

## Also in this issue:

New wave of activity in North Sea M&A sector

Energy transition impact on oil and gas investment decisions

Reduced OPEC supply boosts oil prices

The magazine for oil, gas and new fuels professionals

August 2019



## Changing landscape

Terminal operators are facing rapid changes in international product flows

Magazine of the

## Editor

Kim Jackson MEI  
+44 (0)20 7467 7118  
kjackson@energyinst.org

## Deputy Editor

Brian Davis  
+44 (0)20 7467 7142  
bdavis@energyinst.org

## Digital Officer

Elliot Tawney  
+44 (0)20 7467 7117  
etawney@energyinst.org

## Editorial enquiries

+44 (0)20 7467 7118  
petrev@energyinst.org

## General enquiries

+44 (0)20 7467 7100  
info@energyinst.org

## Advertising

For advertising opportunities  
please contact: Alexander Basseg  
or Simon Kirby  
sponsorship@energyinst.org

## Magazine subscriptions

Chris Baker MEI  
+44 (0)20 7467 7114  
cbaker@energyinst.org

## Membership

For all membership enquiries please  
contact [membership@energyinst.org](mailto:membership@energyinst.org) or  
visit [www.energyinst.org](http://www.energyinst.org)

## Abbreviations

The following are used throughout  
*Petroleum Review*:

mn = million (10 <sup>6</sup> )	t/d = tonnes/day
bn = billion (10 <sup>9</sup> )	kW = kilowatts (10 <sup>3</sup> )
tn = trillion (10 <sup>12</sup> )	MW = megawatts (10 <sup>6</sup> )
cf = cubic feet	GW = gigawatts (10 <sup>9</sup> )
cm = cubic metres	kWh = kilowatt hour
b/d = barrels/day	km = kilometre
boe = barrels of oil equivalent	sq km = square kilometres
t/y = tonnes/year	

No single letter abbreviations are used.  
Abbreviations go together  
eg 100mn cf/y = 100 million cubic feet  
per year.

Printed by Geerings Print Ltd

Magazine of the



61 New Cavendish Street, London  
W1G 7AR, UK  
Chief Executive:  
Louise Kingham OBE FEI

Terms of control: Petroleum Review is circulated  
free of charge to all paid-up members of the  
Energy Institute. To libraries, organisations and  
persons not in membership, it is available on a  
single subscription of £325 for 11 issues in the UK  
and £500 for overseas subscribers. Single issue  
£30 (UK), £45 (overseas). Agency Commission –  
10%. ISSN 0020-3076.  
Energy Institute Registered Charity No.1097899,  
61 New Cavendish Street, London W1G 7AR, UK.

© Energy Institute 2019. The Energy Institute as a  
body is not responsible either for the statements  
made or opinions expressed in these pages. Unless  
specifically stated, the magazine is not a partner  
with, agent of, or in any other way affiliated with  
any of the advertisers in the publication; nor does  
it endorse any of the products of such advertisers  
or external inserts included with the magazine.  
Those readers wishing to attend future events  
advertised are advised to check with the contacts  
in the organisation listed closer to the date, in case  
of late changes or cancellations. To view the full  
conditions of this disclaimer, visit  
<http://tinyurl.com/pdq4w7d>

# Contents



**North American  
and European  
liquids terminal  
operators are  
being kept on  
their toes by  
rapid changes  
in international  
product flows**

Photo: Business  
Wire

## IN THIS ISSUE...

This month's magazine highlights some of the new construction projects being undertaken by North American and north European liquids terminal operators in response to rapid changes in international product flows. We also explain why this sector still provides an opportunity for investors to see a consistent return on their money.

Meanwhile, our regional feature focuses on recent deal-making in the UK and Norwegian sectors of the North Sea, where merger and acquisitions activity is gaining momentum after a brief pause in 2018 and US oil majors move to other opportunities. We also look at the potential prizes – and challenges – facing companies exploring for hydrocarbons West of Shetland.

The issue also highlights new digital technologies addressing the energy trilemma and takes a look at how the energy transition is beginning to influence oil and gas investment decisions. In addition, we present some of the key changes to energy supplies as revealed by the latest statistics published by BP.

**Kim Jackson**, Editor

## Update & regulars

- 2 Perspective
- 3 Upstream
- 5 Downstream
- 7 Industry

## Features

- 10 **Storage**  
Twin peaks  
Peter Mackay
- 12 Investment – consistent returns  
Dave Noakes
- 14 Putting a seal on Buncefield  
Laszlo Komaromi
- 18 **Risk management**  
Reducing wildfire risk  
Maria Kielmas
- 22 **North Sea**  
New waves of activity  
Brian Davis
- 24 Private equity helps drive  
Norwegian North Sea investment  
Brian Davis
- 28 West of Shetland – potential prizes  
in the offing  
Elaine Maslin
- 30 **Energy transition**  
Digital technology – a matter  
of control  
Ian David
- 32 Finance – a landscape in transition  
Michael Burns and Justyna Bremen
- 34 **Exploration and production**  
Reduced OPEC supply boosts oil  
prices in 2018  
Chris Skrebowski

### Energy insights

The EI Knowledge Service has two new *Energy Insights* to keep you informed about up-to-the-minute energy topics.

- Grapple with the white whale that is low carbon heat, including a case study from a hydrogen demonstration project. Visit [bit.ly/2YPIH89](http://bit.ly/2YPIH89)
- A handy primer on nuclear energy, with further reading for those who want to delve deeper. Visit [bit.ly/2Sc338Z](http://bit.ly/2Sc338Z)

## INVESTMENT

# Consistent returns



**T**his year, 2019, marks a year of change in the oil and gas industry as the world prepares for a period likely to be defined by political instability, trade wars and increased environmental regulation. In a macroeconomic climate underpinned by uncertainty, the resilience and predictability of returns continue to make midstream energy infrastructure an attractive investment sector.

A number of infrastructure-focused private equity firms like Prostar Capital have invested in oil storage terminals over the last few years. Headline deals have included Goldman Sachs and MIRA's investment in dry and liquid bulk terminal operator HES International, and First State Investment's acquisition of Vopak's terminals in Algeciras, Amsterdam and Hamburg. Prostar also recently announced the acquisition of an oil storage terminal facility, to be renamed GTI Statia, strategically located on a Dutch island in the Caribbean. GTI Statia will be the third terminal investment by Prostar's first fund, following earlier investments in the United Arab Emirates (GTI Fujairah and Fujairah Oil Terminal).

Despite significant volatility in the underlying price of oil, these deals are expected to yield consistent returns throughout

**Whatever oil's price, the need to store it has made midstream energy infrastructure a reliable investment, says Dave Noakes, Senior Managing Director, Prostar Capital.**

an entire market cycle, reflecting midstream infrastructure's ability to mitigate commodity price-linked performance. For this reason, increased capital is being deployed into the sector. In 2015, there were only six midstream brownfield deals involving infrastructure funds, according to *Inframation* data. By 2018, *Inframation* tracked 26 deals totalling approximately \$22bn. With the US expected to be the world's biggest oil producer by the end of 2019, this production boom has necessitated a correspondingly massive build-out of transport and storage infrastructure.

#### Key sector drivers

The key fundamentals behind a terminal investment are driven by physical attributes – most notably capacity, operational performance, location and off-take facilities. The most highly sought-after terminals have common characteristics, in that they need to be in close proximity to major shipping and trading routes, exist in a price-

discovery centre for commodities trading, and be located near a large number of players in the area, along with access to typically local refining concentration as well as efficient and transparent financial markets.

The most successful global storage hubs (ie Singapore, Amsterdam/Rotterdam/Antwerp (ARA), US Gulf Coast and Fujairah) have emerged based on a combination of market and local drivers. ARA, one of the most important crude and refined products storage hubs in the world, has risen to prominence through receiving and sending shipments from its strategic location on the Northern Atlantic coast, and then moving supplies to other European countries via the Rhine and other routes. Terminals that are located along major trade routes or the ones that house storage that supports specific local demand generally operate in less competitive environments.

Capacity in desirable locations is sought after by producers, as the majority of the storage is for the purpose of either importing and exporting or industrial storage. Typical contracts for trading, distribution or industrial storage are often longer in length than those for a terminal that operates in a more competitive environment used primarily for contango storage. The trade flows associated with specific geographies therefore form an integral aspect to any terminal investment thesis – independent of the underlying commodity price.

#### Energy sector challenges

While we see increased financial interest, there remain a few uncertainties inherent within the overall energy sector that investors need to keep in mind. New technology and the growth in artificial intelligence (AI), greater legislative emissions controls and export sanctions are currently creating a shifting supply and demand picture for the oil and gas markets. Politically, Brexit has caused instability in the market surrounding customs issues with freight movement in and out of the UK. In addition, the ongoing trade war between the US and China has negatively impacted the demand for oil products and chemicals by clouding the outlook for global growth. Adverse climate conditions such as low water levels in certain geographies and hurricanes in others are also having serious

Fujairah has emerged as one of the most successful global storage hubs, the others being Singapore, Amsterdam/Rotterdam/Antwerp (ARA) and the US Gulf Coast, based on a combination of market and local drivers

Photo: Fujairah Oil Terminal

logistical ramifications across the industry.

Growing economies have historically driven supply and demand for oil products worldwide. However, there has been concern that an oversupply in the markets has led to excess capacity. This was a common occurrence throughout parts of the ARA and Fujairah, particularly prevalent between 2016–2018, which had a downward impact on rates; a trend that has now reversed with strong demand for capacity. It is, therefore, a challenge for financial investors to avoid capacity expansion in the absence of customer demand. Several risks in addition to widespread capacity expansions at existing sites include the potential for market backwardation, as well as overall reduction for oil product demand due to regulations.

As part of the oil product supply chain, tank terminals are largely influenced by logistical factors such as product demand and supply, imbalances and trade flow. In a market defined by backwardation, cargo owners with flexible contracts aimed to lock in short-term contracts at lower rates by either moving terminals or giving back their tanks at the same facility.

IMO 2020 is another common theme currently clouding the terminal storage industry. From 1 January 2020, ships will have to use marine fuels with a sulphur content of no more than 0.5% relative to today's 3.5% limit. The new regulations will be the catalyst for change to bunker fuel specifications, which will reduce demand for high sulphur fuel oil storage in bunker terminals and increase the need to segregate low and high sulphur oils.

Even though all of these risks are worth tracking, most of them have the greatest and most immediate impact on the broader energy sector, rather than directly on midstream infrastructure. Well-positioned midstream energy infrastructure assets have tended to be immune to shorter-term volatility, and growing global economies and rising energy demand over the long term can be expected to revert oil supply and demand back to the norm. Terminals with long-term contracts have historically mitigated short- to medium-term pricing fluctuations well, and will continue to do so with future volatility.

A lot of the demand for storage space at the more competitive terminals is supported as the

market largely returns to contango over the short-term, but the majority of demand is driven by oil and supply chain bottlenecks. Typically speaking, investors should be looking for terminals where producers are seeking to house product for distribution and industrial/off-site storage rather than strategic storage, as the revenue streams are more reliable, resulting in greater conviction in an investment over a longer period.

#### Adapting to increased competition

Despite the potential headwinds outlined above, there continues to be a net positive outlook and growing demand for energy storage. Given the stability and predictability of midstream infrastructure cash flows, we've seen an influx of capital in this segment of the energy sector. With additional players looking to access these stable cash flows, EBITDA (earnings before interest, tax, depreciation and amortisation) multiples have been pushed into the high teens, leading to a need for increased selectivity when choosing infrastructure assets.

The increasing competition in the global oil storage market is prompting existing terminal holders to expand oil storage infrastructure and terminal networks to gain market share and scalability. We have observed some private equity firms hiring management teams from the storage industry to both develop and operate projects, effectively acknowledging the need to bring in outside experts. Prostar, in contrast, has focused on building its own in-house expertise, including selective use of industry specialist operating partners to augment that expertise as required. Storage operators are also using long-term rental or throughput-based contracts to provide insulation from short-term pricing volatility and demand sways. Customer diversity throughout the terminals is also lowering concentration and the associated revenue risks.

Various industry players and financial investors are undertaking strategic collaborations including joint ventures, acquisitions, mergers and partnerships in order to establish a stronger market position. Investors are becoming increasingly creative to meet return requirements. Typically, private equity firms have been attracted to terminals given predictable and steady cash flows over a longer period of time, which can be combined with more traditional private equity-style opportunities for operational

improvement and significant expansion potential. Each of these factors can contribute to an exit multiple above entry.

One positive contributor to the current deal flow is coming from the divestment of non-core assets from master limited partnerships (MLPs). Prostar's recently announced GTI Statia deal where we will acquire the terminal from NuStar Energy exemplifies this trend. MLP structures typically only worked when businesses were supported through periods of significant growth. With performance closely correlated to commodity prices, the MLP model came under pressure when oil prices crashed in 2014 and capital markets tightened.

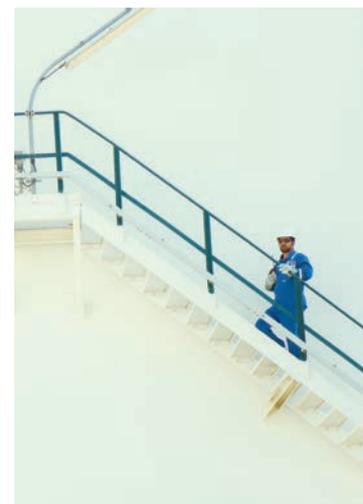
There is particular interest from financial sponsors directed towards more competitive assets that are highly integrated into customers' supply chains offering value-added services such as blending, trucking, shipping and bunkering. These terminals continue to thrive operationally, offering attractive returns and often mitigating general systematic headwinds in the event of a downturn in the oil and gas markets.

From an investor's perspective, it is imperative to have the flexibility of operations within the terminals that allows operators to service customer requirements based on dynamic market demands. Diversity amongst stored product specifications and the ability to conduct product blending is an integral aspect to hedge against product specific risks.

#### Ever-changing landscape

Storage markets have always been changing as a result of regulation, expansion and fluctuations in market dynamics. While there are a number of key risks present within the energy sector, few of them end up having an impact on the outlook for midstream energy infrastructure assets. We anticipate a steady pace of financial sponsors investing in storage terminals and more largely midstream infrastructure, whether individually, in a joint venture or as a part of a consortium.

As institutional investors continue to seek exposure to stable businesses with attractive returns over the long term, experienced managers will have the expertise to select oil terminal investments that provide diversification and a relatively low risk profile. ●



Financiers are stepping up their storage sector investments  
Photo: GTI Fujairah