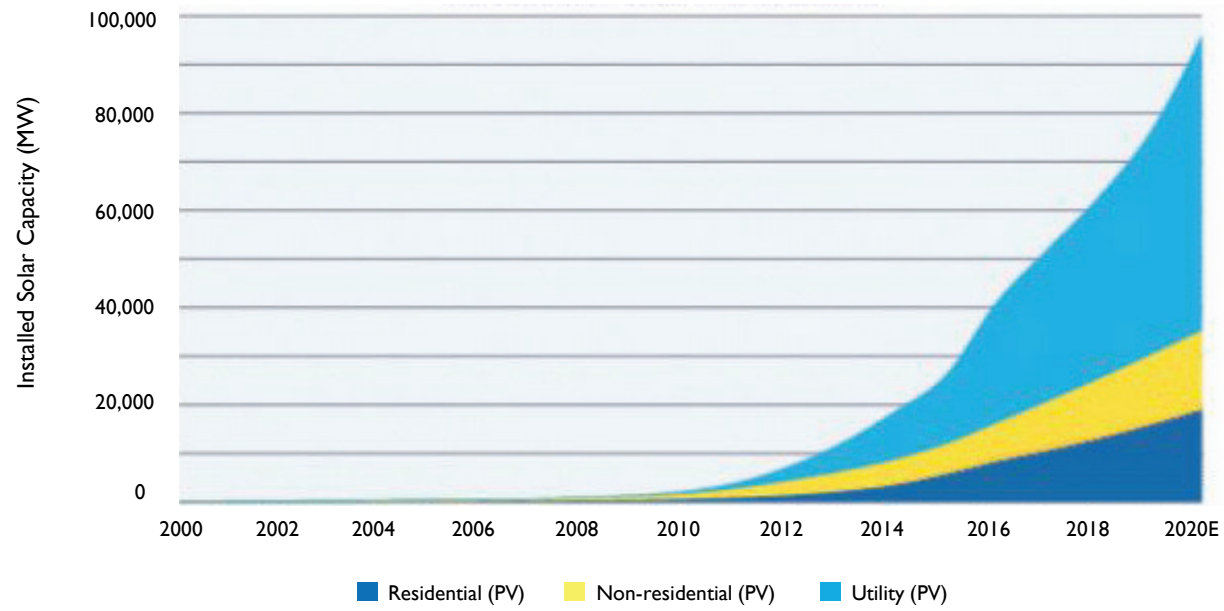
UTILITY-SCALE SOLAR ELECTRICITY NET GENERATION BY SECTOR (MONTHLY) (48)



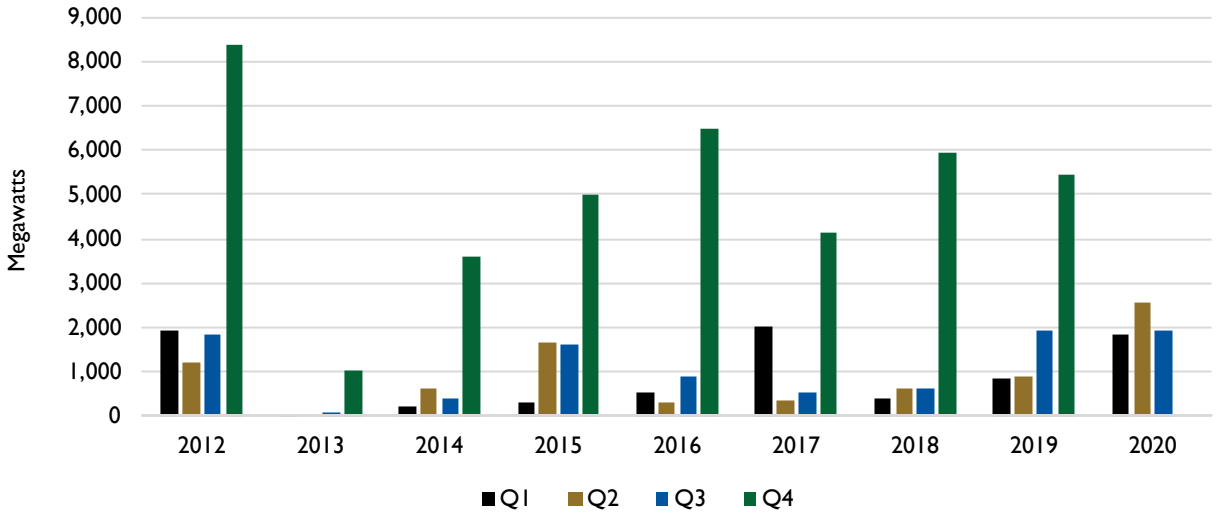
DATA CENTER

RENEWABLES

U.S. Cumulative Solar Installations (Annual) [49]



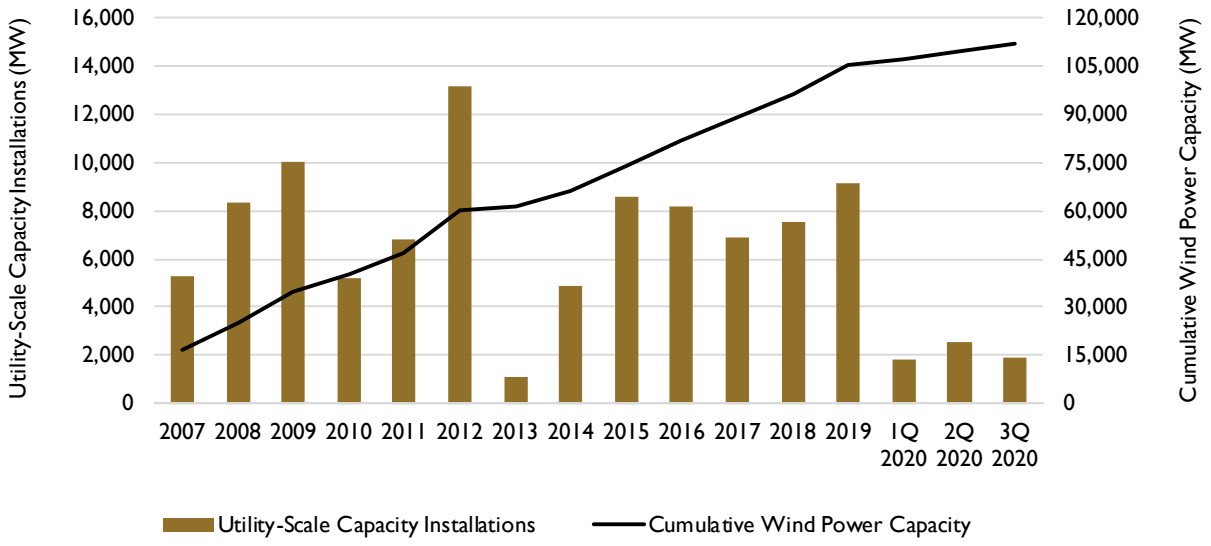
U.S. Wind Power Capacity Installations (Quarterly) [50]



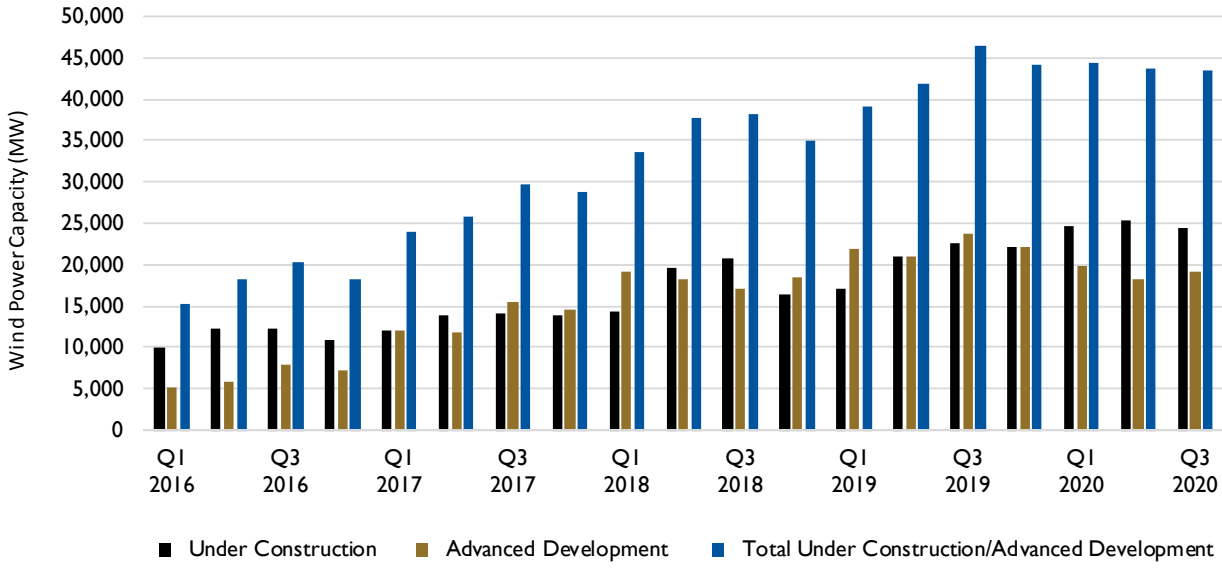
DATA CENTER

RENEWABLES

UTILITY-SCALE WIND POWER CAPACITY INSTALLATIONS (ANNUAL) (51)



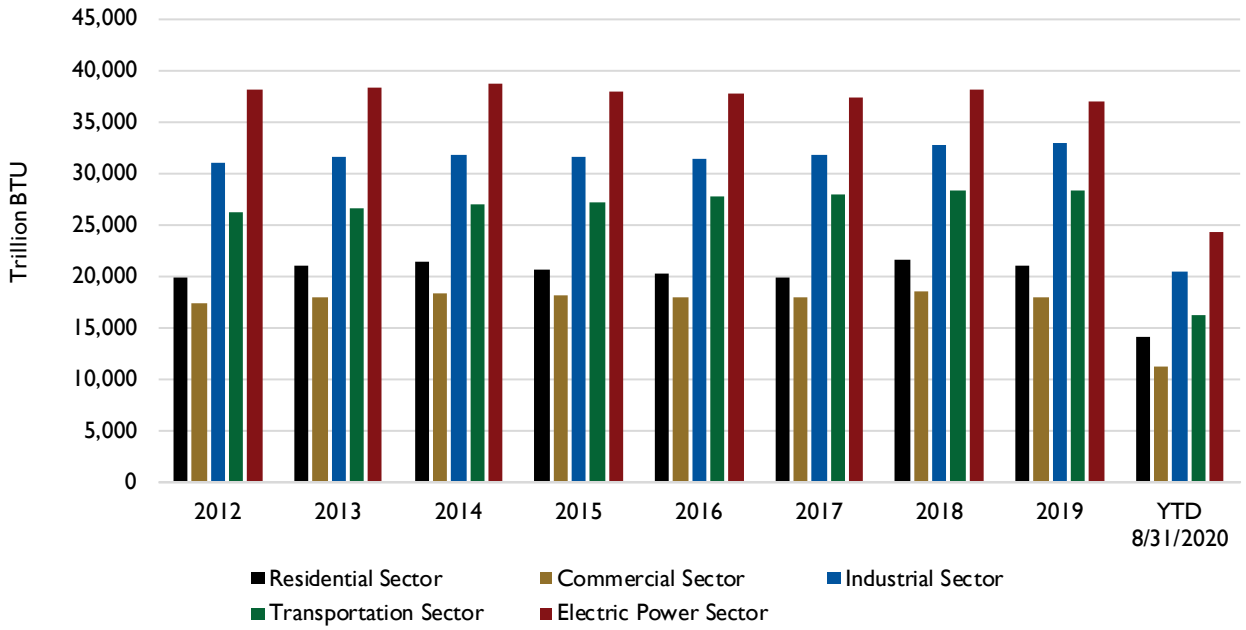
WIND POWER UNDER CONSTRUCTION OR IN ADVANCED DEVELOPMENT (QUARTERLY) (52)



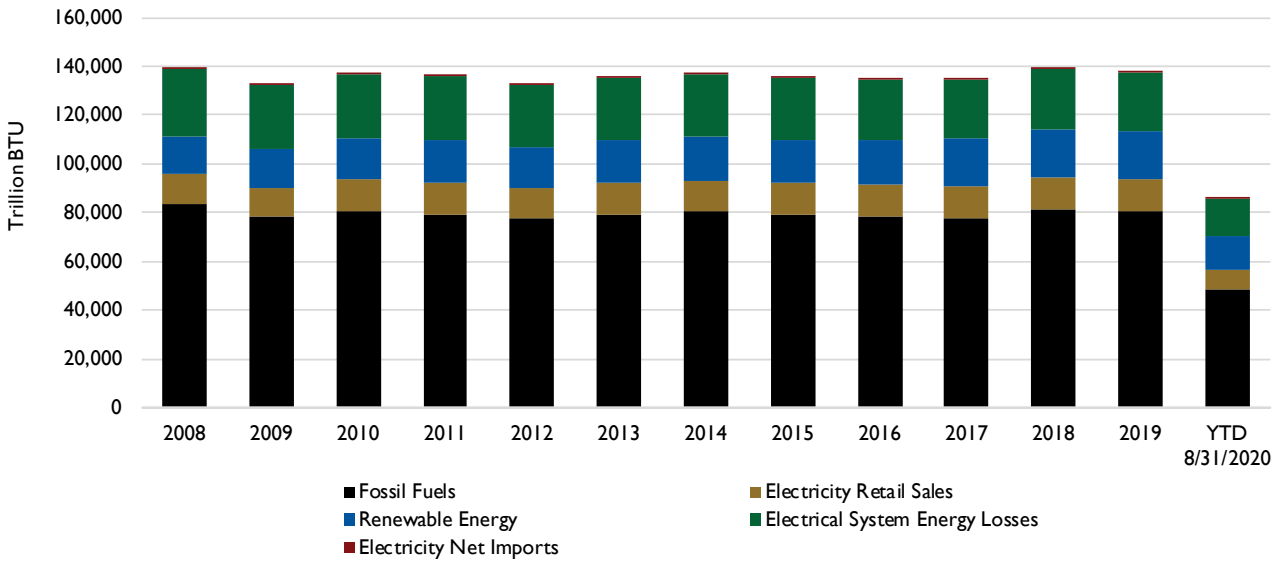
DATA CENTER

U.S. AGGREGATED ENERGY CONSUMPTION

ENERGY CONSUMPTION BY SECTOR (ANNUAL) (53)



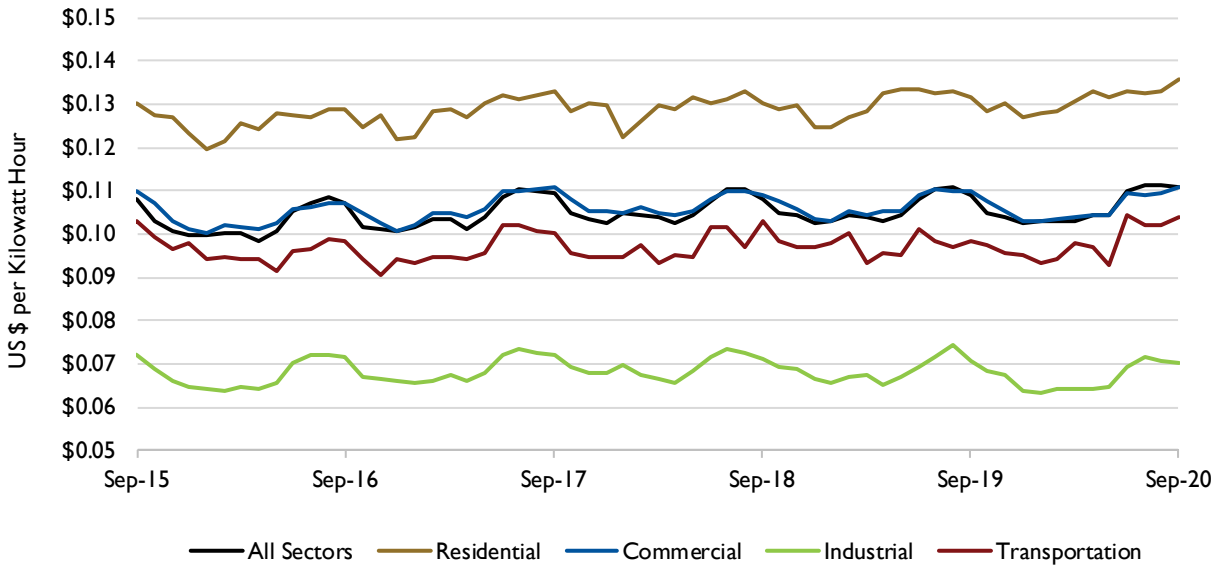
ENERGY CONSUMPTION BY SOURCE (ANNUAL) (54)



DATA CENTER

U.S. AGGREGATED ENERGY CONSUMPTION

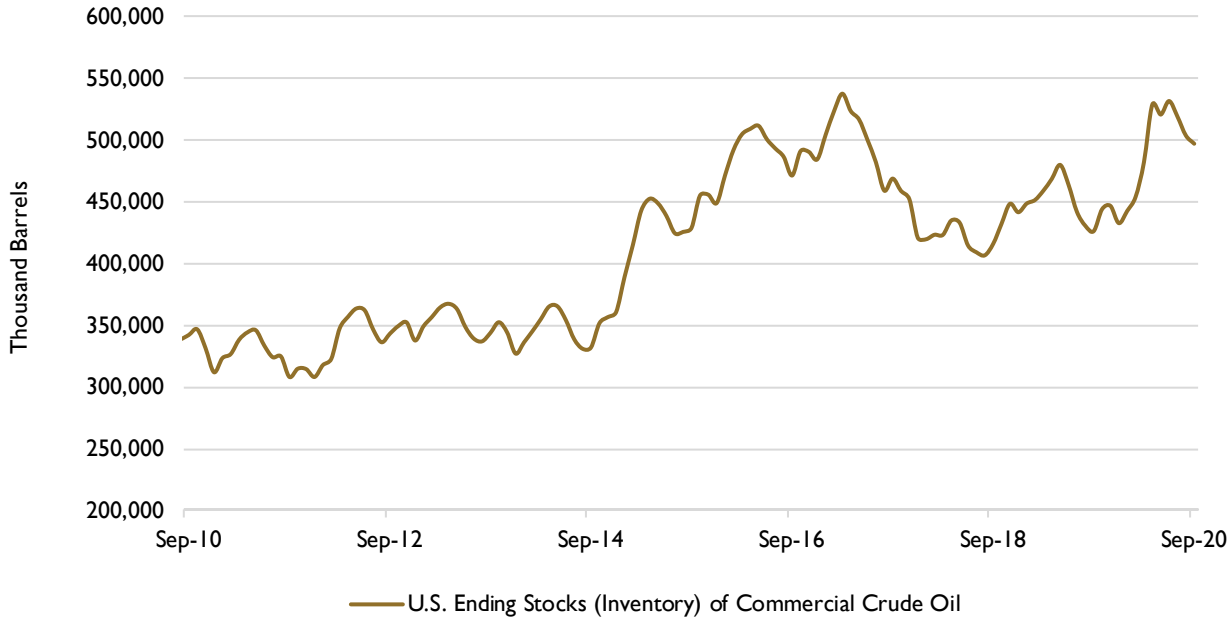
ELECTRICITY PRICES BY SECTOR (MONTHLY AVERAGE) (55)



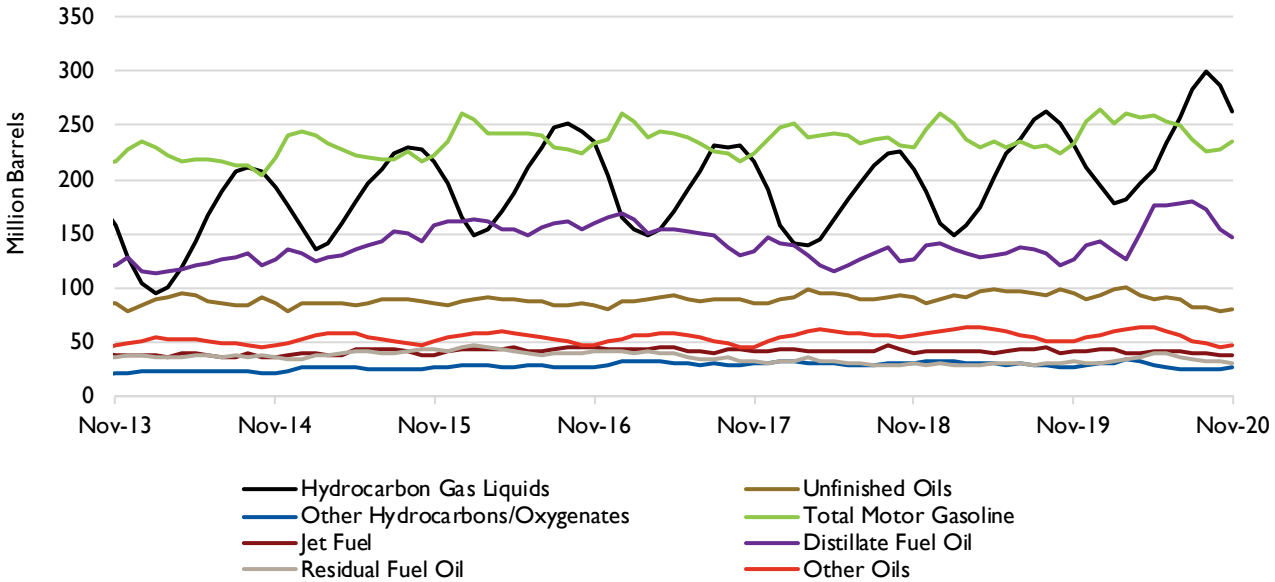
DATA CENTER

LOGISTICS - STORAGE AND TERMINALS

COMMERCIAL CRUDE OIL INVENTORY (MONTHLY) (56)



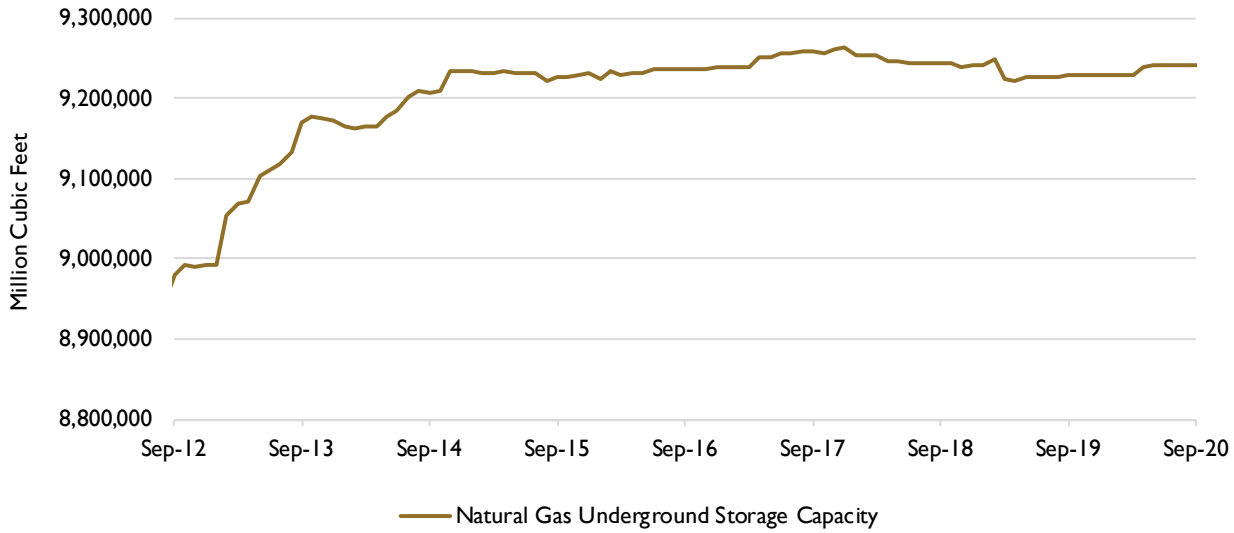
PETROLEUM AND OTHER LIQUIDS COMMERCIAL INVENTORY (MONTHLY) (57)



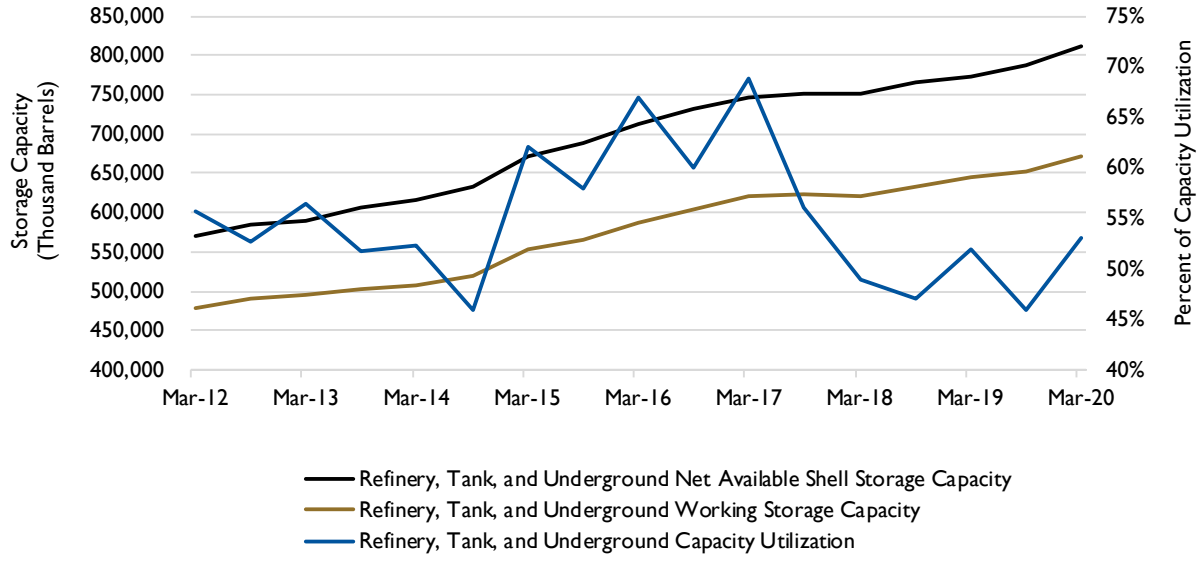
DATA CENTER

LOGISTICS - STORAGE AND TERMINALS

NATURAL GAS UNDERGROUND STORAGE CAPACITY (MONTHLY) (58)



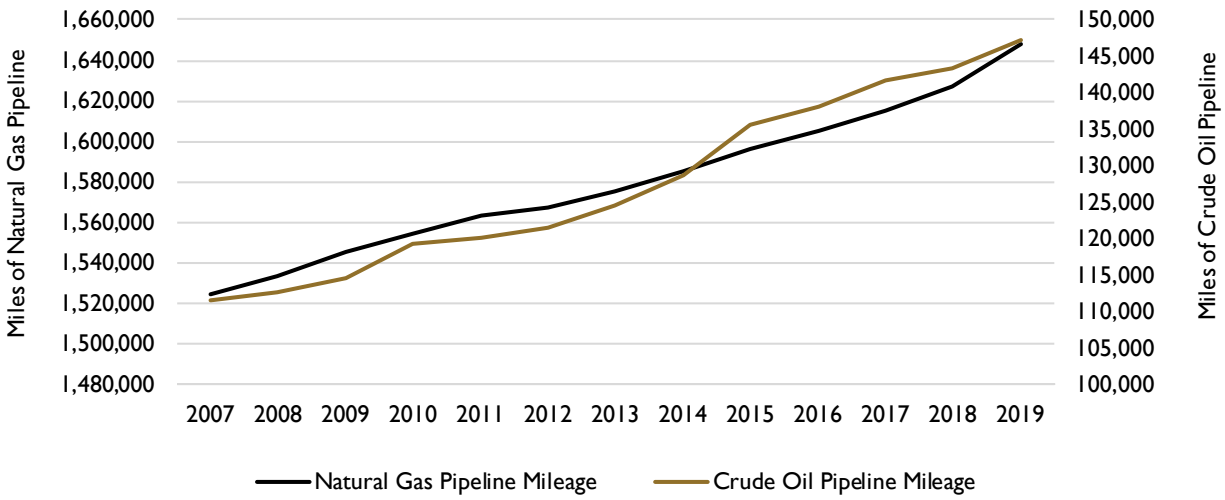
COMMERCIAL CRUDE OIL REFINERY, TANK AND UNDERGROUND STORAGE CAPACITY AND UTILIZATION (ANNUAL) (59)



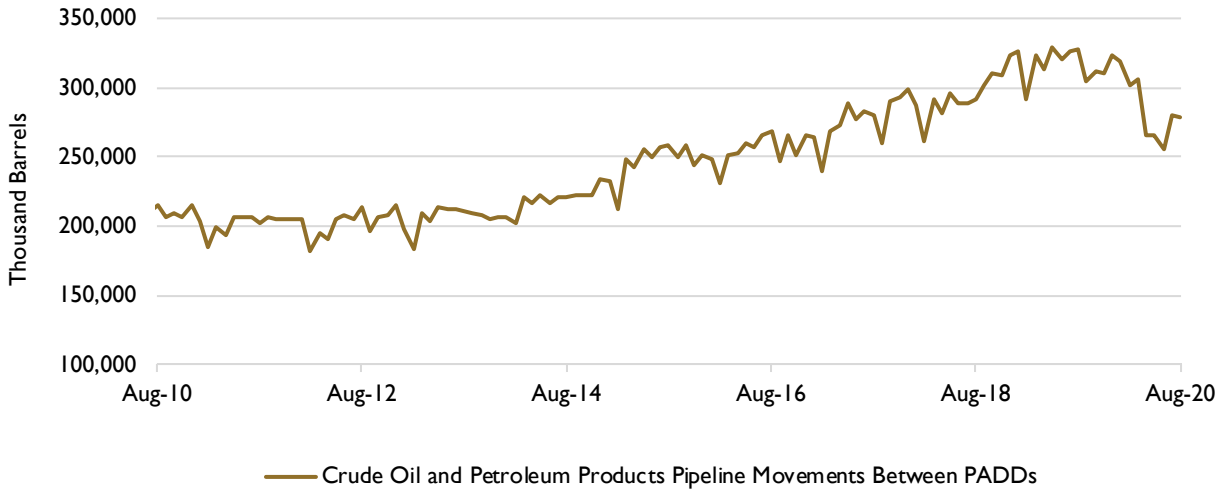
DATA CENTER

LOGISTICS - PIPELINES

Crude Oil and Natural Gas Pipeline Mileage (Annual) (60)



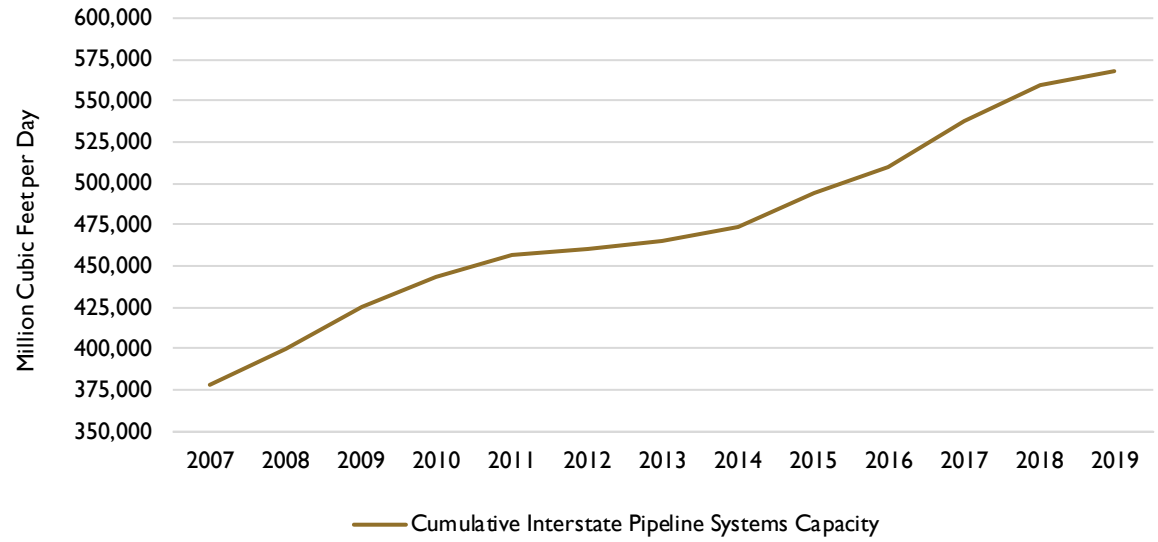
Crude Oil and Petroleum Products Pipeline Movements Between Petroleum Administration for Defense Districts (PADDs) (Monthly) (61)



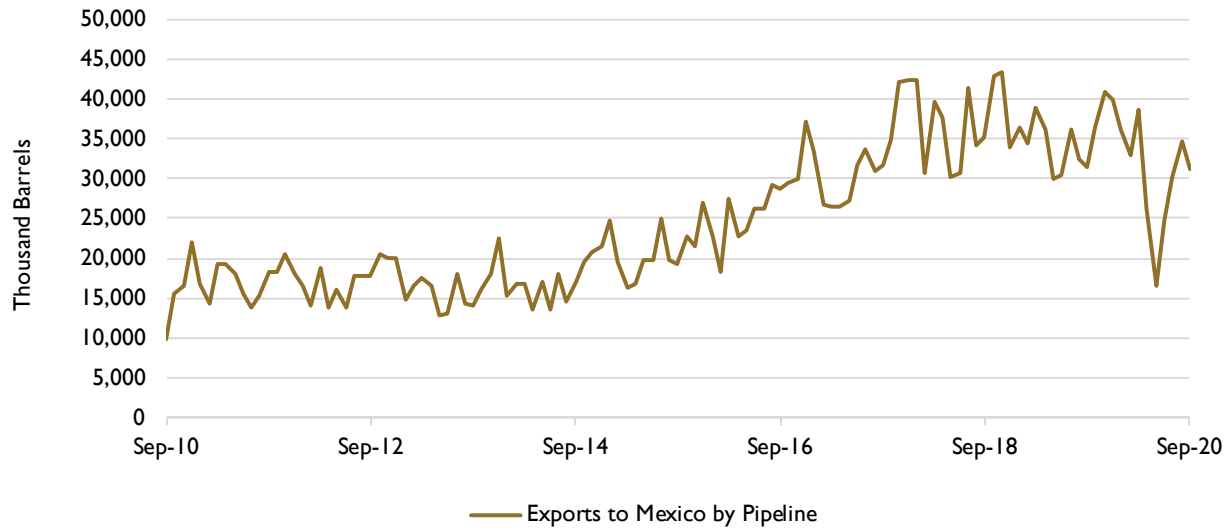
DATA CENTER

LOGISTICS - PIPELINES

NATURAL GAS CUMULATIVE INTERSTATE PIPELINE SYSTEMS CAPACITY (ANNUAL) (62)



CRUDE OIL AND PETROLEUM PRODUCTS EXPORTS TO MEXICO (MONTHLY) (63)

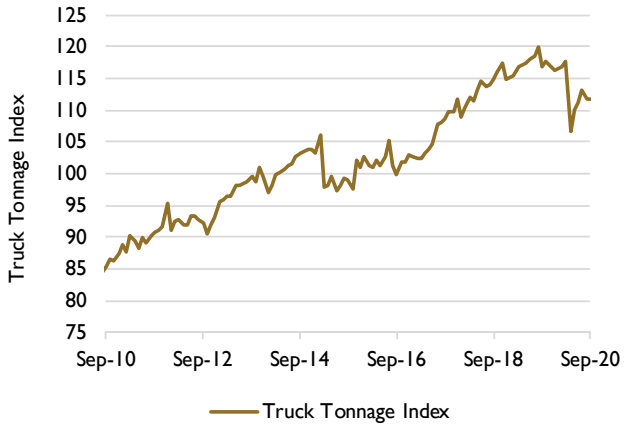


DATA CENTER

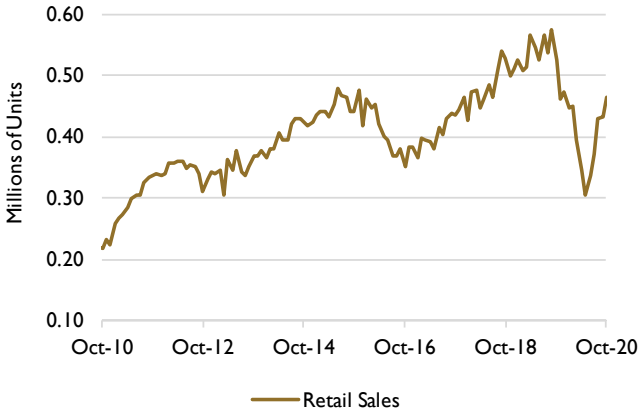
LOGISTICS - TRUCKERS

TRUCK TONNAGE INDEX (MONTHLY) (64)

MEASURES GROSS TONNAGE OF FREIGHT

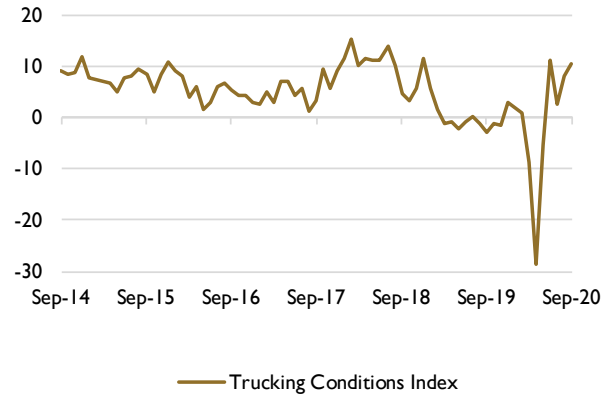


HEAVY TRUCK SALES (MONTHLY) (65)



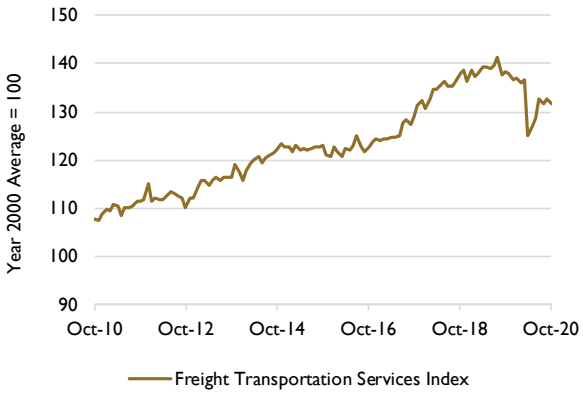
TRUCKING CONDITIONS INDEX (MONTHLY) (66)

INCLUDES FRIGHT VOLUMES, RATES, FLEET CAPACITY, BANKRUPTCIES, FUEL PRICE AND FINANCING



FREIGHT TRANSPORTATION SERVICES INDEX (MONTHLY) (67)

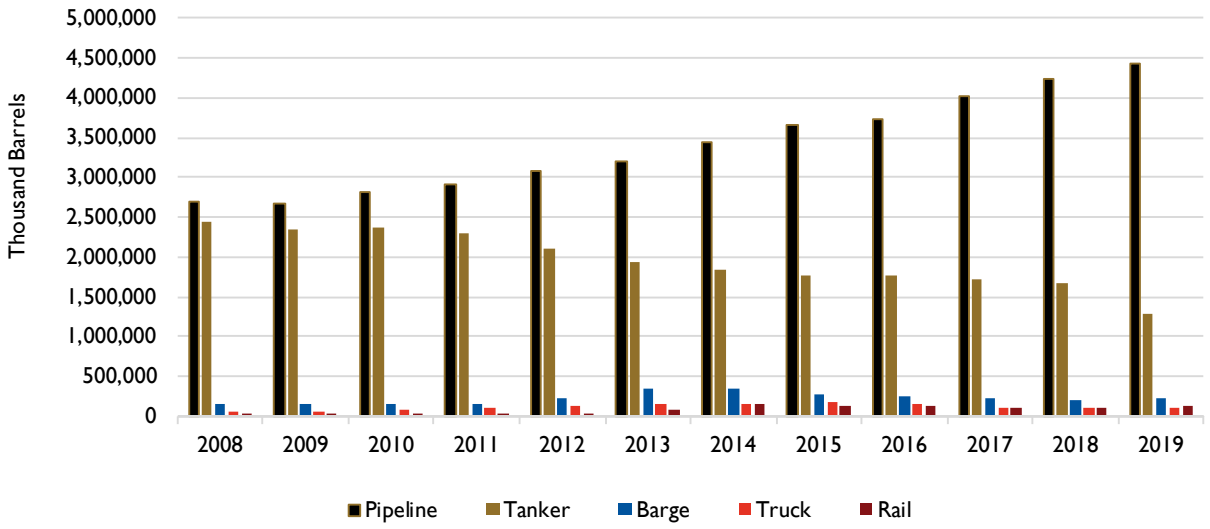
INCLUDES TRUCKING, RAIL, WATERWAYS, PIPELINES AND AIR FRIGHT



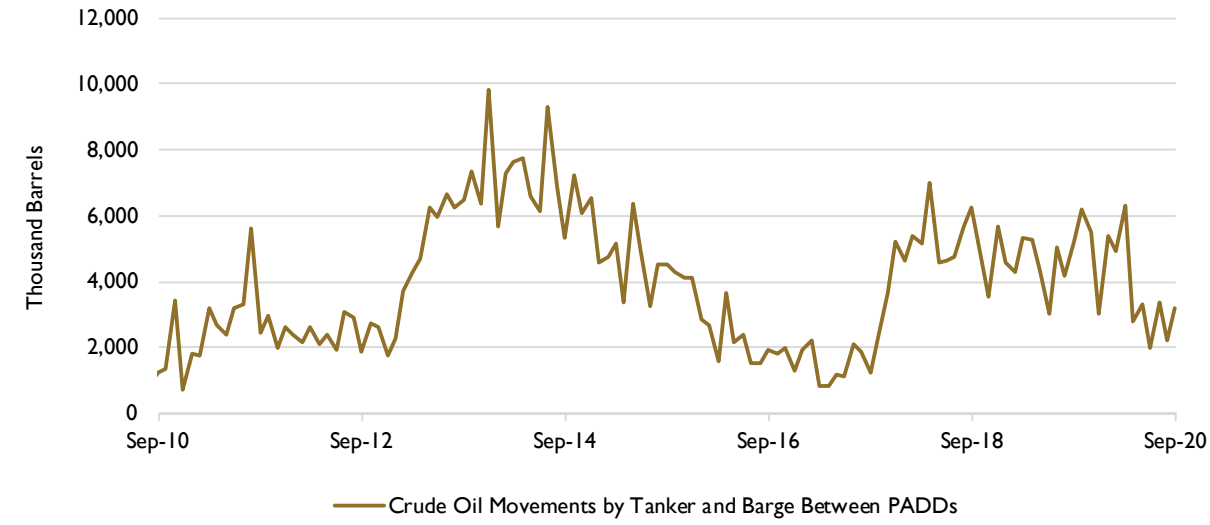
DATA CENTER

LOGISTICS - SHIPPING

Crude Oil Refinery Receipts by Transportation Method (Annual) (68)



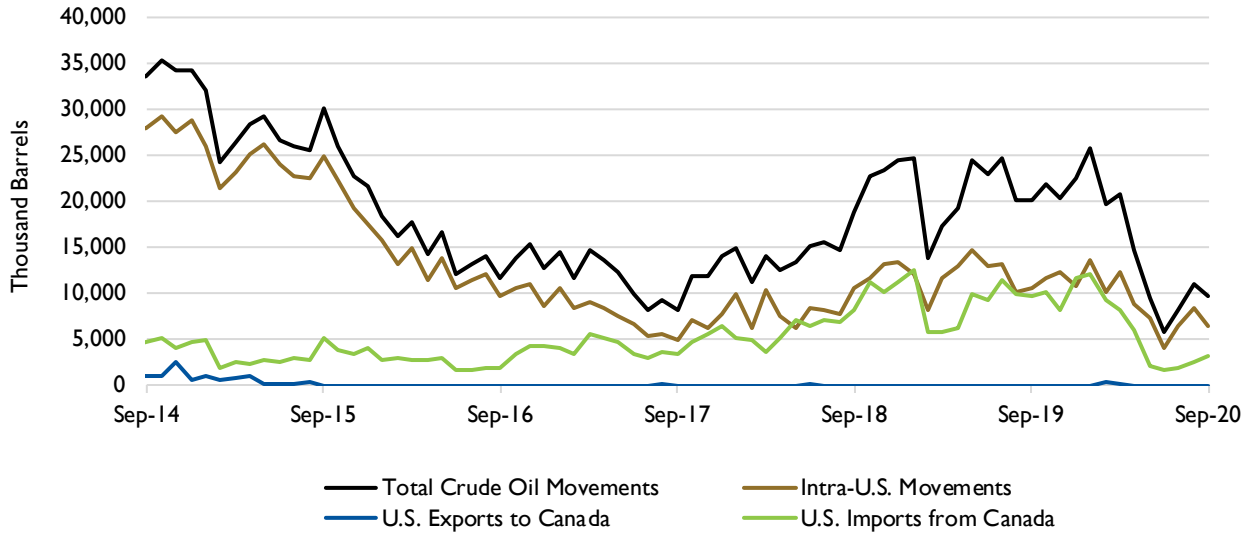
Crude Oil Movements by Tanker and Barge Between Petroleum Administration for Defense Districts (PADDs) (Monthly) (69)



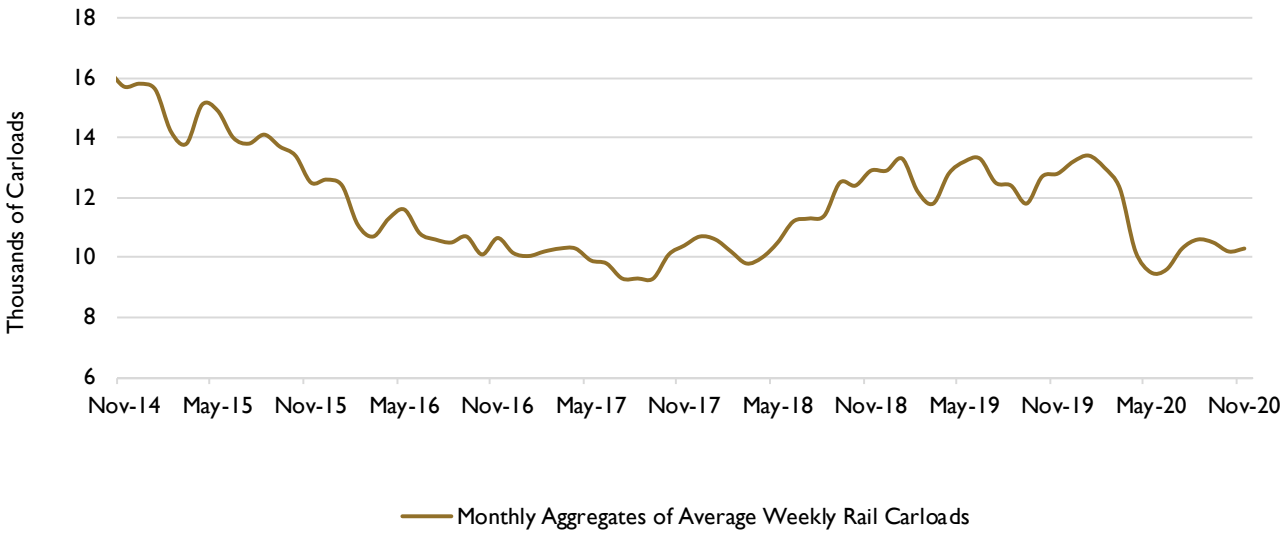
DATA CENTER

LOGISTICS - RAIL

MOVEMENTS OF CRUDE OIL BY RAIL (MONTHLY) (70)



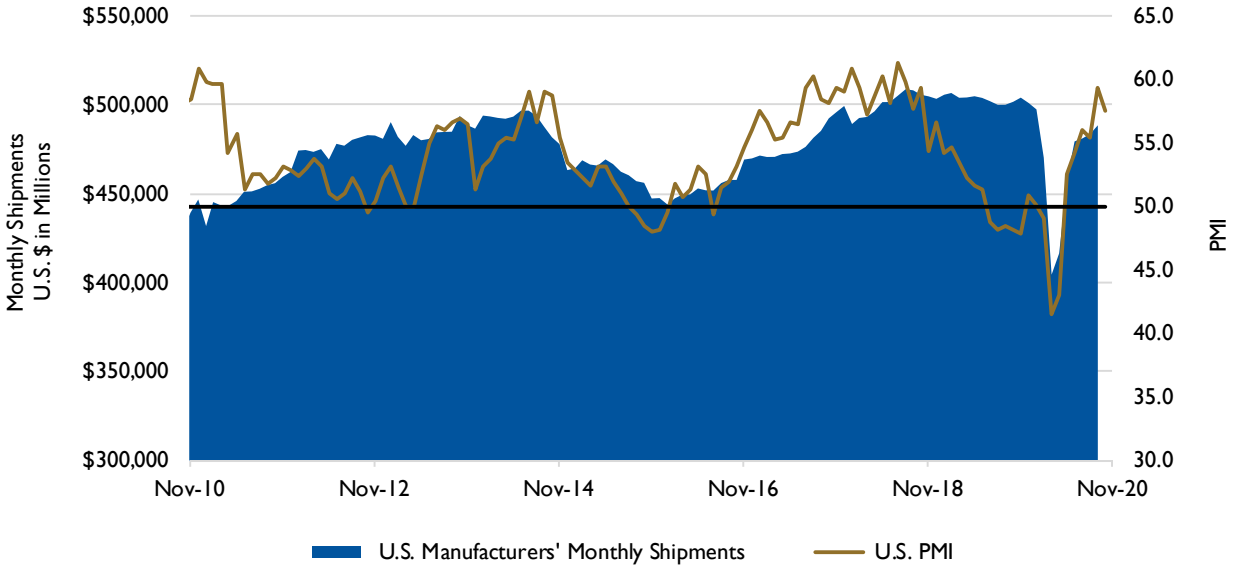
AVERAGE WEEKLY RAIL CARLOADS OF PETROLEUM AND PETROLEUM PRODUCTS (MONTHLY AGGREGATE) (71)



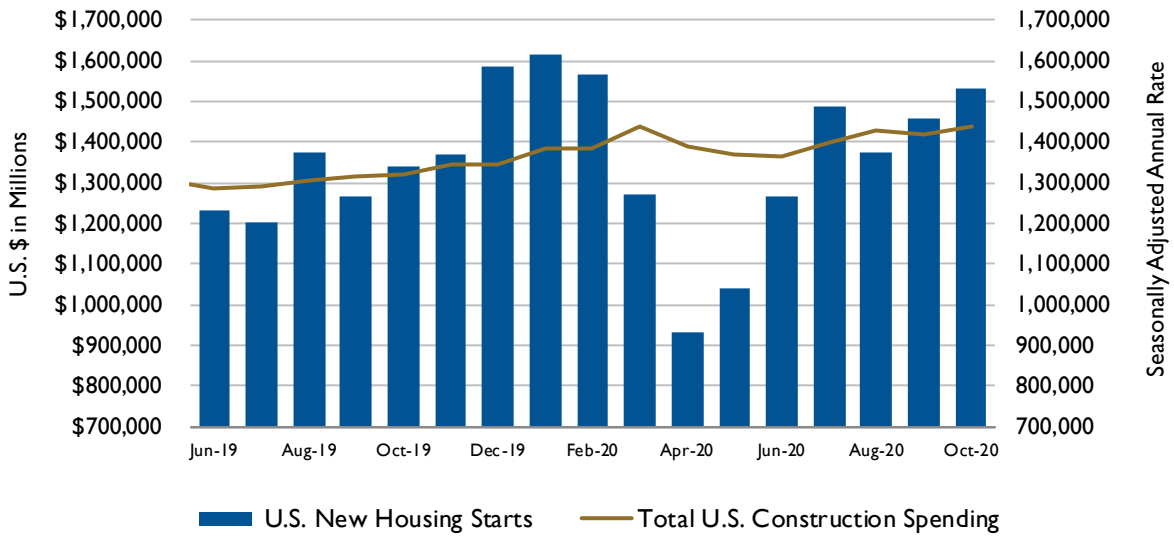
DATA CENTER

ECONOMIC / FINANCIAL

U.S. Manufacturers' Monthly Shipments and U.S. Purchasing Managers' Index (PMI) (Monthly) (72)



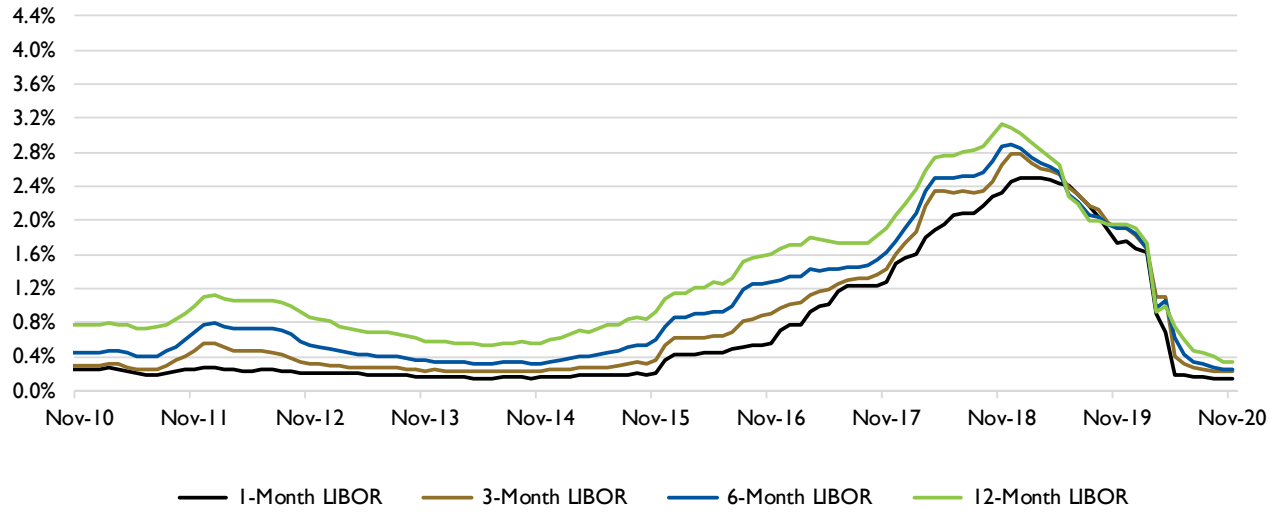
U.S. New Housing Starts and Total U.S. Construction Spending (Monthly) (73)



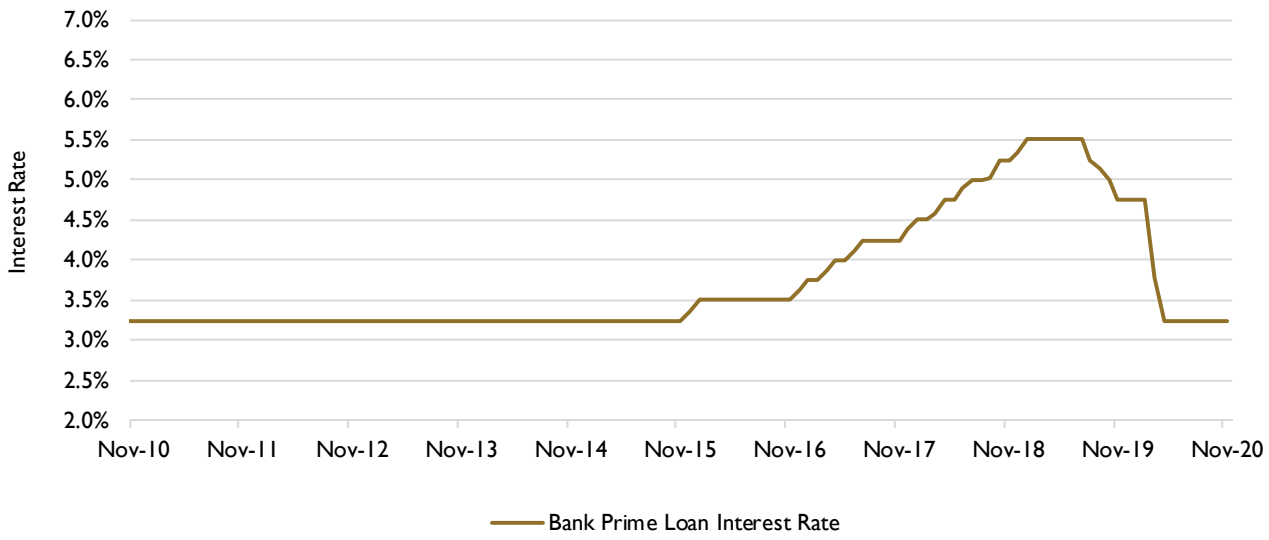
DATA CENTER

ECONOMIC / FINANCIAL

LONDON INTERBANK OFFERED RATE (LIBOR) (MONTHLY AVERAGE) BASED ON U.S. DOLLAR (74)



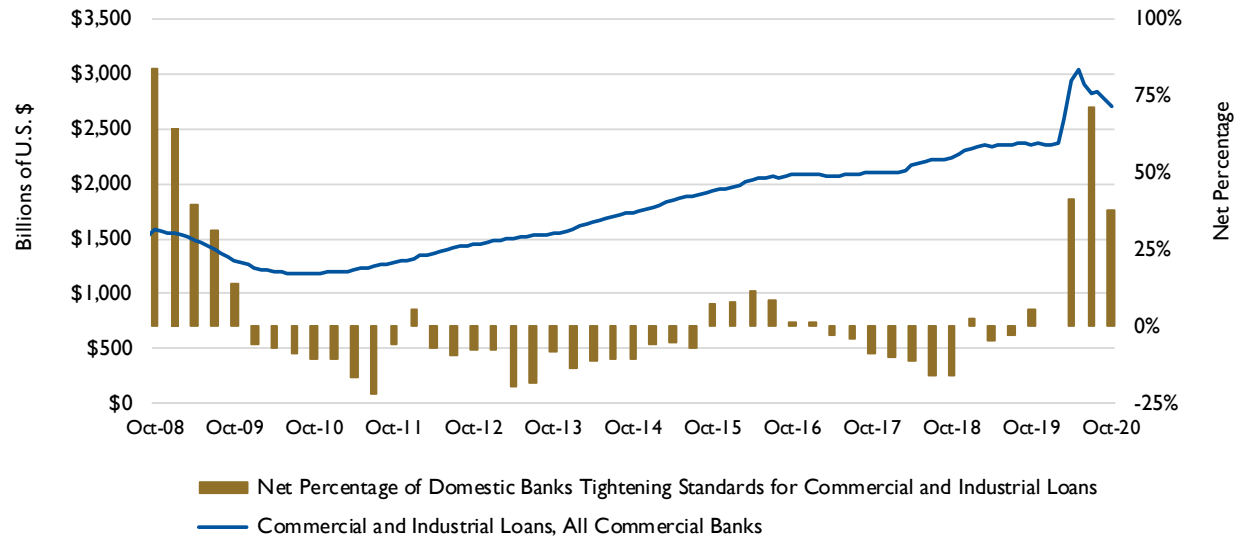
BANK PRIME LOAN INTEREST RATES (MONTHLY AVERAGE) (75)



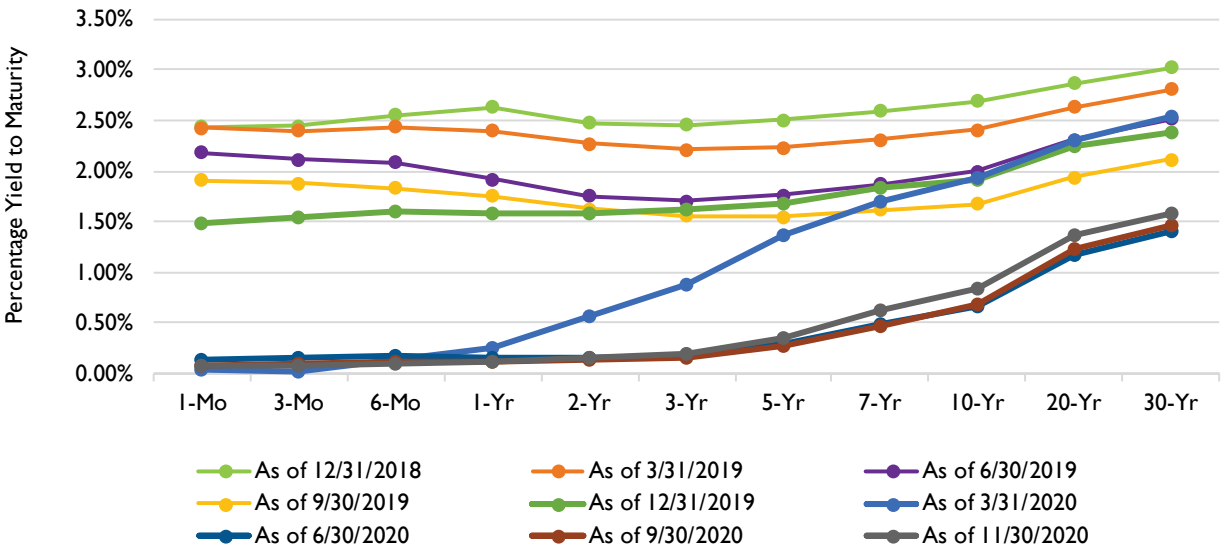
DATA CENTER

ECONOMIC / FINANCIAL

COMMERCIAL AND INDUSTRIAL LOANS VS. BANKING STANDARDS (QUARTERLY, MONTHLY) (76)



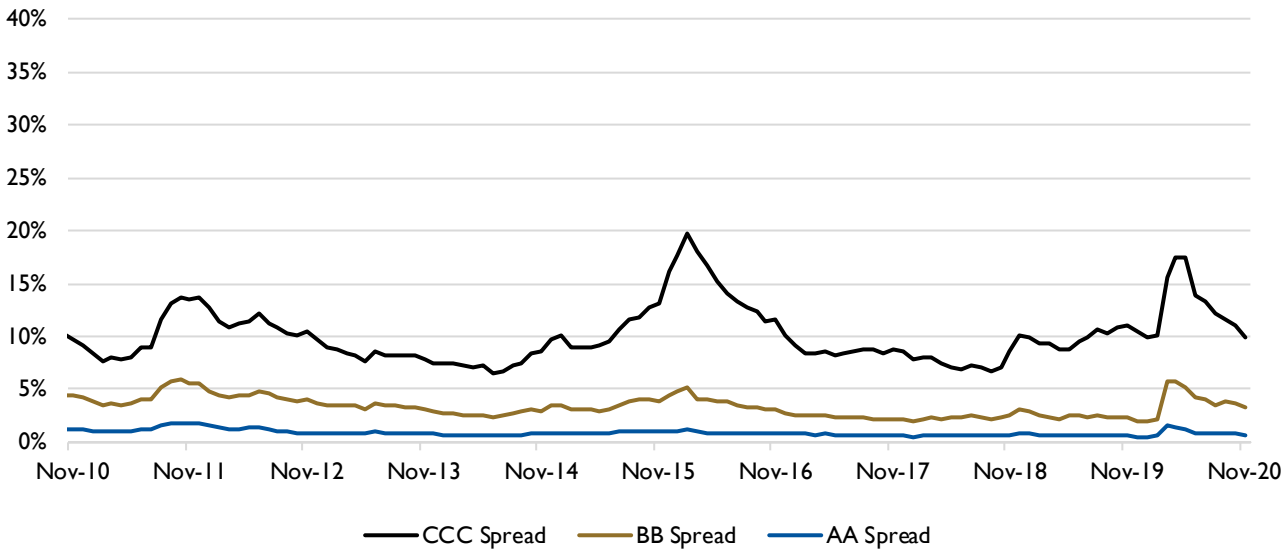
U.S. TREASURY YIELD CURVE (MONTHLY, ANNUAL) (77)



DATA CENTER

ECONOMIC / FINANCIAL

CORPORATE SPREADS TO TREASURIES BY QUALITY (MONTHLY AVERAGE) (78)



DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

ABBREVIATIONS & ACRONYMS

AECO – Alberta Energy Company
ARAMCO – Saudi Arabian Oil Company, formerly the Arabian-American Oil Company
BCF – Billion cubic feet
BTU – British thermal unit
CIF – Costs, insurance and freight
CMT – Constant maturity treasury
DUC – Drilled but uncompleted wells
EBITDA – Earnings before interest, taxes, depreciation and amortization
IFO – Intermediate fuel oil
ITC – Investment Tax Credit
LCOE – Levelized cost of energy
LIBOR – London Interbank Offered Rate
LNG – Liquefied natural gas
LPG – Liquefied petroleum gas
mmBTU – Millions of British Thermal Units
MTBE – Methyl tertiary butyl ether
MW – Megawatt
NBP – National Balancing Point
NGPL – Natural gas plant liquids
NYMEX – New York Mercantile Exchange
OAS – Option-adjusted spread
OPEC – The Organization of Petroleum Exporting Countries
PADD – Petroleum Administration for Defense District
PG&E – Pacific Gas & Electric
PMI – U.S. Purchasing Managers Index
PV – Photovoltaic
SoCal – Southern California
SPR – Strategic Petroleum Reserve
TETCO-M3 – Texas Eastern Transmission Corporation Pipeline Zone M3
TTF – Title Transfer Facility
UAE – United Arab Emirates
WTI – West Texas Intermediate crude oil

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

DEFINITIONS

Biofuels – liquid fuels and blending components produced from biomass feedstocks, used primarily for transportation.

British Thermal Unit (BTU) – A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

Ending Stocks – A proxy for inventory, defined as the total volume of a given commodity held in storage (leases, refineries, processing plants, pipelines, terminals, tank farms) at the end of the last day of a given month.

Distillate Fuel Oil – A general classification for a variety of petroleum fractions produced in petroleum distillation operations. Included within this classification are No. 1, No. 2 and No. 4 diesel fuels (used in on-highway and off-highway diesel engines), as well as No. 1, No. 2 and No. 4 fuel oils (used primarily for space heating and electric power generation).

Distributed Solar Energy – Refers to solar energy generated by small-scale photovoltaic generation plants. Small-scale is defined as a plant with capacity below one megawatt.

Index – A figure in a system or scale representing the average value of specified prices, shares, or other items as compared with some reference figure.

Intermediate Fuel Oil – Also known as IFO and Bunker Fuel, fuel utilized by ships and barges to facilitate international exchange of various commodities across an array of industries.

Investment Tax Credit – A federal policy tax incentive that supports the deployment of solar energy in the United States.

LIBOR – The London Interbank Offered Rate is the average interest rate at which leading banks borrow funds of a sizeable amount from other banks in the London market.

Liquefied Natural Gas – Natural gas that has been cooled to a liquid state, at about -260°Fahrenheit, for shipping and storage.

Liquefied Petroleum Gas – A group of hydrocarbon gases, primarily propane, normal butane and isobutene, derived from crude oil refining or natural gas processing.

Natural Gas Liquids – A group of hydrocarbons including ethane, propane, normal butane, isobutene and natural gasoline. Generally include natural gas plant liquids and all liquefied refinery gases except olefins.

Natural Gas Plant Liquids – Ethane, propane, butane, isobutane, pentane and pentane plus.

Petroleum Administration for Defense District (PADD) – A geographic aggregation of the 50 States and the District of Columbia into five Districts. PADD 1 is the East Coast region, PADD 2 is the Midwest region, PADD 3 is the Gulf Coast region and PADD 5 is the West Coast region.

Petroleum Products – Obtained from the processing of crude oil (including lease condensate), natural gas and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas and miscellaneous products.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

DEFINITIONS

Product Supplied – A widely utilized proxy for consumption of petroleum products, measuring the disappearance of said products from primary sources. Primary sources include, among others, refineries, processing plants, blending plants, pipelines and bulk terminals.

Propylene – Petrochemical feedstock that is recovered from refinery or petrochemical processes. It is an olefinic hydrocarbon that is gaseous at standard temperature and pressure.

Residual Fuel Oil – The general classification for heavy oils that remain after lighter oils are distilled away in the process of petroleum refining.

Spot vs. Wholesale Price – "Spot" prices are defined by the U.S. Energy Information Administration as, "the price for a one-time open market transaction for immediate delivery of a specific quantity of a product at a specific location where the commodity is purchased 'on the spot' at current market rates."

In this report, certain charts contain both "spot" and "wholesale" prices for given commodities alongside each other within the same chart. In these instances, the wholesale prices shown are, in fact, wholesale market "spot" prices. Thus, the terms are interchangeable in charts where both terms are present in describing respective price series.

Strategic Petroleum Reserve (SPR) – An emergency fuel storage of crude oil maintained by the United States Department of Energy for use during periods of major supply interruption.

Virtual Trading Point – Commodity trading center created to service a specific geographic region but does not have a physical location.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

DESCRIPTIONS

General Conversion Information

- International pricing data for various commodities were converted by JKC from the units utilized by the original data source (in the form of currency value per unit of energy content or volume) to appropriate domestic units (in the form of U.S. dollars per common domestic unit of energy content or volume) in order to allow for convenient, informative comparison of international and domestic commodity price series through displaying them on a singular chart in consistent units. Appropriate domestic units for a given commodity are determined by whatever units are most commonly utilized in the United States to denote prices of that commodity, per the U.S. Energy Information Administration.
- International currency units were converted to U.S. dollars using historical exchange rates published by x-rates.com.
- Energy content and volume conversion factors differ by commodity. International energy content or volume units were converted using the various sources listed below:
  - Google.com In-Browser Unit Converter
    - Alberta Energy Co. Hub Natural Gas – gigajoules to mmBTU
    - Dutch TTF Hub Natural Gas – megawatt hours to mmBTU
    - Houston; Los Angeles; Rotterdam; Singapore; Port of Fujairah, UAE IFO 380, IFO 180 Bunker Fuel – liters/kilogram to gallons per metric ton
  - Iowa State University Liquid Fuel Measurements and Conversions
    - Netherlands Retail LPG – liters to metric tons, metric tons to barrels
    - Saudi ARAMCO Propane – metric tons to barrels
    - Japan Propane Imports – metric tons to barrels
    - Holland Retail Gasoline – liters to gallons
    - Singapore Retail Gasoline – liters to gallons
    - UAE Gasoline – liters to gallons
    - Edmonton Diesel Fuel – liters to gallons
    - Singapore Retail Diesel – liters to gallons
    - Holland Retail Diesel – liters to gallons
    - UAE Diesel – liters to gallons
  - Official Nebraska Government Website
    - Netherlands Retail LPG – barrels to gallons
    - Saudi ARAMCO Propane – barrels to gallons
    - Japan Propane Imports – barrels to gallons
  - Lanka IOC Oil Company
    - Houston; Los Angeles; Rotterdam; Singapore; Port of Fujairah, UAE IFO 380, IFO 180 Bunker Fuel – density, in liters per kilogram

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

CHART NOTES

All charts in this report are updated to the latest information available at the time of publication. Due to differing reporting dates for various data used throughout the report, all charts are not updated to the same ending period.

(1) Crude Oil Prices

- Sources: U.S. Energy Information Administration (Brent, West Texas Intermediate), IndexMundi via WorldBank (Dubai Fateh), Alberta.ca Economic Dashboard (Western Canadian Select), OPEC.org and Quandl.com (OPEC Reference Basket).
- The Organization of Petroleum Exporting Countries (OPEC) reference basket is a composite of the following blends of crude oil: Saharan Blend (Algeria), Girassol (Angola), Oriente (Ecuador), Zafiro (Equatorial Guinea), Rabi Light (Gabon), Iran Heavy (Islamic Republic of Iran), Basra Light (Iraq), Kuwait Export (Kuwait), Es Sider (Libya), Bonny Light (Nigeria), Qatar Marine (Qatar), Arab Light (Saudi Arabia), Murban (United Arab Emirates), Merey (Venezuela).
- All prices are spot or wholesale.

(2) Gasoline Prices

- Sources: U.S. Energy Information Administration (New York Harbor, U.S. Gulf Coast), Trading Economics (Singapore, Netherlands Retail), United Arab Emirates Ministry of Energy (UAE Retail).
- New York Harbor Spot, U.S. Gulf Coast Spot, Netherlands Retail and Singapore Retail all represent the price history of conventional gasoline in their respective locations. United Arab Emirates Retail represents an aggregate of unleaded 95, unleaded 98 and unleaded 91 prices in the United Arab Emirates.

(3) Diesel Prices

- Sources: U.S. Energy Information Administration (U.S. Gulf Coast, New York Harbor, Los Angeles, CA), Ec.euopa.eu European Commission (Netherlands Retail), Knoema.com (Singapore Retail), United Arab Emirates (UAE Retail).
- New York Harbor, U.S. Gulf Coast and Los Angeles, CA prices represent ultra-low sulfur No. 2 diesel.
- Edmonton, Canada price represents low-sulfur diesel.
- Singapore Retail, United Arab Emirates Retail and Netherlands Retail prices represent conventional gasoil found at the pump. Gasoil is an alternative term for diesel commonly used throughout Europe.
- Netherlands Retail prices exclude taxes, Singapore Retail prices include taxes.

(4) Jet Fuel Prices

- Source: U.S. Energy Information Administration.
- All prices are spot or wholesale prices.

(5) U.S. Crude Oil and Petroleum Products Supply, Inventory and Consumption

- Source: U.S. Energy Information Administration.
- Crude Oil and Petroleum Products consist of natural gas plant liquids (ethane, propane, butane, isobutane, pentane), other liquids (hydrogen, oxygenates and renewable fuels like fuel ethanol, motor and aviation gasoline blending components, unfinished oils) and finished petroleum products (motor gasoline, aviation gasoline, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, napthas, lubricants, waxes, petroleum cokes, asphalt and road oil, still gas, miscellaneous products).
- Supply is comprised of field production, renewable fuels and oxygenate plant net production, refinery and blender net production, imports and net Petroleum Administration for Defense District (PADD) receipts. Net PADD receipts represent the net volume of product movement into and out of each PADD by tanker, barge and pipeline.
- Ending Stocks is a proxy for inventory and is defined as primary stocks held in storage as of midnight on the last day of the month. Primary stocks include products held in storage at, or in, leases, refineries, natural gas processing plants, pipelines, tank farms and bulk terminals with the capacity to store at least 50,000 barrels or that can receive product by tanker, barge or pipeline. Ending Stocks include volumes in the Strategic Petroleum Reserve (SPR) maintained by the Federal Government for use during periods of major supply interruption.
- Product Supplied is a proxy for consumption as it measures the disappearance of said product from primary sources, including refineries, processing plants, blending plants, pipelines and bulk terminals.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(6) U.S. Refinery Volumes and Wholesale Prices of Petroleum Products

- Source: U.S. Energy Information Administration Petroleum Marketing Monthly.

(7) U.S. Crude Oil Refinery Input, Distillation Capacity and Refinery Utilization

- Source: U.S. Energy Information Administration Petroleum Supply Weekly.
- Net Input is defined as gross inputs less gross production. Crude Oil Refinery Net Input values are monthly aggregates of weekly net input averages, measured in thousands of barrels per day. The resulting values are represented as monthly average refinery inputs, measured in thousands of barrels per day.
- Refinery Capacity refers to the maximum amount of crude oil designed to flow into the distillation (or crude) unit of the refinery. Operable Capacity is equal to the sum of operating and idle capacity. Idle Capacity is capacity that is not in operation, not under active repair, and can be placed in operation within 30 days.

(8) U.S. Crude Oil and Petroleum Products Imports and Exports

- Source: U.S. Energy Information Administration Petroleum Supply Monthly.
- U.S. Net Imports of Petroleum Products data fall below zero at which point the U.S. becomes a net exporter.

(9) Domestic Natural Gas Citygate Prices per Region

- Source: U.S. Energy Information Administration.
- The prices shown are "Citygate" prices. A Citygate is defined as "a point or measuring station at which a distributing gas utility receives gas from a natural gas pipeline company or transmission system." The Citygate price represents the benchmark price for a given region, accounting for all costs of acquisition, storage, and transportation of gas as well as other charges associated with local distribution companies obtaining the gas for sale to end-users.
- The Western market contains Oregon, Washington, California, Nevada, Arizona, New Mexico, Utah, Wyoming, Colorado, Montana, and Idaho.
- The Midwestern market contains North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Minnesota, Iowa, Missouri, Arkansas, Wisconsin, Michigan, Illinois, and Indiana.
- The Gulf market contains Texas and Louisiana; the Southeastern market contains Florida, Mississippi, Alabama, Georgia, Tennessee, North Carolina, and South Carolina.
- The Northeastern market contains Kentucky, Virginia, West Virginia, Ohio, Pennsylvania, New York, Vermont, New Hampshire, Maine, Massachusetts, Rhode Island, Connecticut, Delaware, New Jersey, and Maryland.

(10) International Natural Gas Prices

- Sources: U.S. Energy Information Administration (Henry Hub), NGX Clearinghouse (AECO Hub), BP Statistical Review of World Energy 2017 (United Kingdom NBP), World Bank via Index Mundi (Russian NG European Import Price), Knoema via World Bank (Japan LNG Import), my.Elexys.be Market Information (Dutch TTF).
- Henry Hub serves as the primary global pricing benchmark.
- Alberta Energy Company (AECO) Hub serves North America.
- United Kingdom National Balancing Point (NBP) serves the British Isles.
- Dutch Title Transfer Facility (TTF) serves continental Europe.
- Virtual Trading Point (Virtual) does not have a physical location and was created to serve a specific region.
- Japan LNG Import Price represents aggregate import prices of liquefied natural gas in Japan and is a price benchmark serving the Asia-Pacific region. The price includes costs, insurance and freight (CIF).
- All price benchmarks above represent gaseous state natural gas transported by pipeline, with the exception of Japan LNG Import Price, which represents liquid state natural gas transported by ship.
- All prices are spot or wholesale.

(11), (12), (13) and (14) Liquefied Natural Gas Prices

- Sources: Federal Energy Regulatory Commission (U.S., Mexico, Belgium, India), World Bank via Bluegold Research (Brazil/Argentina, Japan/Korea, China, United Kingdom).
- All prices are "landed" prices. Landed price is the price received at the regasification terminal and is based on a netback calculation that removes the costs of pipeline transportation, regasification, waterborne shipping and liquefaction, so as to best represent the effective price to the producer or seller at a specific location or defined point.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(15) U.S. Import / Export Liquefied Natural Gas Prices
- Source: U.S. Energy Information Administration.
- All prices are spot or wholesale.

(16) Natural Gas Plant Liquids Prices
- Source: U.S. Energy Information Administration.
- Natural gas liquids spot prices at Mont Belvieu, TX.
- Natural Gas Plant Liquids (NGPL) Composite price includes ethane, propane, butane, isobutane and natural gasoline. Daily closing spot prices for each component are averaged into a monthly series, then weighted according to the portion of a representative natural gas plant liquids barrel that they occupy. The NGPL Composite price excludes natural gas liquids produced at crude oil refineries.

(17) U.S. Natural Gas Production and Consumption
- Source: U.S. Energy Information Administration.
- Marketed Production is equal to gross withdrawals of natural gas from production reservoirs, less gas used for reservoir re-pressuring, nonhydrocarbon gases removed in treating and processing operations, and quantities vented and flared (gas that is disposed of by release into the atmosphere).

(18) U.S. Natural Gas Supply and Inventory
- Source: U.S. Energy Information Administration.
- Working Gas is defined as the total amount of natural gas in storage less the amount of base gas. Base gas is the amount of gas intended as permanent inventory.

(19) U.S. Natural Gas Consumption by End Use
- Source: U.S. Energy Information Administration.

(20) U.S. Natural Gas Plant Liquids Production
- Source: U.S. Energy Information Administration.
- Natural Gas Plant Liquids Production refers to the sum of all production of ethane, propane, butane, isobutane, pentane and pentane plus.

(21) U.S. Liquefied Natural Gas Import and Export Volumes
- Source: U.S. Energy Information Administration.

(22), (23) and (24) North American LNG Import / Export Terminals – Proposed, Approved and Existing
- Source: Federal Energy Regulatory Commission.

(25) Heating Oil Prices
- Source: U.S. Energy Information Administration.
- Spot prices of No 2. heating oil at New York Harbor, alongside the spot prices of West Texas Intermediate crude oil for comparison purposes.

(26) Intermediate Fuel Oil aka "Bunker Fuel" Prices
- Source: Ship & Bunker.
- Intermediate Fuel Oil, also known as IFO and Bunker Fuel, is fuel utilized by ships and barges to facilitate international exchange of various commodities across an array of industries, including energy. It is classified in the maritime field by its viscosity, measured in centistokes. IFO 380 has a maximum viscosity of 380 centistokes and is comprised of 98% residual fuel oil and 2% distillate fuel oil. Under new regulations from the International Maritime Organization, ships must burn fuel with a sulfur content of not more than 0.5 percent or install costly emissions-cleaning scrubbers. Very Low Sulfur Fuel Oil (VLSFO) contains a maximum sulfur content of 0.5 percent.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(27) Propane Prices

- Sources: U.S. Energy Information Administration (Conway, KS and Mont Belvieu, TX spot prices), Government of Canada National Energy Board (Edmonton, Canada trading hub prices), Ec.euopa.eu European Commission (Netherlands Retail prices), LPG Australia and news articles (Saudi ARAMCO contract prices), Knoema.com and Petroleum Association of Japan (Japan Imports prices).
- Conway, KS and Mont Belvieu, TX retail prices are propane prices, while Saudi ARAMCO Contracts and Japan Imports are liquefied petroleum gas (LPG) prices. Netherlands Retail and Edmonton, Canada retail prices are auto propane and exclude taxes.
- Propane and LPG prices are represented on the same chart due to the fact that propane is dealt in international marketplaces as LPG, and is referred to as LPG in many European and Asian countries. LPG is comprised of a mixture of propane and butane.
- Conway, KS wholesale prices are typically available only for the winter months (October through March), during which propane demand is driven by cold weather, therefore, the data series displayed is intermittent.

(28) No. 1 Distillate Fuel Oil, Residual Fuel Oil Wholesale, Retail Sales Volume by Refiners

- Source: U.S. Energy Information Administration.
- No. 1 Distillate Fuel Oil consists of No. 1 diesel fuel and No. 1 fuel oil. The former is used in high-speed diesel engines, including those used by metropolitan buses and smaller automobiles. No. 1 fuel oil is utilized primarily as fuel for portable outdoor stoves and heaters.
- Residual Fuel Oil is the general classification for heavy oils that remain after lighter oils are distilled away in the process of petroleum refining. Residual Fuel Oil includes No. 5 and No. 6 fuel oils. The former is used in steam-powered vessels, and the latter is used for electric power generation, space heating, vessel bunkering and industrial processes.
- All wholesale and retail sales volumes refer to those sold by refiners only.

(29) No. 2 Distillate Fuel Oil Wholesale, Retail Sales Volume by Refiners

- Source: U.S. Energy Information Administration.
- No. 2 Distillate Fuel Oil consists of No. 2 diesel fuel and No. 2 fuel oil (heating oil). No. 2 diesel fuel is utilized in on-and-off highway diesel engines, including those used by railroad locomotives, trucks, automobiles and agricultural machinery. No. 2 fuel oil (heating oil) is used for space heating and moderate capacity industrial/commercial burner units.
- All wholesale and retail sales volumes refer to those sold by refiners only.

(30) Propane & Propylene and Distillate Fuel Oil Production and Consumption

- Source: U.S. Energy Information Administration.
- Distillate Fuel Oil is a general classification for a variety of petroleum fractions produced in petroleum distillation operations. Included within this classification are No. 1, No. 2 and No. 4 diesel fuels (used in on-highway and off-highway diesel engines), as well as No. 1, No. 2 and No. 4 fuel oils (used primarily for space heating and electric power generation).
- Propylene is an important petrochemical feedstock that is recovered from refinery or petrochemical processes. It is an olefinic hydrocarbon that is gaseous at standard temperature and pressure.
- Product Supplied is a proxy for consumption as it measures the disappearance of said product from primary sources, including refineries, processing plants, blending plants, pipelines and bulk terminals.

(31) U.S. Ending Stocks of Propane & Propylene and Distillate Fuel Oil

- Source: U.S. Energy Information Administration.
- Distillate Fuel Oil is a general classification for a variety of petroleum fractions produced in petroleum distillation operations. Included within this classification are No. 1, No. 2 and No. 4 diesel fuels (used in on-highway and off-highway diesel engines), as well as No. 1, No. 2 and No. 4 fuel oils (used primarily for space heating and electric power generation).
- Propylene is an important petrochemical feedstock that is recovered from refinery or petrochemical processes. It is an olefinic hydrocarbon that is gaseous at standard temperature and pressure.
- Ending Stocks are defined as the total volume of a propane and propylene/distillate fuel oil held in storage as of the last day of the period. Ending Stocks are monthly averages of Ending Stocks reported at the end of each week during that month, not the amount of Ending Stocks reported at the end of the month. The resulting values are represented as monthly average inventory levels.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(32) U.S. Land Well Count, Rig Count and Wells per Rig

- Source: Platts S&P Global Quarterly Well Count Report.
- Well and rig count data include only those on United States land. Thus, no offshore data is included.
- Platts RigData U.S. Land Rig Count methodology states that a rig is added to the count every time a new oil platform, or rig, is set up on a given site, or every time an existing rig moves to a new location and drills on that site.
- Platts RigData derives U.S. Land Well Count data through tracking new drilling permits and drilling activity only. Thus, the wells comprising the U.S. Land Well Count do not necessarily have to be completed or produce oil or gas in order to be included. For this reason, the well count represented overstates the amount of completed and producing wells that exist on U.S. land.

(33) U.S. Well Starts by Depth

- Source: Platts RigData.
- Total number of well starts by depth on U.S. Land, U.S. Inland Waters and U.S. Offshore, respectively.

(34) Percentage of Crude Oil and Natural Gas Production per Shale Region

- Source: U.S. Energy Information Administration Drilling Productivity Report.
- Percentage of total U.S. crude oil and natural gas production from each of the shale regions.

(35) Drilled but Uncompleted Wells vs. Crude Oil Price

- Source: U.S. Energy Information Administration Drilling Productivity Report.
- Drilled but Uncompleted (DUC) Wells are oil and gas wells that have been drilled but haven't gone through the process of completion (the process of installing well casing, tubing and other equipment that prepares a well for production). The number of DUC wells has significant implications on the domestic supply response to crude oil price changes. If crude oil prices decrease, it is theoretically likely that the amount of DUC wells will increase, and vice versa in an increasing crude oil price scenario. Therefore, the West Texas Intermediate Crude price is tracked for comparative purposes.

(36) Hydraulic Fracturing Sand Consumption and Producer Price Index

- Sources: IHS Markit (consumption), U.S. Bureau of Labor Statistics (producer price index).
- Hydraulic Fracturing Sand is sand utilized as a proppant in the process of hydraulic fracturing to help facilitate the extraction of oil and gas from subsurface rock formations.
- Total 2017 Hydraulic Fracturing Sand Consumption contains actual data for January through April 2017, while May through December 2017 consumption data is projected based on IHS Markit's ProppantIQ research.
- The Producer Price Index for Hydraulic Fracturing Sand measures the weighted average period-to-period change in the selling prices received by domestic producers of hydraulic fracturing sand.
- 2017 Producer Price Index shows annual average as of 9/29/2017.
- Hydraulic Fracturing Sand Producer Price Index Base = 100 at December 2012.

(37) and (38) Crude Oil and Natural Gas Production, Rig Count and Production per Rig

- Sources: U.S. Energy Information Administration Drilling Productivity Report (new-well crude oil and natural gas production per rig), Baker Hughes Inc. (rig count).
- New-Well Crude Oil or Natural Gas Production per Rig in each quarter represents the average of each month's value. New-well production per rig is estimated by dividing several trailing months of data on total production from new wells in each region by that region's monthly rig count, lagged by two months. New-well production per rig is intended to indicate an average rig's contribution to total crude oil production from new wells.
- The determination between a crude oil rig and a natural gas rig is made by the operating company at the time of issuance of the rig permit by the relevant state's permitting authority. The classification of a given rig as an oil or gas rig is based solely upon the operator's judgment after drilling an appraisal well and determining its specific hydrocarbon content. For example, if a well's production comes 50% from gas, 20% from Natural Gas Liquids and 30% from oil, it could either be listed as a gas rig, because gas comprises the largest share of hydrocarbons, or an oil rig because oil drives the well's economics. This determination is at the judgment of the operator.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(39) U.S. Drilling Rigs by Type

- Source: Baker Hughes North America Rotary Rig Count.
- A vertical well is a well that penetrates the earth vertically below the surface-mounted drilling platform, or the surface location of the well.
- A directional well is classified as one in which the surface location of the well is not vertically above the target reservoir. Thus, the well deviates horizontally from its surface location in order to reach the target reservoir, at a specific azimuth and incline. Azimuth measures the cardinal direction of the well's path relative to the surface location, and incline measures degrees of deviation from vertical.
- Per Baker Hughes methodology, a horizontal well is a type of directional well that deviates from vertical by greater than 80 degrees, or one in which the lower part of the wellbore is parallel to the "pay zone." The pay zone is the section of a reservoir that contains hydrocarbons that can be produced economically.

(40) Wind and Solar Prices

- Source: Lazard's Levelized Cost of Energy Analysis 2012-2016.
- The Levelized Cost of Energy (LCOE) is the net present value of the per-megawatt hour cost of building and operating a generating plant over an assumed financial life and duty cycle. It is utilized as a means of comparing the cost-competitiveness of various energy-generating technologies of unequal life spans, project sizes, capital profiles and capacities.
- The respective levelized costs of each generation technology for each year are a simple average of the high and low values of the cost range associated with that generating technology during that year.
- Solar PV refers to solar photovoltaic.
- Solar PV – Community refers to a solar power plant whose electricity is shared by more than one household.
- Solar PV – Rooftop Residential refers to a Solar PV system that has its solar panels mounted on the rooftop of a residential structure.
- Solar PV – Crystalline Rooftop refers to crystalline solar panels mounted on rooftops. Crystalline panels are a type of solar panel that achieves the photoelectric effect, the chemical process that converts solar (light) energy to electricity, through use of crystalline silicone solar cells.
- Solar PV – Crystalline Utility-Scale refers to a solar power plant that uses crystalline panels to generate power that is fed into the grid, supplying a utility with energy.
- Solar PV – Thin Film Utility-Scale refers to a solar power plant that uses thin-film solar panels to generate power that is fed into the grid, supplying a utility with energy. Thin-film panels differ from crystalline panels in that the photoemissive materials, those which produce an electric current when contacted by sufficient solar energy, are not cut from crystals.
- Solar Thermal refers to solar technology that generates thermal energy to heat water or other fluids, rather than generating electricity.

(41) U.S. Total Renewable Energy Consumption

- Source: U.S. Energy Information Administration Monthly Energy Review.
- Total Renewable Energy Consumption is comprised of hydroelectric, geothermal, solar, wind, wood, waste and biofuels.
- Waste refers to biomass waste and is organic non-fossil material of biological origin that is a byproduct or a discarded product. Biomass waste includes municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural crop byproducts, straw and other biomass solids, liquids and gases.
- Biofuels are liquid fuels and blending components produced from biomass feedstocks, used primarily for transportation. Biomass is organic, non-fossil material comprised of decayed biological matter.

(42) U.S. Solar, Wind and Hydroelectric Energy Consumption

- Source: U.S. Energy Information Administration Monthly Energy Review.

(43) U.S. Wood, Waste, Biofuels and Geothermal Energy Consumption

- Source: U.S. Energy Information Administration Monthly Energy Review.
- Biofuels are liquid fuels and blending components produced from biomass feedstocks, used primarily for transportation. Biomass is organic, non-fossil material comprised of decayed biological matter.

(44) Corn and Ethanol Prices and Corn Cost per Gallon of Ethanol

- Source: U.S. Department of Agriculture Economic Research Service (corn and ethanol price).

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(45) U.S. Solar Energy Consumption

- Source: U.S. Energy Information Administration Monthly Energy Review.
- Utility-scale solar energy refers to solar energy generated by plants with a capacity of at least one megawatt that is transmitted via the transmission grid to a high volume of consumers. Thus, Utility-Scale Solar Energy Consumption represents consumption of solar energy generated at plants with capacity of at least one megawatt.
- Distributed solar energy refers to solar energy generated by small-scale generating plants with capacity below one megawatt that is distributed over a specific locality with a small volume of consumers relative to utility-scale energy consumers. Thus, Distributed Solar Energy Consumption represents consumption of solar energy generated at small-scale generating plants.

(46) U.S. Solar Energy Net Generation

- Source: U.S. Energy Information Administration Monthly Energy Review.
- Distributed Solar Photovoltaic Generation refers to energy generated by small-scale photovoltaic generation plants. Small-scale is defined as a plant with capacity below one megawatt. Photovoltaic generation refers to solar energy generated by photovoltaic solar panels.
- Utility-Scale Solar Electricity Net Generation refers to generation of solar energy by plants with capacity equal to or above one megawatt. Net generation is defined as the amount of gross generation less electrical energy consumed by the generating plant for service or auxiliaries.

(47) Distributed Solar Photovoltaic Generation by Sector

- Source: U.S. Energy Information Administration Monthly Energy Review.
- Distributed Solar Photovoltaic Generation refers to energy generated by small-scale photovoltaic generation plants. Small-scale is defined as a plant with capacity below one megawatt. Photovoltaic generation refers to solar energy generated by photovoltaic solar panels.

(48) Utility-Scale Solar Electricity Net Generation by Sector

- Source: U.S. Energy Information Administration Monthly Energy Review.
- Utility-Scale Solar Electricity Net Generation refers to generation of solar energy by plants with capacity equal to or above one megawatt. Net generation is defined as the amount of gross generation less electrical energy consumed by the generating plant for service or auxiliaries.
- Gaps in the data represent periods for which there was no data reported, or the data value was trivially small and thus deemed unnecessary to report.

(49) U.S. Solar Capacity Installations

- Source: Solar Energy Industries Association Q1 2017 Solar Market Insight Report.
- The Investment Tax Credit (ITC) is a federal policy tax incentive that supports the deployment of solar energy in the United States. The ITC allows those who install a solar system to claim up to 30% of the price paid to install the system as a tax credit when filing Federal taxes, thereby significantly discounting the cost associated with transitioning to solar energy.

(50) U.S. Wind Power Capacity Installations

- Source: American Wind Energy Association U.S. Wind Energy Quarterly Market Report.
- Wind Power Generation Capacity Installations refers to non-utility-scale wind power capacity additions. Utility-scale is defined as installations of wind turbines larger than 100 kilowatts.

(51) Utility-Scale Wind Power Capacity Installations

- Source: American Wind Energy Association U.S. Wind Energy Quarterly Market Report.
- Utility-Scale Wind Capacity includes installations of wind turbines larger than 100 kilowatts. Capacity installations may not always equate to an equal increase in cumulative wind power capacity due to decommissioned, uprated and repowered wind turbines.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(52) Wind Power Under Construction or in Advanced Development

- Source: American Wind Energy Association (AWEA) U.S. Wind Energy Quarterly Market Report.
- AWEA defines projects as being "in advanced development" if it has not yet begun construction, but has either signed a power purchase agreement, announced a firm turbine order, or been announced to proceed under utility ownership.

(53) U.S. Aggregated Energy Consumption by Sector

- Source: U.S. Energy Information Administration.
- Energy consumed by the electric power sector is primary energy only. Primary energy is energy in its original form, before any transformation to secondary or tertiary forms of energy. For example, coal can be converted to synthetic gas and then to electricity. Under these circumstances, coal is primary energy, synthetic gas is secondary energy and electricity is tertiary energy.

(54) U.S. Aggregated Energy Consumption by Source

- Source: U.S. Energy Information Administration.
- Total consumption of each category of energy is as accurate as possible. However, some data is unavailable or unreported and, thus, some total consumption values may be understated.
- Fossil Fuels includes coal, petroleum-based products, natural gas and natural gas-based products.
- Renewable Energy includes conventional hydroelectric, solar, biomass, nuclear, geothermal and wind.
- Biomass is a renewable energy source derived from organic matter such as wood, crop waste, or garbage, with wood being the largest contributor.
- Fossil Fuels and Renewable Energy consumption represent consumption of primary energy, which is energy in its original form, before transformation to secondary or tertiary forms of energy. Thus, to arrive at total energy consumption, Electricity Retail Sales (representing consumption of secondary and tertiary forms of energy) is added alongside consumption of Fossil Fuels and Renewable Energy.
- Electrical System Energy Losses are a deduction from total energy consumption, and are incorrectly represented as positively contributing to total energy consumption. Thus, total energy consumption figures in each year are overstated by the amount of electrical system energy losses.

(55) Electricity Prices by Sector

- Source: U.S. Energy Information Administration.

(56) Commercial Crude Oil Inventory

- Source: U.S. Energy Information Administration.
- U.S. Ending Stocks of Commercial Crude Oil represents stocks (inventory) of crude oil held in storage for commercial use. This figure excludes both lease stock and volumes in the Strategic Petroleum Reserve (SPR). Lease stock is crude oil stored in tanks at sites where producers are drilling on leased land. They're excluded from total commercial crude oil inventory because they aren't yet available for commercial use. The SPR is petroleum maintained by the Federal Government for use during periods of major supply interruption.
- Ending stocks (inventory) are primary stocks of crude oil held in storage as of midnight on the last day of the month. Primary stocks include crude oil held in storage at, or in, leases, refineries, natural gas processing plants, pipelines, tank farms and bulk terminals with the capacity to store a minimum of 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge or pipeline.

(57) Petroleum and Other Liquids Commercial Inventory

- Source: U.S. Energy Information Administration.
- Hydrocarbon Gas Liquids (HGLs) are molecules of carbon and hydrogen in various combinations. HGLs include alkanes, or paraffins (ethane, propane, butane, isobutene, natural gasoline) and alkenes, or olefins (ethylene, propylene, butylene, isobutylene).
- Unfinished Oils are all oils that require further processing and are produced by partial refining of crude oil. Unfinished Oils include napthas and lighter oils, kerosene and light gas oils, heavy gas oils and residuum.
- Other Hydrocarbons/Oxygenates are substances that increase the amount of oxygen in various gasoline blends when added to them. This category includes fuel ethanol, methanol and methyl tertiary butyl ether (MTBE).
- Total Motor Gasoline includes finished motor gasoline and motor gasoline blending components.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

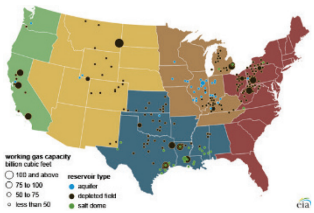
(57) Petroleum and Other Liquids Commercial Inventory (continued)

- Distillate Fuel Oil is a general classification for a variety of petroleum fractions produced in petroleum distillation operations. Included within this classification are No. 1, No. 2 and No. 4 diesel fuels (used in on-highway and off-highway diesel engines), as well as No. 1, No. 2 and No. 4 fuel oils (used primarily for space heating and electric power generation).
- Residual Fuel Oil is the general classification for heavy oils that remain after lighter oils are distilled away in the process of petroleum refining. Residual Fuel Oil includes No. 5 and No. 6 fuel oils. The former is used in steam-powered vessels, and the latter is used for electric power generation, space heating, vessel bunkering and industrial processes.
- Other Oils include aviation gasoline blending components, finished aviation gasoline, kerosene, petrochemical feedstocks, special napthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas and miscellaneous products.

(58) Natural Gas Underground Storage Capacity

- Source: U.S. Energy Information Administration.
- Underground Storage Capacity refers to total natural gas storage capacity in underground storage facilities called "salt domes," which are caverns hollowed out in subsurface salt formations. Salt domes are the primary means of natural gas storage in the United States.

U.S. Underground Natural Gas Storage Facilities by Type (July 2015)



(59) Commercial Crude Oil Refinery, Tank and Underground Storage Capacity and Utilization

- Source: U.S. Energy Information Administration.
- Commercial Crude Oil Storage Capacity refers to working storage capacity. Working capacity is the volume difference between a crude oil storage tank's maximum safe fill capacity and the volume below which pump suction is ineffective, called tank bottoms.
- Crude Oil Shell Storage Capacity is the design capacity of a petroleum storage tank. It includes tank bottoms, working storage capacity and contingency space. Contingency space is defined as available storage space above the defined maximum operating inventory level that remains empty during normal operations. Shell Storage Capacity is always greater than or equal to working storage capacity.
- Crude Oil Storage Capacity data is released only twice per year for the months of March and September. Thus, the data series excludes inventory levels for all months other than March and September of each year.

(60) Crude Oil and Natural Gas Pipeline Mileage

- Source: Pipeline and Hazardous Materials Safety Administration.
- The chart includes information from only Federal Energy Regulatory Commission-regulated pipeline companies.
- Crude Oil Pipeline Mileage represents total mileage of pipelines dedicated to the transport of crude oil and those dedicated to the transport of petroleum products. Pipeline Mileage for crude oil includes trunk lines only.
- Pipeline Mileage for natural gas includes both trunk and gathering lines.
- Trunk lines are synonymous with transmission lines, which are large, cross-country pipelines that move oil or gas from producing areas to refineries. Gathering lines are pipelines that transport oil or gas from the area in which it was produced to a storage facility which acts as an intermediate stop before transportation by truck, railcar, or trunk line.

(61) Crude Oil and Petroleum Products Pipeline Movements Between Petroleum Administration for Defense Districts (PADDs)

- Source: Federal Reserve Bank of St. Louis, with data provided by the U.S. Energy Information Administration.
- Crude Oil and Petroleum Products Pipeline Movements Between PADDs represents the total volume of crude oil and petroleum products transported between each PADD. The data does not include movements within each PADD.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(62) Natural Gas Cumulative Interstate Pipeline Systems Capacity

- Source: U.S. Energy Information Administration.
- Cumulative Interstate Capacity refers to capacity of natural gas pipelines crossing between states. Thus, capacity of intrastate pipelines is not included and the data should not be interpreted as representing total capacity of natural gas pipelines.

(63) Crude Oil and Petroleum Products Exports to Mexico

- Source: U.S. Energy Information Administration.
- Petroleum Products include pentanes plus, liquefied petroleum gases, unfinished oils, finished motor gasoline, motor gasoline blending components, oxygenates, fuel ethanol, distillate fuel oil, kerosene, kerosene-type jet fuel, special napthas, residual fuel oil, waxes, petroleum coke, asphalt and road oil, lubricants and miscellaneous products.

(64) Truck Tonnage Index

- Source: U.S. Department of Transportation, Bureau of Transportation Statistics.
- The Truck Tonnage Index measures the gross tonnage of freight that is transported by motor carriers for a given month. The Index serves as an indicator of shipping activity in the United States.
- Created by the U.S. Department of Transportation, Bureau of Transportation Statistics via information published in the American Trucking Association (ATA) Monthly Truck Tonnage Report.
- In January 2018, ATA revised the seasonally adjusted index back five years as part of its annual revision. In addition, ATA re-indexed the seasonally adjusted and not seasonally adjusted tonnage indexes to 2015 = 100 back to 1973.

(65) Heavy Truck Sales

- Source: Federal Reserve Bank of St. Louis.
- Heavy Trucks are trucks with more than 14,000 pounds gross vehicle weight.

(66) Trucking Conditions Index

- Source: FTR Transportation Intelligence.
- The Trucking Conditions Index summarizes the status of the trucking industry through tracking changes in six major conditions including freight volumes, freight rates, fleet capacity, fleet bankruptcies, fuel price and financing.
- An index value greater than zero represents a positive environment in the truck market, and an index value below zero represents a negative environment. An index value above 10 is a sign that volumes, prices and margin are in a solidly favorable range.

(67) Freight Transportation Services Index

- Source: Federal Reserve Bank of St. Louis.
- The Freight Transportation Services Index measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight.

(68) Crude Oil Refinery Receipts by Transportation Method

- Source: U.S. Energy Information Administration.
- Refinery Receipts by Pipeline, Tanker, Barge, Truck and Rail refer to total volumes of crude oil of domestic and international origin that are in transit to, or received by, domestic refineries. Volumes of crude oil in transit via pipeline are excluded from receipts. Foreign crude oil is included in receipts only after entry through customs.
- Refinery inputs track volumes of crude oil that are entered into refining processes (e.g., distillation units, cokers, etc.).
- The volume difference between refinery receipts and refinery inputs is that which is in transit but not yet received by refineries plus that which has been received and is held in bonded storage, awaiting entry into refining processes.

(69) Crude Oil Movements by Tanker and Barge Movements Between Petroleum Administration for Defense Districts (PADDs)

- Source: U.S. Energy Information Administration.
- The data series shown on the chart is an aggregate of all crude oil movements between Petroleum Administration for Defense Districts (PADDs). This includes crude oil movement from PADD 1 to PADD 2 and PADD 3; PADD 2 to PADD 1 and PADD 3; and PADD 3 to PADD 1, PADD 2 and PADD 5.
- PADD 1 is the East Coast region, PADD 2 is the Midwest region, PADD 3 is the Gulf Coast region and PADD 5 is the West Coast region.

DATA CENTER: ABBREVIATIONS & ACRONYMS, DEFINITIONS, DESCRIPTIONS AND CHART NOTES

(70) Movements of Crude Oil by Rail
- Source: U.S. Energy Information Administration.

(71) Average Weekly Rail Carloads of Petroleum and Petroleum Products
- Source: Association of American Railroads.
- Monthly aggregates of the average weekly number of rail carloads transporting petroleum and petroleum products in the United States.
- Excludes the U.S. operations of Canadian railroads.

(72) U.S. Manufacturers' Monthly Shipments and U.S. Purchasing Managers' Index (PMI)
- Sources: For Manufacturers' Monthly Shipments - U.S. Census Bureau Manufacturers' Shipments, Inventories and Orders Survey; and for U.S. Purchasing Managers' Index (PMI) – Institute for Supply Management Manufacturing Report on Business®.
- A PMI above 50 represents expansion within the manufacturing sector compared with the prior month.

(73) U.S. New Housing Starts and Total U.S. Construction Spending
- Source: U.S. Census Bureau.

(74) London Interbank Offered Rate (LIBOR), Based on U.S. Dollar
- Source: ICE Benchmark Administration Limited via the Federal Reserve Bank of St. Louis.
- The London Interbank Offered Rate is the average interest rate at which leading banks borrow funds of a sizeable amount from other banks in the London market. LIBOR is the most widely used benchmark or reference rate for short term interest rates. The chart values are monthly percent averages of daily figures and are not seasonally adjusted.

(75) Bank Prime Loan Interest Rates
- Source: Federal Reserve Bank of St. Louis.
- The Bank Prime Loan Interest Rate is that posted by a majority of top 25 (by assets in domestic offices) insured, U.S.-chartered commercial banks. Prime is one of several base rates used by banks to price short-term business loans.
- The chart values are monthly percent averages of daily figures and are not seasonally adjusted.

(76) Commercial and Industrial Loans vs. Banking Standards
- Source: Federal Reserve Bank of St. Louis.
- Net Percentage of Domestic Banks Tightening Standards for Commercial and Industrial Loans to large and middle-market firms. Quarterly, not seasonally adjusted.
- Commercial and Industrial Loans, All Commercial Banks. Monthly, seasonally adjusted.

(77) U.S. Treasury Yield Curve
- Source: U.S. Treasury.
- U.S. Treasury Yield Curve rates are commonly referred to as Constant Maturity Treasury (CMT) rates. Yields are interpolated by the U.S. Treasury from the daily yield curve.
- The curve, which relates the yield on a security to its time to maturity, is based on the closing market bid yields on actively traded U.S. Treasury securities in the over-the-counter market.

(78) Corporate Spreads to Treasuries by Quality
- Source: Federal Reserve Bank of St. Louis.
- Corporate Spreads to Treasuries represent the spread, or difference, between the yield curve of an index of corporate bonds of a given rating category and the spot rate U.S. Treasury curve. The spot rate U.S. Treasury curve is a yield curve that uses U.S. Treasury spot rates rather than yields, and represents the rate for a zero-coupon U.S. Treasury bond.
- The corporate bond yield indexes are Bank of America Merrill Lynch Option-Adjusted Spread (OAS) Indexes for all bonds with a given investment rating of AA, BB or CCC or below that are publically issued in the U.S. domestic market. Each respective OAS index is calculated using each constituent bond's OAS, weighted by market capitalization. A bond's OAS is the bond's yield spread relative to the risk-free rate of return, typically the U.S. Treasury securities yield, adjusted to account for an embedded option.

HOT TOPICS

ENERGY INFRASTRUCTURE UNDER THE BIDEN ADMINISTRATION

Whether or not the Biden Administration can push energy legislation through a closely-divided Congress, it will have plenty of administrative levers to advance the President's agenda to transition away from natural gas, oil and coal. Likely new regulatory agency rules and permitting hurdles will make oil and gas production, new pipelines and other energy infrastructure projects more difficult to get approved, and more expensive to develop. The President's objective of carbon-free electricity by 2035, apart from whether it is advisable or achievable, nevertheless can be assumed to drive agency rulemaking and executive orders early in his term. The first lever is the Federal Energy Regulatory Commission (FERC), which has jurisdiction over natural gas pipelines and LNG export terminals. Here are some expected impacts.

- **The 5-member Commission will soon have a 3-2 Democrat majority**, with Richard Glick possibly the new Chairman. Throughout his tenure in the minority, Glick has championed the principle that permitting reviews must include a "climate test" – which requires an accounting of greenhouse gas emissions from combustion of the natural gas transported by the pipeline under review, as well as an analysis of "cumulative impacts" of incremental emissions. He has voted against permits for nearly every new pipeline project to come before the Commission because of this position.
- **Very few major new pipeline and LNG projects are currently in FERC's permitting queue.** And most of these are expansions or replacements of existing capacity on existing right of way, rather than new "greenfield" projects that involve larger-scale construction work. This stems partly from uncertainty in the long-term demand picture, and from the fact that the recent strong build-out has left pipeline operators with rich portfolios of existing pipeline assets in a weakened current demand environment. Going forward, developers will also have to consider growing opposition headwinds, added to an already challenging permitting environment, when evaluating whether to embark on new projects.
- **LNG is a bright spot.** Most feeder pipelines for planned LNG export terminals have already been permitted and are awaiting final investment decisions (FIDs) on the export terminals they will supply. Export licenses have been granted and extended out through 2050. The outlook is dependent on strengthening global LNG markets and the global competitiveness of U.S. LNG. Prospects for both are positive. So far 10 billion cubic feet per day (bcf/d) of LNG capacity is in operation; 5 bcf/d is under construction to come onstream between now and 2024; and 33 bcf/d has been permitted but is not yet under construction. If even half of that capacity is built, U.S. LNG will dominate global markets and U.S. natural gas production will surge. Exports, whether via LNG or by pipeline to Mexico, will drive a major share of future growth in natural gas production and transmission, and therefore infrastructure investment.

Next is the **Environmental Protection Agency (EPA),** which has jurisdiction over Clean Water Act pipeline water crossing permits, and Clean Air Act emissions regulations.

HOT TOPICS

ENERGY INFRASTRUCTURE UNDER THE BIDEN ADMINISTRATION (CONTINUED)

- **EPA administers the Clean Water Act's Section 401,** which are the rules governing states' actions on developer applications for pipeline water crossing permits. New rules were recently finalized that prevent states from denying water quality certifications on grounds unrelated to water quality – such as greenhouse gas emissions. The new rules also prevent states from attempting to kill projects by endlessly dragging out the permit decision timeframe. Biden's EPA can be expected to launch a new rulemaking that effectively reverses those reforms.
- **Waters of the United States (or WOTUS)** – The Trump administration's Navigable Waters Protection Rule tightened definitions of what types of water bodies require CWA Section 401, 404 or Nationwide 12 pipeline water crossing permits. Previous rules absurdly included such water bodies as agricultural run-off ditches and rainwater collection ponds. EPA and Army Corps of Engineers' attorneys defended the Trump rule prior to the transition against several state-level legal challenges. They will likely not continue do so under Biden. Recent reforms to the WOTUS definitions will be on the chopping block for reversal.
- **Aggressive Endangered Species Act interpretations** under Biden's EPA will put off-limits more land for gas and oil production and pipeline right-of-way if they occur within what will be an expanded designated area of habitat of endangered or threatened species, such as the Sage Grouse.
- **Methane – expect tighter restrictions**, including reversal of Trump's recent easing of regulations. Tighter restrictions will disadvantage smaller producers who are less able to implement controls where wells are so low-producing that expensive control equipment would make them uneconomic.
- **Methane venting and flaring** on both public and private lands will likely be sharply limited by new regulations under the Clean Air Act.

On the positive side, steep reductions of methane emissions, already a top industry priority, will help counter natural gas opponents' arguments based on climate impacts of the release of uncombusted methane.

Federal lands and offshore energy production

- **Biden has pledged no new oil or gas production leases** on Federal lands and offshore. Onshore Federal lands production now accounts for 9% of both oil and gas. With no new drilling, existing shale wells on Federal lands will decline to near zero output over the next 3-4 years.

HOT TOPICS

ENERGY INFRASTRUCTURE UNDER THE BIDEN ADMINISTRATION (CONTINUED)

- **Gulf of Mexico production declines** would take longer but eventually that resource would also be reduced.
- **But declining Federal lands production** would increase demand for gas and oil produced from onshore private lands.
- **The biggest potential immediate impact is on New Mexico, where most of the shale resources are on federal lands.** Governor Lujan Grisham says she will ask for an exemption since oil and gas-related revenues are a massive contributor to the state's budget.

National Environmental Policy Act (NEPA) Reviews for Permitting of Infrastructure

- **Recently-issued revised NEPA implementation rules** that streamline the infrastructure permitting process may be reversed, ending progress toward shortening and simplifying NEPA reviews on projects under federal jurisdiction, including pipelines.
- **New superseding rules will likely require climate tests** on all projects. It's unclear how alleged climate-related "costs" would be calculated and attributed; for example, costs attributed to sea level rise, fires, drought, or hardening of infrastructure. There will likely be a return to some form of Obama's "social cost of carbon" regime quantifying the societal costs of carbon emissions.

Net-zero carbon emissions for electric generation by 2035, which Biden has announced as a goal.

- Because there is no alternative to a major role for natural gas generation (as natural gas was for coal), this will require **major federal support for carbon capture at generating plants**, including R&D, tax credits and subsidies, requiring Senate approval. A major scaling up of carbon capture, utilization and storage technology (CCUS) will require a very extensive CO2 pipeline buildout, with potentially tens of thousands of miles of new pipelines needed to carry compressed CO2 to storage caverns. But without subsidies, **installing or retrofitting power plants with carbon capture equipment** will raise costs of generating electricity from natural gas-fired power plants, benefitting the economics of wind and solar at the expense of natural gas.
- Biden's announced plans for **massive subsidies for renewables** ($2 trillion) would further disadvantage natural gas economics. Senate approval would be required.

To summarize, **count on increased headwinds for oil and natural gas infrastructure** under Biden's presidency.

HOT TOPICS

U.S. PROJECTED TO BOOST ENERGY STORAGE BY MORE THAN 500% BY 2025

Battery technology is an often overlooked market in renewable energy, but that is changing as energy storage technology is continuously evolving. New batteries are being researched and developed in a push to find long-duration, cheap storage. It's not just about cost declines, it's also about efficiency.

Driven by falling prices and technological advances that enable batteries to store ever-larger amounts of energy, grid-scale systems are seeing record growth in the U.S. Most new utility-scale renewable energy projects are now including battery storage. Facilities are being built with storage systems that can hold enough renewable energy to power hundreds of thousands of homes.

These sector achievements are largely due to the auto industry's race to build smaller, cheaper and more powerful lithium-ion batteries for electric cars. State clean energy mandates, along with tax incentives for storage systems that are paired with solar installations, are also playing an important role in the growth of energy storage.

A record-breaking 476 MW of storage resources were deployed in the U.S. in the third quarter of 2020, according to a recent report from Wood Mackenzie and the U.S. Energy Storage Association (ESA). This was a 240% increase over the previous quarter.[1] Nationwide, a record 1.2 GW of storage has been installed this year. That number is projected to grow to a total of nearly 7.5 GW — with a $7.3 billion annual market — by 2025, predominantly due to large-scale utility procurements, most of which will be paired with solar resources.[1] The ESA expects energy storage deployment to be 3.6 GW in 2021.[2]

U.S. Quarterly Energy Storage Deployments[3]

Source: Wood Mackenzie.

HOT TOPICS

U.S. PROJECTED TO BOOST ENERGY STORAGE BY MORE THAN 500% BY 2025 (CONTINUED)

A majority of the growth in the third quarter came from front-of-the-meter deployments in California, New Jersey and Arkansas. Front-of-the-meter refers to a stand-alone system that sits "in front" of the meter and feeds power directly into the grid, as opposed to using the power on-site for a single building or facility. The residential storage market had about 7,000 deployments per quarter in 2020 and is set to expand by six times through 2025, with increasingly active markets in New York, Massachusetts, PJM (Pennsylvania, Jersey, Maryland Power Pool), Texas and Florida.[1]

Battery technology has advanced immeasurably in the last decade, demonstrated by huge increases in storage capacity and the falling cost of lithium-ion batteries. The price tag for utility-scale battery storage in the United States dropped nearly 70% between 2015 and 2018, according to the U.S. Energy Information Administration.[5] Market competition and rising battery production also play a role in falling prices. The U.S. National Renewable Energy Laboratory projects mid-range costs for lithium-ion batteries will fall an additional 45% between 2018 and 2030.[5]

The U.S. government is also paying more attention to the sector. The Department of Energy (DoE) just published its first comprehensive strategy on energy storage. The "Energy Storage Grand Challenge Roadmap" (ESGC) identifies cost and performance targets to be met in the coming years, and hopes to establish the U.S. as a leader in energy storage. The ESGC focuses not just on new technologies and research into existing technologies but also on helping companies commercialize these technologies. Over the last four fiscal years, the DoE has invested approximately $400 million per year into energy storage research and development.[2]

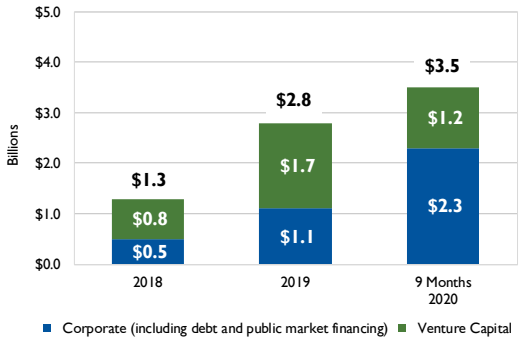
The December 2020 federal relief package to boost the economy due to the impact of the coronavirus pandemic, includes a two-year extension of the solar Investment Tax Credit (ITC), a 30% tax rebate for new solar installations. The legislation also includes the Better Energy Storage Technology Act, authorizing $1 billion over five years for innovation investments in energy storage technology.[2]

The growing trend of integrating storage is making utility-scale renewable energy projects more financially attractive to the capital markets as well, as it enhances the generation profile of the installation. For the first nine months of 2020, venture capital funding for battery storage companies totaled $1.2 billion, while corporate funding (including debt and public market financing) into battery storage companies reached $2.3 billion.[4]

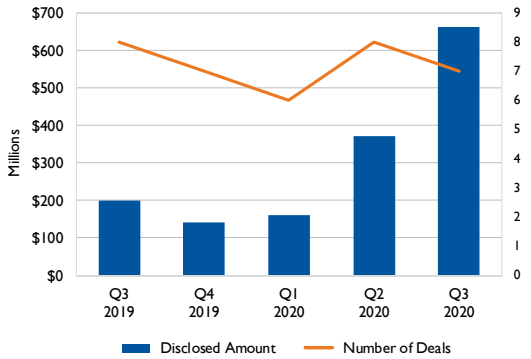
HOT TOPICS

U.S. PROJECTED TO BOOST ENERGY STORAGE BY MORE THAN 500% BY 2025 (CONTINUED)

Battery Storage Investments[4,6] (in Billions)



Venture Capital Battery Storage Investments[4] (in Millions)



In 2019, venture capital funding into battery storage companies increased by 103% to $1.7 billion compared to $850 million raised in 2018. Seventy-eight venture capital investors participated in the sector in 2019 with top investors including BASF Venture Capital, Breakthrough Energy Ventures and Macquarie Capital. Total corporate funding increased to $1.1 billion in 2019 compared to $0.5 billion in 2018. Lithium-ion based battery technology companies received the most funding in 2019 at $1.4 billion.[6]

Increased renewable energy generation and a decrease in battery storage costs have led to a stronger focus on energy storage solutions and grid flexibility services. U.S. leadership in energy storage requires an approach that enables American firms to compete in markets around the world. Energy storage offers an opportunity to identify the most cost-effective technologies for increasing grid reliability, resilience, and demand management. The mass deployment of storage could overcome one of the biggest obstacles to renewable energy — its cycling between oversupply when the sun shines or the wind blows, and shortage when the sun sets or the wind drops.

Sources:
(1) Utility Dive, U.S. Storage Deployments Shatter Record in Q3, with 7.5 GW Projected by 2025: WoodMac, December 3, 2020.
(2) Energy Storage News, U.S. Department of Energy Publishes its 'First Comprehensive Energy Storage Strategy', December 23, 2020.
(3) Energy Storage News, U.S.' record-high quarterly energy storage deployments a 'sign of things to come', December 3, 2020.
(4) Mercom Capital Group LLC, Executive Summary - Battery Storage, Smart Grid, and Efficiency Funding and M&A 2020 First Nine Months Report, October 19, 2020.
(5) Yale School of the Environment, In Boost for Renewables, Grid-Scale Battery Storage Is on the Rise, December 15, 2020.
(6) Mercom Capital Group LLC, Executive Summary - Battery Storage, Smart Grid, and Efficiency Funding and M&A Q4 2019, January 20, 2020.

PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

PETROLEUM PRODUCTS

EQUITY COMPARABLES (1)

Petroleum Products (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Calumet Specialty Products Partners, L.P.	$2,489	$182	7.3%	$2.55	54.3%	$199	$1,574	0.6x	8.6x	7.5x
Chevron Corporation	104,202	15,761	15.1	72.00	58.6	134,443	161,850	1.6x	10.3x	1.8x
CVR Energy, Inc.	4,381	188	4.3	12.38	25.6	1,245	2,416	0.6x	12.8x	5.0x
EnLink Midstream, LLC	3,995	1,052	26.3	2.35	29.0	1,151	7,700	1.9x	7.3x	4.5x
Gibson Energy Inc.	3,966	312	7.9	16.20	76.1	2,369	3,360	0.8x	10.8x	3.4x
Exxon Mobil Corporation	195,860	18,672	9.5	34.33	47.0	145,155	209,064	1.1x	11.2x	3.2x
HollyFrontier Corporation	12,665	341	2.7	19.71	33.5	3,173	5,739	0.5x	16.8x	6.1x
Keyera Corp.	2,468	677	27.4	15.09	55.0	3,334	5,678	2.3x	8.4x	3.6x
Marathon Petroleum Corporation	92,755	3,450	3.7	29.34	42.1	19,091	60,717	0.7x	17.6x	9.5x
Parkland Corporation	11,495	693	6.0	26.43	71.5	3,950	6,897	0.6x	10.0x	3.7x
Phillips 66	76,845	1,322	1.7	51.84	43.2	22,638	37,774	0.5x	28.6x	9.9x
NuStar Energy L.P.	1,495	745	49.8	10.62	36.0	1,160	5,924	4.0x	8.0x	4.8x
Valero Energy Corporation	71,240	3,010	4.2	43.32	42.5	17,664	30,054	0.4x	10.0x	4.1x
Median			**7.3%**		**43.2%**			**0.7x**	**10.3x**	**4.5x**
Mean			**12.8%**		**47.3%**			**1.2x**	**12.3x**	**5.2x**

SELECTED TRANSACTIONS

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
4/24/2019	Anadarko Petroleum Corporation (NYSE:APC)	Occidental Petroleum Corporation (NYSE:OXY)	$57,809.2	4.4x	7.6x
10/22/2018	EnLink Midstream Partners, LP (NYSE:ENLK)	EnLink Midstream, LLC (NYSE:ENLC)	$12,923.5	1.7x	12.2x
8/27/2018	Blue Ridge Mountain Resources, Inc. (OTCPK:BRMR)	Eclipse Resources Corporation (NYSE:ECR)	$348.0	3.6x	12.8x
8/1/2018	Energy Transfer Operating, LP	Energy Transfer, LP (NYSE:ET)	$69,430.8	2.1x	10.9x
5/17/2018	Enbridge Energy Partners, LP (NYSE:EEP)	Enbridge Inc. (TSX:ENB)	$15,925.8	6.6x	10.1x
4/30/2018	Andeavor (NYSE:ANDV)	Marathon Petroleum Corporation (NYSE:MPC)	$35,103.0	0.9x	12.7x
11/8/2017	Alon USA Partners, LP	Delek US Holdings, Inc. (NYSE:DK)	$1,050.4	0.5x	5.9x
4/5/2017	Houghton International Inc.	Quaker Chemical Corporation (NYSE:KWR)	$1,415.4	-	11.8x
2/2/2017	ONEOK Partners, LP	ONEOK, Inc. (NYSE:OKE)	$23,722.4	2.7x	12.9x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

NATURAL GAS

EQUITY COMPARABLES (1)

Natural Gas (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Alliant Energy Corporation	$3,479	$1,354	38.9%	$51.65	85.7%	$12,894	$19,651	5.6x	14.5x	5.0x
AltaGas Ltd.	4,077	898	22.0	12.07	70.7	3,373	9,780	2.4x	10.9x	6.1x
Atmos Energy Corporation	2,821	1,251	44.3	95.59	78.9	11,792	16,360	5.8x	13.1x	3.8x
Avista Corporation	1,306	436	33.4	34.12	64.4	2,317	4,676	3.6x	10.7x	5.5x
Baytex Energy Corp.	739	388	52.5	0.35	21.9	194	1,636	2.2x	4.2x	3.5x
Calumet Specialty Products Partners, L.P.	2,489	182	7.3	2.55	54.3	199	1,574	0.6x	8.6x	7.5x
Cenovus Energy Inc.	10,987	433	3.9	3.90	38.0	4,787	12,364	1.1x	28.5x	16.2x
Chesapeake Utilities Corporation	483	169	35.0	84.30	83.2	1,390	2,131	4.4x	12.6x	4.5x
Corning Natural Gas Holding Corporation	33	10	31.9	17.00	72.3	52	112	3.4x	10.8x	5.3x
Crestwood Equity Partners LP	2,440	446	18.3	12.46	33.7	912	4,581	1.9x	10.3x	5.8x
Dominion Energy, Inc.	16,717	7,482	44.8	78.93	86.8	66,242	110,523	6.6x	14.8x	5.1x
EnLink Midstream, LLC	3,995	1,052	26.3	2.35	29.0	1,151	7,700	1.9x	7.3x	4.5x
Enbridge Inc.	31,096	8,861	28.5	29.20	67.9	59,129	117,763	3.8x	13.3x	5.7x
Enterprise Products Partners L.P.	28,161	7,405	26.3	15.79	54.0	34,515	64,501	2.3x	8.7x	4.0x
Epsilon Energy Ltd.	25	14	54.3	3.03	78.1	72	56	2.2x	4.1x	(0.8)x
Eversource Energy	8,721	2,970	34.1	83.55	84.0	28,630	44,175	5.1x	14.9x	5.3x
Genesis Energy, L.P.	1,976	451	22.8	4.50	20.1	552	4,919	2.5x	10.9x	7.4x
National Fuel Gas Company	1,546	761	49.2	40.59	85.1	3,692	5,782	3.7x	7.6x	3.5x
New Jersey Resources Corporation	1,954	341	17.5	27.02	59.0	2,592	4,893	2.5x	14.3x	7.0x
Northwest Natural Holding Company	761	234	30.7	45.39	58.7	1,387	2,518	3.3x	10.8x	5.2x
MDU Resources Group, Inc.	5,526	812	14.7	22.50	69.8	4,512	6,921	1.3x	8.5x	3.0x
OGE Energy Corp.	2,109	884	41.9	29.99	64.6	6,003	9,504	4.5x	10.8x	3.9x
ONE Gas, Inc.	1,499	484	32.3	69.01	71.2	3,652	5,454	3.6x	11.3x	3.9x
ONEOK, Inc.	8,635	2,448	28.4	25.98	33.1	11,540	25,252	2.9x	10.3x	5.8x
RGC Resources, Inc.	63	21	32.9	23.45	73.3	191	309	4.9x	14.9x	6.1x
South Jersey Industries, Inc.	1,519	407	26.8	19.27	57.6	1,934	5,086	3.3x	12.5x	8.1x
Southwest Gas Holdings, Inc.	3,233	715	22.1	63.10	68.5	3,528	6,285	1.9x	8.8x	3.9x
Summit Midstream Partners, LP	401	230	57.4	9.81	12.3	37	1,976	4.9x	8.6x	6.5x
Targa Resources Corp.	8,161	2,125	26.0	14.03	33.3	3,272	14,470	1.8x	6.8x	3.5x
TC Energy Corporation	9,731	6,239	64.1	41.96	73.0	39,435	80,189	8.2x	12.9x	5.9x
Median			**31.3%**		**66.2%**			**3.3x**	**10.8x**	**5.3x**
Mean			**32.3%**		**59.4%**			**3.4x**	**11.2x**	**5.4x**

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

NATURAL GAS

SELECTED TRANSACTIONS (1)

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
7/27/2020	CNX Midstream Partners LP (NYSE:CNXM)	CNX Resources Corporation (NYSE:CNX)	$764.2	5.1x	6.6x
2/27/2020	EQM Midstream Partners, LP	Equitrans Midstream Corporation (NYSE:ETRN)	$4,395.8	7.6x	8.1x
10/21/2019	AltaGas Canada Inc. (TSX:ACI)	Alberta Teachers' Retirement Fund Board; Public Sector Pension Investment	$1,278.2	5.2x	15.2x
9/16/2019	SemGroup Corporation	Energy Transfer LP (NYSE:ET)	$5,007.4	1.9x	11.2x
8/27/2019	Tallgrass Energy, LP (NYSE:TGE)	The Blackstone Group Inc. (NYSE:BX)	$9,337.3	9.9x	9.9x
5/8/2019	Andeavor Logistics LP	MPLX LP (NYSE:MPLX)	$14,804.7	5.6x	10.6x
4/24/2019	Anadarko Petroleum Corporation (NYSE:APC)	Occidental Petroleum Corporation (NYSE:OXY)	$57,809.2	4.4x	7.6x
11/8/2018	Western Gas Partners, LP (NYSE:WES)	Western Gas Equity Partners, LP (NYSE:WGP)	$13,427.9	6.5x	12.0x
10/22/2018	EnLink Midstream Partners, LP (NYSE:ENLK)	EnLink Midstream, LLC (NYSE:ENLC)	$12,923.5	1.7x	12.2x
10/9/2018	Antero Midstream Partners LP (NYSE:AM)	Antero Midstream GP LP (NYSE:AMGP)	$7,359.7	7.7x	11.5x
9/28/2018	American Midstream Partners, LP (NYSE:AMID)	ArcLight Capital Partners, LLC	$1,595.1	2.0x	14.2x
8/27/2018	Blue Ridge Mountain Resources, Inc. (OTCPK:BRMR)	Eclipse Resources Corporation (NYSE:ECR)	$348.0	3.6x	12.8x
8/1/2018	Energy Transfer Operating, LP	Energy Transfer, LP (NYSE:ET)	$69,430.8	2.1x	10.9x
5/17/2018	Williams Partners LP (NYSE:WPZ)	The Williams Companies, Inc. (NYSE:WMB)	$57,052.1	7.0x	14.1x
4/25/2018	Rice Midstream Partners LP (NYSE:RMP)	EQM Midstream Partners, LP (NYSE:EQM)	$2,443.1	7.7x	9.9x
11/1/2017	Southcross Energy Partners, LP (NYSE:SXE)	American Midstream Partners, LP (NYSE:AMID)	$624.1	1.0x	14.8x
7/19/2017	Avista Corporation (NYSE:AVA)	Hydro One Limited (TSX:H)	$5,332.4	3.7x	11.3x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

PROPANE AND HEATING/FUEL OIL

EQUITY COMPARABLES (1)

Propane and Heating/Fuel Oil (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Ferrellgas Partners, L.P.	$1,503	$243	16.2%	$0.35	32.6%	$34	$2,416	1.6x	9.9x	10.0x
NGL Energy Partners LP	5,920	561	9.5	3.96	28.3	510	4,856	0.8x	8.7x	6.1x
Spire Inc.	1,855	534	28.8	53.20	60.5	2,739	6,001	3.2x	11.2x	6.0x
Star Group, L.P.	1,467	124	8.4	9.75	98.0	426	590	0.4x	4.8x	1.4x
Suburban Propane Partners, L.P.	1,108	256	23.1	16.28	66.6	1,012	2,348	2.1x	9.2x	5.2x
UGI Corporation	6,559	1,577	24.0	32.98	66.4	6,870	13,206	2.0x	8.4x	4.1x
Median			**19.6%**		**63.5%**			**1.8x**	**8.9x**	**5.6x**
Mean			**18.3%**		**58.7%**			**1.7x**	**8.7x**	**5.5x**

SELECTED TRANSACTIONS

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
11/11/2020	Assets of Petroleum Heat and Power Co., Inc.	Superior Plus Corp. (TSX:SPB)	$6.1	-	-
10/15/2020	Central Coast Propane, Inc.	Superior Plus Corp. (TSX:SPB)	$12.9	-	-
9/1/2020	Simmons Energy Solutions Inc.	MFA Oil Company	-	-	-
8/25/2020	Rymes Propane & Oils, Inc.	Superior Plus Corp. (TSX:SPB)	$159.0	-	-
7/28/2020	Champagne's Energy, Inc.	Superior Plus Corp. (TSX:SPB)	$27.3	-	-
2/6/2020	All American Propane, Inc.	ThompsonGas LLC	-	-	-
1/9/2020	Evelyn Jeanne, Inc., d/b/a Western Propane Service	Superior Plus Corp. (TSX:SPB)	-	-	-
11/13/2019	Propane Distribution Assets in New Brunswick and Quebec	Superior Plus Corp. (TSX:SPB)	$3.7	-	-
11/13/2019	Propane Distribution Assets in North Carolina	Superior Plus Corp. (TSX:SPB)	$1.2	-	-
5/9/2019	Sheldon Gas Company/Sheldon Oil Company	Superior Plus Corp. (TSX:SPB)	$15.9	-	-
4/2/2019	AmeriGas Partners, LP (NYSE:APU)	UGI Corporation (NYSE:UGI)	$6,149.2	2.2x	10.5x
3/26/2019	Substantially all of the Propane Distribution Assets of Phelps Sungas, Inc. and BMK of Geneva, Inc.	Superior Plus Corp. (TSX:SPB)	$19.5	-	-

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

DRILLING

EQUITY COMPARABLES (1)

Drilling (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
AKITA Drilling Ltd.	$106	$11	10.5%	$0.21	19.7%	$9	$64	0.6x	5.8x	4.8x
Baker Hughes Company	21,558	2,530	11.7	13.29	51.1	8,723	18,602	0.9x	7.4x	1.4x
CES Energy Solutions Corp.	744	57	7.6	0.59	31.6	155	401	0.5x	7.1x	3.9x
Diamond Offshore Drilling, Inc.	794	54	6.8	0.22	2.8	30	2,120	2.7x	39.1x	39.8x
Ensign Energy Services Inc.	835	205	24.6	0.44	18.8	70	1,179	1.4x	5.7x	5.2x
Halliburton Company	16,399	1,566	9.5	12.05	47.3	10,586	19,599	1.2x	12.5x	5.6x
Helmerich & Payne, Inc.	1,774	356	20.0	14.65	31.0	1,575	1,610	0.9x	4.5x	(0.1)x
Independence Contract Drilling, Inc.	115	14	11.9	2.44	10.1	13	144	1.2x	10.5x	9.5x
National Oilwell Varco, Inc.	7,044	224	3.2	9.06	35.1	3,518	4,925	0.7x	22.0x	4.8x
Precision Drilling Corporation	830	224	26.9	12.46	38.6	171	1,178	1.4x	5.3x	4.2x
Secure Energy Services Inc.	1,592	75	4.7	1.03	25.9	163	552	0.3x	7.3x	4.6x
Valaris plc	1,643	(197)	(12.0)	0.09	1.1	17	6,482	3.9x	NM	NM
Median			**10.0%**		**28.5%**			**1.1x**	**7.3x**	**4.8x**
Mean			**10.5%**		**26.1%**			**1.3x**	**11.6x**	**7.6x**

SELECTED TRANSACTIONS

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
5/4/2020	Quintana Energy Services Inc.	KLX Energy Services Holdings, Inc. (NasdaqGS:KLXE)	$49.6	0.1x	2.1x
10/8/2018	Rowan Companies plc (NYSE:RDC)	Ensco plc (NYSE:ESV) / Valaris plc (NYSE:VAL)	$3,139.1	3.8x	43.9x
10/1/2018	Sidewinder Drilling LLC	Independence Contract Drilling Inc. (NYSE:ICD)	$291.8	2.6x	45.1x
8/27/2018	Blue Ridge Mountain Resources, Inc. (OTCPK:BRMR)	Eclipse Resources Corporation (NYSE:ECR)	$347.9	3.6x	12.8x
8/13/2018	Trinidad Drilling Ltd. (TSX:TDG)	Ensign Energy Services Inc. (TSX:ESI)	$714.0	1.5x	5.1x
6/5/2018	Xtreme Drilling Corp.	AKITA Drilling Ltd. (TSX:AKT.A)	$155.0	2.8x	162.4x
2/15/2018	Layne Christensen Company (NasdaqGS:LAYN)	Granite Construction Incorporated (NYSE:GVA)	$491.9	1.0x	16.5x
5/30/2017	Atwood Oceanics, Inc. (NYSE:ATW)	Ensco plc (NYSE:ESV)	$1,759.6	2.2x	4.7x
5/19/2017	Savanna Energy Services Corp.	Total Energy Services Inc. (TSX:TOT)	$458.2	1.4x	16.6x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

LUBRICANTS AND GREASES

EQUITY COMPARABLES (1)

Lubricants and Greases (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Albemarle Corporation	$3,242	$853	26.3%	$89.28	88.4%	$9,496	$12,617	3.9x	14.8x	3.5x
Ashland Global Holdings Inc.	2,326	440	18.9	70.92	86.7	4,289	6,015	2.6x	13.7x	3.5x
Clean Harbors, Inc.	3,219	541	16.8	56.03	63.4	3,117	4,438	1.4x	8.2x	2.2x
CSW Industrials, Inc.	378	80	21.2	77.25	95.3	1,137	1,147	3.0x	14.3x	(0.2)x
FMC Corporation	4,687	1,280	27.3	105.91	93.1	13,722	17,125	3.7x	13.4x	2.4x
Ingevity Corporation	1,194	376	31.5	49.44	52.2	2,041	3,253	2.7x	8.7x	3.1x
Kraton Corporation	1,565	166	10.6	17.82	55.1	568	1,570	1.0x	9.4x	5.8x
NewMarket Corporation	2,018	413	20.5	342.32	67.8	3,740	4,383	2.2x	10.6x	1.3x
Ocean Bio-Chem, Inc.	52	13	25.3	14.33	63.5	136	136	2.6x	10.2x	(0.1)x
Quaker Chemical Corporation	1,423	187	13.1	179.71	86.3	3,199	4,031	2.8x	21.6x	4.1x
Stepan Company	1,820	233	12.8	109.00	91.7	2,443	2,416	1.3x	10.4x	(0.3)x
Synalloy Corporation	268	5	2.0	5.52	34.6	50	163	0.6x	30.2x	19.5x
Trecora Resources	212	22	10.1	6.14	67.3	152	219	1.0x	10.2x	0.6x
Valvoline Inc.	2,353	599	25.5	19.04	79.7	3,523	5,051	2.1x	8.4x	2.6x
Median			**19.7%**		**73.7%**			**2.4x**	**10.5x**	**2.5x**
Mean			**18.7%**		**73.2%**			**2.2x**	**13.1x**	**3.4x**

SELECTED TRANSACTIONS

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
12/7/2020	Gabriel Performance Products, LLC	Huntsman Corporation (NYSE:HUN)	$250.0	2.4x	11.0x
7/12/2019	Milacron Holdings Corp. (NYSE:MCRN)	Hillenbrand, Inc. (NYSE:HI)	$2,051.1	1.7x	12.9x
4/23/2019	Synalloy Corporation (NasdaqGM:SYNL)	Privet Fund Management, LLC	$308.8	1.0x	10.9x
9/13/2018	MPM Holdings Inc. (OTCPK:MPMQ)	KCC Corporation (KOSE:A002380); SJL Partners; Wonik QnC Corporation (KOSDAQ:A074600)	$2,664.9	1.0x	7.4x
8/15/2018	KMG Chemicals, Inc.	Cabot Microelectronics Corporation (NasdaqGS:CCMP)	$1,606.5	3.5x	13.5x
4/5/2017	Houghton International Inc.	Quaker Chemical Corporation (NYSE:KWR)	$1,415.4	1.8x	11.8x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

SOLAR

EQUITY COMPARABLES (1)

Solar (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Boralex Inc.	$464	$306	66.0%	$28.89	99.5%	$2,962	$5,330	11.5x	17.4x	7.3x
Capital Power Corporation	1,390	820	59.0	22.06	75.6	2,318	5,883	4.2x	7.2x	3.3x
NextEra Energy Partners, LP	911	620	68.1	59.96	93.1	3,929	13,714	15.1x	22.1x	7.8x
NRG Energy, Inc.	9,261	1,980	21.4	30.74	73.6	7,505	13,431	1.5x	6.8x	2.8x
Sunrun Inc.	846	(26)	(3.1)	77.07	98.5	9,780	13,300	15.7x	NM	NM
Median			**59.0%**		**93.1%**			**11.5x**	**12.3x**	**5.3x**
Mean			**42.3%**		**88.0%**			**9.6x**	**13.4x**	**5.3x**

SELECTED TRANSACTIONS

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
1/13/2020	TerraForm Power, Inc. (NasdaqGS:TERP)	Brookfield Renewable Partners L.P. (TSX:BEP.UN)	$10,880.5	9.5x	13.0x
11/4/2019	Pattern Energy Group Inc. (NasdaqGS:PEGI)	Canada Pension Plan Investment Board	$6,293.7	11.5x	16.1x
2/5/2018	8point3 Energy Partners LP (NasdaqGS:CAFD)	Capital Dynamics, Inc.	$1,671.3	23.8x	17.0x
5/4/2017	Up to 20 Megawatts of Solar Energy Power Generation Assets	Kontrol Energy Corp. (CNSX:KNR)	$22.6	-	4.1x
3/7/2017	TerraForm Global, Inc. (NasdaqGS:GLBL)	Orion US Holdings 1 LP	$1,651.8	6.6x	17.2x
1/20/2016	Capstone Infrastructure Corporation	Irving Infrastructure Corp.	$1,435.1	-	12.7x
12/3/2014	Hawaiian Electric Industries, Inc. (NYSE:HE)	NextEra Energy, Inc. (NYSE:NEE)	$4,398.8	1.3x	8.5x

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(2) LTM is defined as last twelve months.
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(4) Net Debt is defined as total debt less cash and cash equivalents.

PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

WIND

EQUITY COMPARABLES (1)

Wind (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Algonquin Power & Utilities Corp.	$1,623	$651	40.1%	$14.52	86.4%	$8,597	$13,932	8.6x	21.4x	5.8x
Avangrid, Inc.	6,260	1,806	28.8	50.46	88.2	15,592	24,548	3.9x	13.6x	4.9x
Boralex Inc.	464	306	66.0	28.89	99.5	2,962	5,330	11.5x	17.4x	7.3x
Brookfield Renewable Partners L.P.	2,806	1,660	59.2	35.03	99.8	14,253	34,684	12.4x	20.9x	10.6x
Innergex Renewable Energy Inc.	442	378	85.6	18.06	99.5	3,150	6,404	14.5x	16.9x	9.1x
NextEra Energy Partners, LP	911	620	68.1	59.96	93.1	3,929	13,714	15.1x	22.1x	7.8x
Northland Power Inc.	1,506	1,076	71.5	30.23	98.7	6,096	12,473	8.3x	11.6x	5.5x
TransAlta Renewables Inc.	316	194	61.3	12.56	91.7	3,348	3,966	12.6x	20.5x	3.0x
Median			**63.7%**	**95.9%**				**11.9x**	**18.9x**	**6.6x**
Mean			**60.1%**	**94.6%**				**10.8x**	**18.1x**	**6.7x**

SELECTED TRANSACTIONS

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
1/13/2020	TerraForm Power, Inc. (NasdaqGS:TERP)	Brookfield Renewable Partners L.P. (TSX:BEP.UN)	$10,880.5	9.5x	13.0x
11/4/2019	Pattern Energy Group Inc. (NasdaqGS:PEGI)	Canada Pension Plan Investment Board	$6,293.7	11.5x	16.1x
10/21/2019	AltaGas Canada Inc. (TSX:ACI)	Alberta Teachers' Retirement Fund Board; Public Sector Pension Investment	$1,278.2	5.2x	15.2x
10/30/2017	Alterra Power Corp. (TSX:AXY)	Innergex Renewable Energy Inc. (TSX:INE)	$745.0	10.6x	31.0x
7/27/2017	Boralex Inc. (TSX:BLX)	Caisse de dépôt et placement du Québec	$3,436.5	12.5x	20.3x
6/19/2017	Pattern Energy Group Inc. (NasdaqGS:PEGI)	Public Sector Pension Investment Board	$4,313.7	12.2x	18.6x
3/7/2017	TerraForm Global, Inc. (NasdaqGS:GLBL)	Orion US Holdings 1 LP	$1,651.8	6.6x	17.2x
1/20/2016	Capstone Infrastructure Corporation	Irving Infrastructure Corp.	$1,435.1	-	12.7x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

OIL AND GAS FIELD SERVICES

EQUITY COMPARABLES (1)

Oil and Gas Field Services (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Archrock, Inc.	$922	$410	44.5%	$5.38	51.6%	$823	$2,655	2.9x	6.5x	4.3x
Baker Hughes Company	21,558	2,530	11.7	13.29	51.1	8,723	18,602	0.9x	7.4x	1.4x
Blueknight Energy Partners, L.P.	310	63	20.3	1.54	86.0	63	(39)	(0.1)x	(0.6)x	4.3x
Cathedral Energy Services Ltd.	39	(8)	(21.2)	0.08	31.9	4	20	0.5x	NM	NM
CES Energy Solutions Corp.	744	57	7.6	0.59	31.6	155	401	0.5x	7.1x	3.9x
Cypress Environmental Partners, L.P.	259	15	5.9	2.12	20.9	26	105	0.4x	6.9x	3.6x
Dawson Geophysical Company	111	7	6.1	1.76	60.1	41	17	0.2x	2.6x	(5.8)x
ENGlobal Corporation	70	1	2.1	0.86	55.4	24	18	0.3x	12.7x	(2.6)x
Enservco Corporation	21	(6)	(27.2)	2.28	38.9	10	50	2.4x	NM	NM
Ensign Energy Services Inc.	835	205	24.6	0.44	18.8	70	1,179	1.4x	5.7x	5.2x
Enterprise Group, Inc.	13	2	12.2	0.18	72.1	9	17	1.3x	10.8x	4.9x
Essential Energy Services Ltd.	74	2	2.7	0.10	27.5	14	21	0.3x	10.6x	2.6x
High Arctic Energy Services Inc	88	7	7.6	0.49	27.3	24	14	0.2x	2.1x	(1.5)x
Hyduke Energy Services Inc.	6	(5)	(83.7)	0.01	50.0	1	0	0.0x	NM	NM
Innospec Inc.	1,273	145	11.4	63.32	58.7	1,556	1,567	1.2x	10.8x	(0.2)x
Matrix Service Company	946	23	2.5	8.35	35.0	221	158	0.2x	6.7x	(2.0)x
Mullen Group Ltd.	887	153	17.2	6.76	87.2	661	1,048	1.2x	6.9x	2.5x
Newpark Resources, Inc.	552	(3)	(0.5)	1.05	13.7	95	215	0.4x	NM	NM
North American Construction Group Ltd.	415	124	29.8	6.51	52.2	190	502	1.2x	4.1x	2.7x
Parkland Corporation	11,495	693	6.0	26.43	71.5	3,950	6,897	0.6x	10.0x	3.7x
Precision Drilling Corporation	830	224	26.9	12.46	38.6	171	1,178	1.4x	5.3x	4.2x
Profire Energy, Inc.	24	(3)	(10.8)	0.74	36.6	35	24	1.0x	NM	NM
ProPetro Holding Corp.	1,070	212	19.8	4.06	33.5	410	373	0.3x	1.8x	(0.3)x
Secure Energy Services Inc.	1,592	75	4.7	1.03	25.9	163	552	0.3x	7.3x	4.6x
Select Energy Services, Inc.	748	32	4.2	3.84	39.7	334	369	0.5x	11.7x	(3.4)x
Shawcor Ltd.	891	10	1.2	1.57	13.9	110	430	0.5x	41.5x	29.7x
Smart Sand, Inc.	145	43	29.5	1.31	44.9	57	97	0.7x	2.3x	1.2x
STEP Energy Services Ltd.	318	14	4.5	0.39	30.6	26	180	0.6x	12.4x	11.4x
USA Compression Partners, LP	688	417	60.7	10.01	54.6	970	3,373	4.9x	8.1x	4.7x
Median			**6.1%**		**38.9%**			**0.5x**	**7.0x**	**3.1x**
Mean			**7.6%**		**43.5%**			**0.9x**	**8.4x**	**3.3x**

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

EQUIPMENT AND PHYSICAL TECHNOLOGY

EQUITY COMPARABLES (1)

Equipment and Physical Technology (United States & Canada)

Company	LTM(2) Revenues	LTM(2) EBITDA	LTM(2) Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value(3)	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt(4)/ EBITDA
AKITA Drilling Ltd.	$106	$11	10.5%	$0.21	19.7%	$9	$64	0.6x	5.8x	4.8x
CSI Compressco LP	389	101	25.8	0.89	29.2	42	717	1.8x	7.1x	6.7x
Enerflex Ltd.	1,045	168	16.1	3.47	36.0	311	650	0.6x	3.9x	1.7x
Exterran Corporation	1,160	165	14.2	4.16	27.9	138	633	0.5x	3.8x	3.2x
Forum Energy Technologies, Inc.	599	(48)	(8.0)	10.99	27.3	61	409	0.7x	NM	NM
Geospace Technologies Corporation	88	7	8.5	6.18	35.0	84	58	0.7x	7.8x	(4.4)x
Gulf Island Fabrication, Inc.	273	(28)	(10.4)	3.13	52.3	48	(9)	(0.0)x	NM	NM
Halliburton Company	16,399	1,566	9.5	12.05	47.3	10,586	19,599	1.2x	12.5x	5.6x
Hanwei Energy Services Corp.	6	(1)	(25.2)	0.01	60.0	2	5	0.8x	NM	NM
Helix Energy Solutions Group, Inc.	744	139	18.7	2.41	24.1	362	752	1.0x	5.4x	1.9x
ION Geophysical Corporation	138	30	21.8	1.50	15.3	23	153	1.1x	5.1x	4.6x
Key Energy Services, Inc.	238	(15)	(6.5)	5.75	7.1	79	130	0.5x	NM	NM
McCoy Global Inc.	31	2	5.7	0.34	65.2	9	13	0.4x	7.3x	2.0x
MIND Technology, Inc.	36	(10)	(27.3)	2.08	62.4	25	48	1.3x	NM	NM
Nabors Industries Ltd.	2,405	658	27.4	24.44	14.6	178	3,499	1.5x	5.3x	4.2x
National Oilwell Varco, Inc.	7,044	224	3.2	9.06	35.1	3,518	4,925	0.7x	22.0x	4.8x
Natural Gas Services Group, Inc.	71	22	31.6	8.45	64.3	113	99	1.4x	4.4x	(1.2)x
Parker Drilling Company	630	129	20.4	3.00	13.1	45	147	0.2x	1.1x	0.8x
PHX Energy Services Corp.	213	26	12.4	1.13	51.7	60	80	0.4x	3.0x	0.6x
RigNet, Inc.	225	25	11.2	4.10	54.8	82	190	0.8x	7.5x	4.0x
RPC, Inc.	686	7	1.1	2.64	48.4	561	449	0.7x	61.6x	(15.6)x
Schlumberger Limited	26,297	4,818	18.3	15.56	37.8	21,599	35,792	1.4x	7.4x	2.9x
SEACOR Holdings Inc.	733	82	11.2	29.08	60.0	591	873	1.2x	10.6x	3.3x
Solaris Oilfield Infrastructure, Inc.	141	49	35.1	6.34	43.0	186	253	1.8x	5.1x	(1.1)x
Superior Drilling Products, Inc.	13	(0)	(0.1)	0.41	39.1	11	15	1.1x	NM	NM
TechnipFMC plc	13,351	1,308	9.8	6.31	26.6	2,836	3,444	0.3x	2.6x	0.3x
TerraVest Industries Inc.	228	40	17.5	11.34	87.6	212	305	1.3x	7.6x	2.3x
TETRA Technologies, Inc.	827	145	17.5	0.51	23.6	64	1,032	1.2x	7.1x	5.9x
Weatherford International plc	4,089	103	2.5	1.95	5.3	137	1,943	0.5x	18.9x	17.0x
Median			**11.2%**		**36.0%**			**0.8x**	**7.1x**	**2.9x**
Mean			**9.4%**		**38.4%**			**0.9x**	**9.7x**	**2.3x**

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

OIL AND GAS FIELD SERVICES AND EQUIPMENT AND PHYSICAL TECHNOLOGY

SELECTED TRANSACTIONS (1)

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
12/7/2020	SEACOR Holdings Inc. (NYSE:CKH)	American Industrial Partners	$845.5	1.5x	11.1x
9/1/2020	OneStim Business	Liberty Oilfield Services Inc. (NYSE:LBRT)	$427.8	0.1x	1.5x
9/1/2020	Calfrac Well Services Ltd. (TSX:CFW)	THRC Holdings, LP	$675.7	0.8x	34.9x
5/3/2020	Quintana Energy Services Inc. (NYSE:QES)	KLX Energy Services Holdings, Inc. (NasdaqGS:KLXE)	$49.6	0.1x	2.1x
2/23/2020	Strad Inc. (TSX:SDY)	Management	$116.6	1.1x	3.5x
11/20/2019	W&W Energy Services, Inc.	Petrofac Limited (LSE:PFC)	$24.8	-	-
6/17/2019	C&J Energy Services, Inc. (NYSE:CJ)	Keane Group, Inc. (NYSE:FRAC)	$699.2	0.3x	2.9x
3/20/2019	Red Bone Services LLC/Tecton Energy Services Ltd.	KLX Energy Services Holdings, Inc. (NasdaqGS:KLXE)	$82.5	-	4.8x
1/20/2019	ZCL Composites Inc. (TSX:ZCL)	Shawcor Ltd. (TSX:SCL)	$233.7	1.7x	12.5x
10/29/2018	Adler Hot Oil Service, LLC.	Enservco Corporation (AMEX:ENSV)	$12.5	0.7x	4.3x
6/5/2018	Xtreme Drilling Corp.	AKITA Drilling Ltd. (TSX:AKT.A)	$155.0	2.8x	162.4x
5/1/2018	KLX Inc. (NasdaqGS:KLXI)	Aviall Inc.	$4,482.9	-	15.7x
4/16/2018	Aveda Transportation and Energy Services Inc. (TSXV:AVE)	Daseke Companies, Inc.	$2,139.8	0.7x	4.8x
1/16/2018	USA Compression Partners, LP (NYSE:USAC)	Energy Transfer Partners, LP (NYSE:ETP); Energy Transfer Equity, LP (NYSE:ETE)	$2,033.4	7.3x	14.3x
1/2/2018	Archrock Partners, LP	Archrock, Inc. (NYSE:AROC)	$2,405.5	4.3x	10.5x
12/11/2017	Pure Technologies Ltd.	Xylem Inc. (NYSE:XYL)	$395.2	4.0x	26.5x
5/19/2017	Savanna Energy Services Corp.	Total Energy Services Inc. (TSX:TOT)	$458.2	1.8x	16.6x
5/15/2017	Ceiba Energy Services Inc.	Secure Energy Services Inc. (TSX:SES)	$27.2	4.5x	29.2x
4/24/2017	Flowchem Ltd.	KMG Chemicals, Inc. (NYSE:KMG)	$495.0	N/A	11.5x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

STORAGE AND TERMINALS

EQUITY COMPARABLES (1)

Storage and Terminals (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Alliant Energy Corporation	$3,479	$1,354	38.9%	$51.65	85.7%	$12,894	$19,651	5.6x	14.5x	5.0x
AltaGas Ltd.	4,077	898	22.0	12.07	70.7	3,373	9,780	2.4x	10.9x	6.1x
Blueknight Energy Partners, L.P.	310	63	20.3	1.54	86.0	63	(39)	(0.1)x	(0.6)x	4.3x
Chart Industries, Inc.	1,270	228	18.0	70.27	90.6	2,529	3,192	2.5x	14.0x	2.7x
EnLink Midstream, LLC	3,995	1,052	26.3	2.35	29.0	1,151	7,700	1.9x	7.3x	4.5x
Equitrans Midstream Corporation	1,570	1,284	81.8	8.46	55.5	3,659	11,814	7.5x	9.2x	5.5x
Gibson Energy Inc.	3,966	312	7.9	16.20	76.1	2,369	3,360	0.8x	10.8x	3.4x
Green Plains Partners LP	82	53	64.0	7.00	47.3	162	320	3.9x	6.1x	2.9x
Magellan Midstream Partners, L.P.	2,582	1,216	47.1	34.20	51.4	7,697	12,648	4.9x	10.4x	4.1x
MPLX LP	8,607	4,644	54.0	15.74	55.7	16,372	39,261	4.6x	8.5x	4.5x
NuStar Energy L.P.	1,495	745	49.8	10.62	36.0	1,160	5,924	4.0x	8.0x	4.8x
Median			**38.9%**		**55.7%**			**3.9x**	**9.2x**	**4.5x**
Mean			**39.1%**		**62.2%**			**3.5x**	**9.0x**	**4.3x**

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

STORAGE AND TERMINALS

SELECTED TRANSACTIONS (1)

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
8/24/2020	Cheniere Energy Partners, LP (AMEX:CQP)	Brookfield Infrastructure Partners LP (NYSE:BIP) and Blackstone Infrastructure Partners, LP	$17,027.5	5.1x	11.3x
7/27/2020	CNX Midstream Partners LP (NYSE:CNXM)	CNX Resources Corporation (NYSE:CNX)	$764.2	5.1x	6.6x
2/27/2020	EQM Midstream Partners, LP	Equitrans Midstream Corporation (NYSE:ETRN)	$4,395.8	7.6x	8.1x
9/16/2019	SemGroup Corporation (NYSE:SEMG)	Energy Transfer LP (NYSE:ET)	$4,991.7	2.1x	13.5x
8/27/2019	Tallgrass Energy, LP (NYSE:TGE)	The Blackstone Group Inc. (NYSE:BX)	$9,337.3	8.9x	11.2x
8/21/2019	Kinder Morgan Canada Limited (TSX:KML)	Pembina Pipeline Corporation (TSX:PPL)	$2,294.7	4.4x	16.3x
5/10/2019	Buckeye Partners, LP (NYSE:BPL)	IFM Global Infrastructure Fund	$10,500.3	2.7x	18.6x
11/8/2018	Western Gas Partners, LP (NYSE:WES)	Western Gas Equity Partners, LP (NYSE:WGP)	$13,427.9	6.5x	12.0x
10/22/2018	EnLink Midstream Partners, LP (NYSE:ENLK)	EnLink Midstream, LLC (NYSE:ENLC)	$12,923.5	1.7x	12.2x
10/18/2018	Valero Energy Partners LP	Valero Energy Corporation (NYSE:VLO)	$4,069.8	7.6x	10.5x
9/19/2018	Dominion Energy Midstream Partners, LP (NYSE:DM)	Dominion Energy, Inc. (NYSE:D)	$10,405.4	13.6x	19.7x
8/1/2018	Energy Transfer Partners, LP (NYSE:ETP)	Energy Transfer Equity, LP (NYSE:ETE)	$69,412.3	2.1x	10.8x
7/30/2018	Four Corners Area Assets	Harvest Midstream Company	$1,125.0	-	13.2x
7/10/2018	Transmontaigne Partners LP (NYSE:TLP)	TLP Acquisition Holdings LLC	$1,254.3	6.1x	11.5x
6/29/2018	Boardwalk Pipeline Partners, LP	Boardwalk GP LP	$6,792.1	5.3x	8.3x
5/17/2018	Enbridge Energy Partners, LP (NYSE:EEP)	Enbridge Inc. (TSX:ENB)	$15,925.8	6.6x	10.1x
4/30/2018	Andeavor (NYSE:ANDV)	Marathon Petroleum Corporation (NYSE:MPC)	$35,101.9	0.9x	12.7x
4/26/2018	Rice Midstream Partners LP (NYSE:RMP)	EQM Midstream Partners, LP (NYSE:EQM)	$2,443.1	7.7x	9.9x
3/26/2018	Tallgrass Energy Partners, LP (NYSE:TEP)	Tallgrass Equity, LLC	$4,176.5	6.4x	6.9x

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

PIPELINES

EQUITY COMPARABLES (1)

Oil and Gas Pipelines (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Antero Midstream Corporation	$1,007	$727	72.2%	$5.37	63.6%	$2,559	$5,645	5.6x	7.8x	4.3x
ATCO Ltd.	3,057	1,262	41.3	28.89	70.0	3,318	12,508	4.1x	9.9x	5.1x
Blueknight Energy Partners, L.P.	310	63	20.3	1.54	86.0	63	(39)	(0.1)x	(0.6)x	4.3x
Crestwood Equity Partners LP	2,440	446	18.3	12.46	33.7	912	4,581	1.9x	10.3x	5.8x
Enable Midstream Partners, LP	2,490	946	38.0	4.14	35.0	1,803	6,600	2.7x	7.0x	4.5x
Enbridge Inc.	31,096	8,861	28.5	29.20	67.9	59,129	117,763	3.8x	13.3x	5.7x
Energy Transfer LP	42,640	9,711	22.8	5.42	39.1	14,611	80,518	1.9x	8.3x	5.4x
Enterprise Products Partners L.P.	28,161	7,405	26.3	15.79	54.0	34,515	64,501	2.3x	8.7x	4.0x
Equitrans Midstream Corporation	1,570	1,284	81.8	8.46	55.5	3,659	11,814	7.5x	9.2x	5.5x
Genesis Energy, L.P.	1,976	451	22.8	4.50	20.1	552	4,919	2.5x	10.9x	7.4x
Gibson Energy Inc.	3,966	312	7.9	16.20	76.1	2,369	3,360	0.8x	10.8x	3.4x
Inter Pipeline Ltd.	1,816	718	39.5	9.81	57.1	4,211	9,623	5.3x	13.4x	7.6x
Kinder Morgan, Inc.	11,937	5,791	48.5	12.33	54.6	27,909	62,859	5.3x	10.9x	5.9x
ONEOK, Inc.	8,635	2,448	28.4	25.98	33.1	11,540	25,252	2.9x	10.3x	5.8x
Plains All American Pipeline, L.P.	26,481	1,854	7.0	5.98	29.1	4,354	17,652	0.7x	9.5x	5.9x
Sanchez Midstream Partners LP	61	27	45.0	0.29	44.9	6	457	7.5x	16.6x	17.0x
Summit Midstream Partners, LP	401	230	57.4	9.81	12.3	37	1,976	4.9x	8.6x	6.5x
Targa Resources Corp.	8,161	2,125	26.0	14.03	33.3	3,272	14,470	1.8x	6.8x	3.5x
TC PipeLines, LP	567	466	82.2	25.58	57.3	1,824	3,839	6.8x	8.2x	4.1x
The Williams Companies, Inc.	7,734	4,203	54.3	19.65	81.3	23,846	48,565	6.3x	11.6x	5.3x
TC Energy Corporation	9,731	6,239	64.1	41.96	73.0	39,435	80,189	8.2x	12.9x	5.9x
Western Midstream Partners, LP	2,848	1,767	62.0	8.00	31.5	3,552	11,590	4.1x	6.6x	4.4x
Median			**38.8%**		**54.3%**			**3.9x**	**9.7x**	**5.4x**
Mean			**40.7%**		**50.4%**			**3.9x**	**9.6x**	**5.8x**

(1) Matching public companies to middle-market companies is an imperfect comparable analysis due to the variables of size, equipment, markets, etc. Nonetheless JKC's research has yielded this list as the closest available.
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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

PIPELINES

SELECTED TRANSACTIONS (1)

Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
10/5/2020	TC PipeLines, LP (NYSE:TCP)	TC Energy Corporation (TSX:TRP)	$2,213.6	7.4x	9.0x
7/27/2020	CNX Midstream Partners LP (NYSE:CNXM)	CNX Resources Corporation (NYSE:CNX)	$764.2	5.1x	6.6x
2/27/2020	EQM Midstream Partners, LP	Equitrans Midstream Corporation (NYSE:ETRN)	$4,395.8	7.6x	8.1x
9/16/2019	SemGroup Corporation (NYSE:SEMG)	Energy Transfer LP (NYSE:ET)	$4,991.7	2.1x	13.5x
8/27/2019	Tallgrass Energy, LP (NYSE:TGE)	The Blackstone Group Inc. (NYSE:BX)	$9,337.3	8.9x	11.2x
8/21/2019	Kinder Morgan Canada Limited (TSX:KML)	Pembina Pipeline Corporation (TSX:PPL)	$2,294.7	4.4x	16.3x
5/10/2019	Buckeye Partners, LP (NYSE:BPL)	IFM Global Infrastructure Fund	$10,500.3	2.7x	18.6x
11/8/2018	Western Gas Partners, LP (NYSE:WES)	Western Gas Equity Partners, LP (NYSE:WGP)	$13,427.9	6.5x	12.0x
10/18/2018	Valero Energy Partners LP	Valero Energy Corporation (NYSE:VLO)	$4,069.8	7.6x	10.5x
10/9/2018	Antero Midstream Partners LP (NYSE:AM)	Antero Midstream GP LP (NYSE:AMGP)	$7,359.7	7.7x	11.5x
9/28/2018	American Midstream Partners, LP (NYSE:AMID)	ArcLight Capital Partners, LLC	$1,595.1	2.0x	14.2x
7/10/2018	Transmontaigne Partners LP (NYSE:TLP)	TLP Acquisition Holdings LLC	$1,254.3	6.1x	11.5x
5/17/2018	Williams Partners LP	The Williams Companies, Inc. (NYSE:WMB)	$57,090.5	7.0x	14.1x
5/17/2018	Enbridge Energy Partners, LP (NYSE:EEP)	Enbridge Inc. (TSX:ENB)	$15,925.8	6.6x	10.1x
5/10/2018	Amberjack Pipeline Company LLC	Shell Midstream Partners, LP (NYSE:SHLX)	$1,928.7	8.2x	9.4x
3/26/2018	Tallgrass Energy Partners, LP (NYSE:TEP)	Tallgrass Equity, LLC	$4,176.5	6.4x	6.9x
8/15/2017	Western Refining Logistics, LP (NYSE:WNRL)	Andeavor Logistics LP (NYSE:ANDX)	$1,843.8	0.8x	14.4x
12/20/2016	Howard Midstream Partners, LP	Alberta Investment Management Corporation	$1,394.7	4.3x	14.4x
11/21/2016	Sunoco Logistics Partners LP	Energy Transfer Partners, LP (NYSE:ETP)	$15,527.3	1.5x	13.7x
10/24/2016	JP Energy Partners LP	American Midstream Partners, LP (NYSE:AMID)	$465.0	-	11.3x

(1) Total Enterprise Value is defined as market capitalization plus total debt less cash and cash equivalents.

PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

TRUCKERS

EQUITY COMPARABLES (1)

Truckers (United States & Canada)

Company	LTM[2] Revenues	LTM[2] EBITDA	LTM[2] Margin	Stock Price 09/30/20	% of 52-Week High	Market Cap	Total Enterprise Value[3]	TEV / LTM Revenues	TEV / LTM EBITDA	Net Debt[4]/ EBITDA
Adams Resources & Energy, Inc.	$1,204	$10	0.8%	$19.90	50.1%	$84	$30	0.0x	2.9x	(3.7)x
ArcBest Corporation	2,841	191	6.7	31.06	88.7	790	836	0.3x	4.4x	0.3x
Covenant Logistics Group, Inc.	853	82	9.6	17.49	84.5	300	584	0.7x	7.1x	1.9x
Daseke, Inc.	1,522	158	10.4	5.37	75.2	348	1,057	0.7x	6.7x	4.0x
Heartland Express, Inc.	657	183	27.9	18.60	81.8	1,513	1,431	2.2x	7.8x	(0.4)x
Hess Corporation	4,885	1,834	37.5	40.93	55.2	12,489	20,710	4.2x	11.3x	4.2x
J.B. Hunt Transport Services, Inc.	9,349	1,238	13.2	126.38	87.6	13,334	14,515	1.6x	11.7x	0.9x
Knight-Swift Transportation Holdings Inc.	4,593	982	21.4	40.70	85.8	6,927	7,805	1.7x	7.9x	0.8x
Landstar System, Inc.	3,836	281	7.3	125.49	89.6	4,816	4,671	1.2x	16.6x	(0.4)x
Marten Transport, Ltd.	864	177	20.5	16.32	81.1	1,349	1,275	1.5x	7.2x	(0.5)x
Old Dominion Freight Line, Inc.	3,951	1,102	27.9	180.92	87.2	21,228	20,854	5.3x	18.9x	(0.3)x
P.A.M. Transportation Services, Inc.	468	56	12.0	37.60	52.5	217	436	0.9x	7.8x	4.4x
Patriot Transportation Holding, Inc.	89	9	9.6	8.95	42.1	30	20	0.2x	2.3x	(1.5)x
Parkland Corporation	11,495	693	6.0	26.43	71.5	3,950	6,897	0.6x	10.0x	3.7x
Roadrunner Transportation Systems, Inc.	1,848	(68)	(3.7)	2.20	17.7	83	494	0.3x	NM	NM
Ryder System, Inc.	8,484	2,233	26.3	42.24	73.6	2,273	9,824	1.2x	4.4x	3.1x
Saia, Inc.	1,789	287	16.0	126.14	88.7	3,264	3,520	2.0x	12.3x	0.7x
Schneider National, Inc.	4,444	587	13.2	24.73	87.9	4,386	3,962	0.9x	6.7x	(0.9)x
TFI International Inc.	3,677	584	15.9	41.79	91.8	3,893	5,209	1.4x	8.9x	1.8x
Titanium Transportation Group Inc.	134	10	7.3	1.17	89.7	43	87	0.6x	8.9x	4.7x
Universal Logistics Holdings, Inc.	1,381	147	10.6	20.86	81.3	562	1,038	0.8x	7.1x	3.2x
USA Truck, Inc.	516	41	7.9	9.45	73.5	79	269	0.5x	6.5x	4.4x
Werner Enterprises, Inc.	2,374	462	19.4	41.99	88.5	2,901	3,022	1.3x	6.5x	0.3x
YRC Worldwide Inc.	4,509	140	3.1	3.92	69.4	209	1,151	0.3x	8.2x	7.0x
Median			**11.3%**		**81.5%**			**0.9x**	**7.8x**	**0.9x**
Mean			**13.6%**		**74.8%**			**1.3x**	**8.4x**	**1.6x**

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PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

TRUCKERS

SELECTED TRANSACTIONS (1)

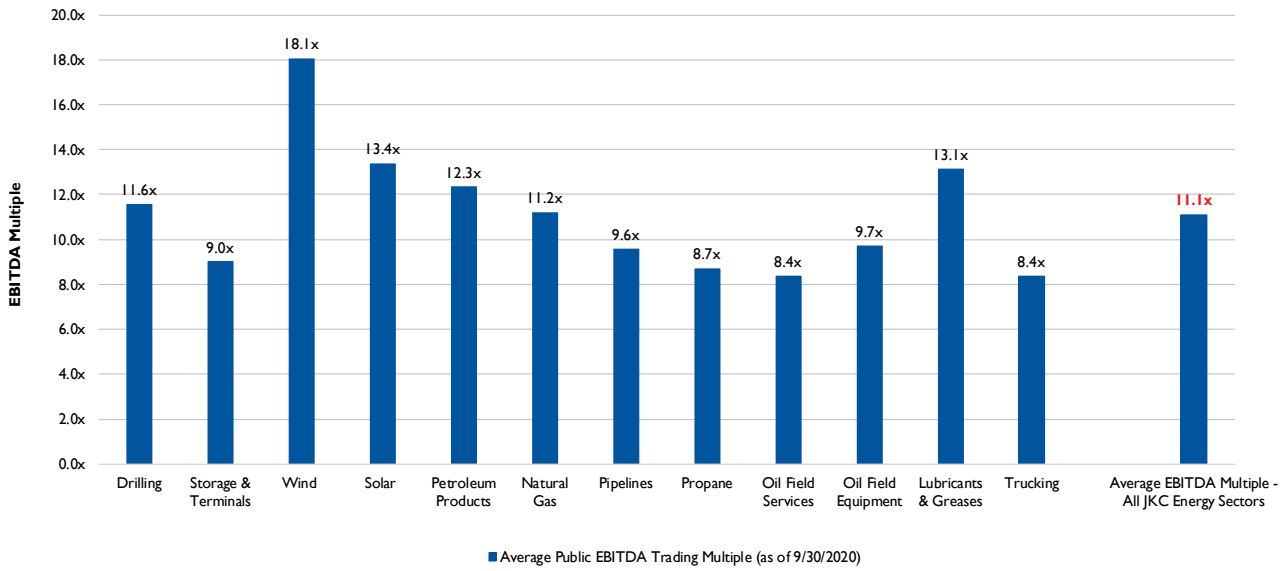
Announced / Closed Date	Target(s)	Acquirer	Total Enterprise Value (TEV)	TEV / Revenues	TEV / EBITDA
2/19/2020	Performance Team LLC	A.P. Møller - Mærsk A/S (CPSE:MAERSK B)	$545.0	1.0x	6.1x
11/5/2018	CaseStack, Inc.	Hub Group, Inc. (NasdaqGS:HUBG)	$255.0	1.1x	11.6x
8/31/2018	Mode Transportation, LLC	York Capital Management	$238.5	-	10.0x
12/7/2017	Keen Transport, Inc.	Wallenius Wilhelmsen ASA (OB:WALWIL)	$64.0	0.8x	6.4x
7/19/2016	Span-Alaska Transportation, Inc.	Matson Logistics, Inc.	$197.6	-	9.4x
5/2/2016	Trimac Transportation Ltd.	Trimac Corporation	$215.9	-	5.9x
9/9/2015	Con-way Inc.	XPO Logistics, Inc. (NYSE:XPO)	$3,057.0	-	6.2x
8/17/2015	Liberty International Inc.	Janel Corporation (OTCPK:JANL)	$2.3	-	26.6x
7/28/2015	Stagecoach Cartage and Distribution, LLC	Roadrunner Transportation Systems, Inc. (NYSE:RRTS)	$40.0	-	5.7x
5/25/2015	Hodges Trucking Company, LLC	Rodan Transport (U.S.A.) Ltd.	$42.0	-	3.0x
5/6/2015	Quality Distribution Inc.	Apax Partners LLP	$823.3	-	12.0x
5/4/2015	Bridge Terminal Transport Inc.	XPO Logistics, Inc. (NYSE:XPO)	$100.0	-	8.1x
4/21/2015	Command Transportation, LLC	Echo Global Logistics, Inc. (NasdaqGS:ECHO)	$391.0	-	10.6x
1/20/2015	Wheels Group Inc.	Radiant Global Logistics Ltd.	$80.1	-	13.5x

(1) Total Enterprise Value is defined as market capitalization plus total debt less cash and cash equivalents.

PUBLIC AND TRANSACTION COMPARABLES BY SEGMENT

AVERAGE PUBLIC EBITDA TRADING MULTIPLES

ALL JKC ENERGY SECTORS (AS OF 9/30/2020)



FACTOIDS: LITTLE-KNOWN FACTS AND STATS

Petroleum Products (1)

- U.S. petroleum consumption fell from 20.1 million barrels per day (b/d) in April 2019 to 14.7 million b/d in April 2020, a 27% decrease and the lowest monthly petroleum consumption in the United States since May 1983.
- Production of crude oil decreased in the United States in May 2020 by 1.99 million barrels per day, the largest monthly decrease since at least January 1980.
- Texas had the largest decrease (14.8%) in crude oil production from April to May 2020 among states and producing regions. Texas accounted for 41% of the national total in 2019.

Natural Gas (2)

- Between 2011 and 2019, 121 U.S. coal-fired power plants were repurposed to burn other types of fuels, 103 of which were converted to or replaced by natural gas-fired plants.
- Natural gas is one of the main sources of energy in the United States. In 2019, U.S. production of dry natural gas increased to almost 34 trillion cubic feet (Tcf) and consumption increased to 31 Tcf—both record values.

Propane and Heating/Fuel Oil (3)

- Department of Energy (DOE) research funding totaled more than $9 million for vehicle technologies utilizing propane for fiscal year 2020. The amount awarded for propane-related projects nearly doubled the $5 million the industry received in appropriations funding for propane engine technology in 2016.
- Six propane-related projects were part of DOE's July pledge of $139 million for 55 projects selected to advance innovative vehicle technologies.
- In 2018, about 3 billion gallons of heating oil were sold to residential consumers in the Northeast, equal to about 85% of total U.S. residential heating oil sales.

(1) U.S. Energy Information Administration.
(2) U.S. Energy Information Administration.
(3) LPGas Magazine and U.S. Energy Information Administration.

FACTOIDS: LITTLE-KNOWN FACTS AND STATS

Lubricants and Greases (1)

- Global demand for lubricants in wind energy reached about 40,000 to 50,000 metric tons in 2019, valued at $400 million to $500 million, as total installed wind energy capacity topped 650 gigawatts.
- With a marked increase in ventilator manufacturing since the onset of the Covid-19 pandemic, there is an increased demand for the specialized lubricants that allow these life-saving machines to operate safely. These ventilators require an oxygen-compatible lubricant/grease. Oxygen-compatible greases can also be used in other high-oxygen applications such as scuba diving equipment.

Solar (2)

- In the last decade, solar installations have experienced an average annual growth rate of 49%.
- As of fall 2019, nearly 250,000 Americans worked in solar - more than double the number in 2012 - at more than 10,000 companies in every U.S. state.

Wind (3)

- In 2019, the wind industry supported 120,000 jobs across all 50 states and Puerto Rico.
- Wind energy supports a thriving domestic manufacturing sector with over 530 factories across 43 states producing components for the wind energy industry.

(1) Lubes N Grease Magazine.
(2) Solar Energy Industries Association.
(3) Clean Power for America.

FACTOIDS: LITTLE-KNOWN FACTS AND STATS

Oil and Gas Field Services (1)

- A Rystad Energy analysis shows the number of drilled wells globally is expected to reach around 55,350 this year, the lowest since at least the beginning of the century. The decline is a staggering 23% fall from 2019's number of 71,946 wells.
- Drilled wells are expected to partly recover to just above 61,000 in 2021. Then numbers will rise further to just above 65,000 in 2022 and remain just below 69,000 until the end of 2025.

Equipment and Physical Technology (2)

- BP's has invested $5 million in Satelytics – a cloud-based geospatial analytics software company that uses advanced spectral imagery and machine learning to monitor environmental changes, including methane emissions.
- A growing number of oil and gas companies are looking to measure and reduce their carbon emissions under increased pressure from shareholders to join the fight against climate change. As a result a growing number of technology companies are now launching carbon emissions tracking and accounting software. In June, Germany's SAP launched a carbon emissions accounting system to help firms manage and reduce their carbon footprint and accelerate the move to sustainable business practices.

Storage and Terminals (3)

- The UK bulk liquid storage industry generated $3.8 billion in revenue in 2019. In the UK and Ireland, the sector employs 3,790 people across 291 terminals. Most of the storage capacity is for oil and its derivatives, with chemicals having the second largest storage capacity.
- Asia is expected to lead the global liquids storage capacity growth, contributing about 49% of the total global capacity growth by 2024. The region is likely to add 56.8 million m3 of liquids storage capacity by 2024.

(1) Oilandgaspeople.com.
(2) Tank Storage Magazine and Oilprice.com.
(3) GlobalData, "Global Liquids Storage Industry Outlook to 2024."

FACTOIDS: LITTLE-KNOWN FACTS AND STATS

PIPELINES (1)

- Five pipeline projects that carry petroleum products were completed in 2019, and the Plantation Pipeline Roanoke expansion became operational in 2020. Petroleum products include gasoline, diesel, jet fuel, and other refinery products.
- In 2019, 14 crude oil pipeline projects were completed, compared with 11 in 2018. An additional three projects were completed as of the end of April 2020. Nine of the crude oil projects completed in 2019 and all three of the 2020 projects were new pipeline projects.

TRUCKERS (2)

- According to the U.S. Department of Transportation, as of May 2019, the number of for-hire carriers on file with the Federal Motor Carrier Safety Administration totaled 892,078, private carriers totaled 772,011 and other interstate motor carriers totaled 84,930.
- Trucks transported 67.4% of the value of surface trade between the U.S. and Canada and 83.5% of the value of surface trade between the U.S. and Mexico in 2018.

(1) U.S. Energy Information Administration.
(2) U.S. Department of Transportation.

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ABOUT JORDAN KNAUFF & COMPANY

Jordan Knauff & Company was founded in 2001 to undertake a distinct mission: to assemble and maintain a staff of top-notch investment banking personnel and offer their knowledge and experience to provide the best available investment banking services to middle-market companies, the entrepreneurs who lead them and the financial entities that transact with them. On a combined basis, over the course of their careers our employees have completed over 200 transactions as investors, owners, operators, buyers, sellers and investment bankers of middle-market businesses across a variety of industries. The majority of our firm's broad transaction experience has been with private companies owned by one shareholder, a partnership, a family or private equity investors.

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ABOUT THE ENERGY EQUIPMENT & INFRASTRUCTURE ALLIANCE

EEIA is a Washington, D.C.-based trade association representing the North American natural gas and petroleum production, transportation and processing infrastructure supply chain. That supply chain is comprised of 60 industries that provide construction, equipment, materials, services and supplies to energy infrastructure and operations. EEIA advocates for sound legislative and regulatory policies at the federal and state levels. Our members include companies, trade associations and labor organizations operating in the energy sector. We advocate for our industries both directly with policymakers, and through mobilization of business leaders and workers to act and speak for the value and benefits of full and responsible development of our energy resources in their communities and with their political leaders.

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