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The 12th International Fujairah Bunkering & Fuel Oil Forum Fuelling The Future - Solutions & Challenges

23 - 24 March 2021

FUJAIRAH
BUNKERING
Week 2021

In conjunction with the Fujairah Bunkering Week, 15-24 March 2021

Hosted by:



Organised by:



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Vol 24: Issue 3 2021

Oil Review Middle East

www.oilreview.me

UK £10, USA \$16.50

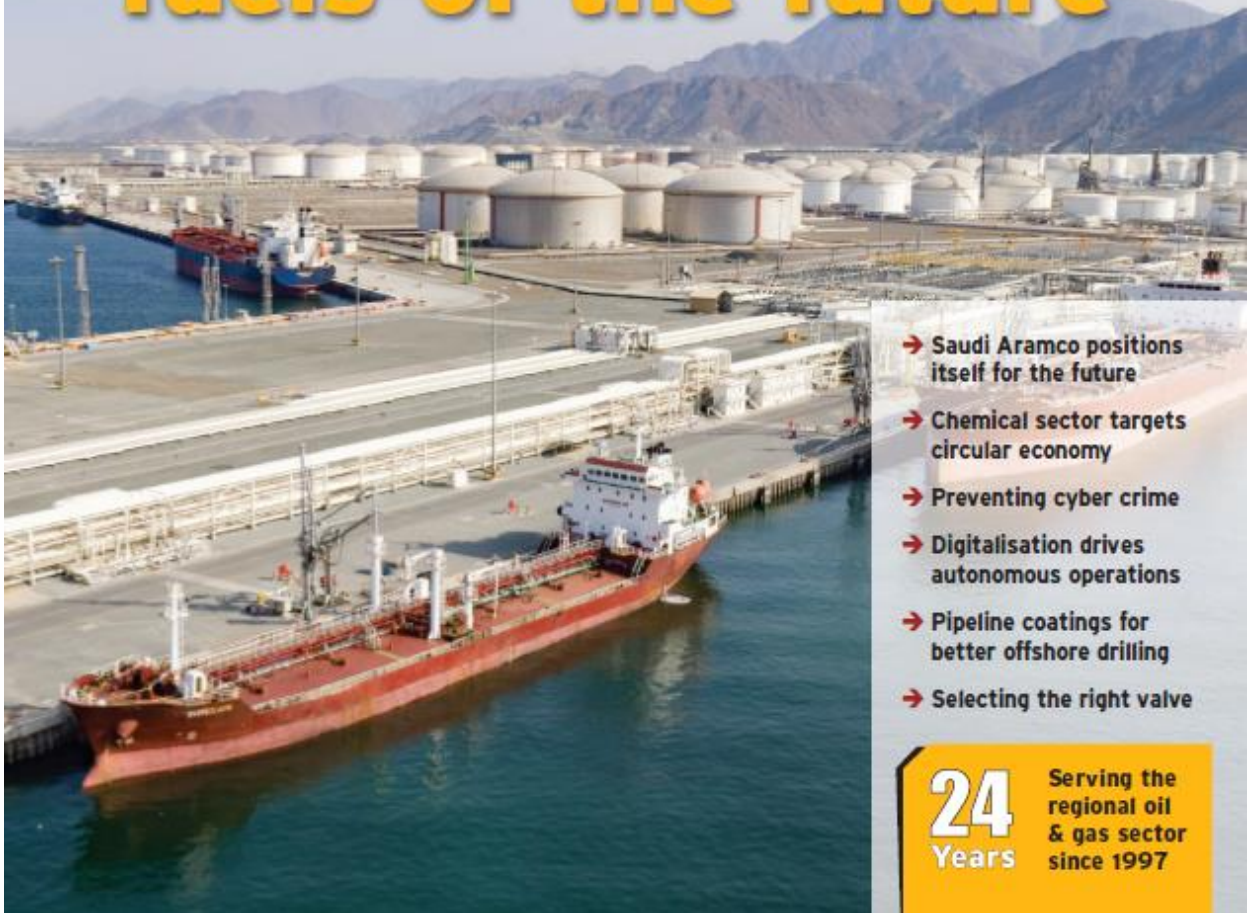
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VOLUME 24 | ISSUE 3 2021

Fujairah prepares for the fuels of the future



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Port of Fujairah prepares for age of transition

At the 12th International Fujairah Bunkering & Fuel Oil Forum (FUJCON), speakers discussed the volatility of the future storage and bunkering market, as an array of fuels are set to come to the fore, and how ports will have to adapt to accommodate this.

THE PORT OF Fujairah is one of the largest commercial ports in the Middle East and is of immense strategic importance for maritime businesses that require service in the region. At the 12th International Fujairah Bunkering & Fuel Oil Forum, organised by Conference Connection, attendees were treated to a host of speakers who explored the development of the port from the beginning of its operations in 1983 to its wide influence today where it holds a variety of accolades such as the second largest bunkering hub in the world, the largest commercial storage capacity for refined products in the Middle East and ranks in the top three largest storage hubs in the world.

Speaking on the importance of the port, Salem Al Hamoudi, director of Fujairah Oil Industry Zone, commented, "Fujairah is perfectly located to bridge the time zone gap between the east and west and benefits from state-of-the-art waterfront infrastructure. Oil storage capacity has seen a growth from 3.2mn cu m in 2011 to more than 10mn cu m in 2018 with 16 national and international oil terminals operating. There are plans for the port to expand its refining capacity to cater for the growing demand for bunker fuel and boost its storage capacity to exceed 17mn cu m in the next three to four years."

Speaking on the recent and future developments of the port Martijn Heijboer, business development manager, Port of Fujairah, added that since 2019 Fujairah has reached some great achievements and milestones including:

- The construction of a service harbour dedicated for utility vehicles to support the Fujairah anchorage area. The port itself can now hold 120 vessels.
- Commencement of the construction of a new deepwater bulk handling terminal which will handle mostly limestone for export but also aggregates from surrounding areas. This is expected to be finished by 2022 and will eventually be transformed into a multi-use facility.
- Completion of a two-year project which



The port of Fujairah has the largest commercial storage capacity for refined products in the Middle East.

Image Credit : Port of Fujairah

“Fujairah is perfectly located to bridge the time zone gap between the east and west.”

included the upgrading of existing container and general cargo terminal and construction of new container handling facilities.

- In terms of bunkering, the port has seen the implementation of IMO 2020 regulation and currently has four bunker barge berths for MGO (marine gas oil) and low sulphur fuel oil (LSFO) loading with 84% of volumes sold last year from these two sources. The Fujairah bunker market did not decline significantly in 2020 but actually witnessed a rather steady year for bunker fuels with close to 9mn cu m sold at Fujairah offshore anchorage.
- Record oil volumes handled at the Fujairah oil department. In 2019 there was a 50% increase from the previous year and 2020 nearly matched this despite the Covid-19 pandemic.

Heijboer continued, "We believe there is still room for growth and perhaps as early as

this year we could take some investment decisions to expand infrastructure. We also see expansion in the storage landscape with 2.4mn cu m in the pipeline related to extension projects, and see some terminals approving their connectivity with the port to accommodate more volumes."

Heijboer added that there are serious talks around jetty expansions, which would be a great chance to add Liquid Petroleum Gas (LPG) loading arms and infrastructure alongside LNG-related facilities.

Bunkering fuels for the future

While the port of Fujairah is currently in a strong position, the representatives recognised that the market for bunkering and storage was dramatically changing alongside the increasing demand for action on climate change. The International Maritime Organisation (IMO) as part of its Initial Strategy to reduce greenhouse gas (GHG) emissions, has committed to cutting the carbon intensity of international shipping by at least 40% by 2030 and to reduce annual GHG emissions by at least 50% by 2050 (compared to 2008). The organisation has noted that a key factor in reaching these goals, will be the adoption of cleaner fuels and the Fujairah

representatives acknowledged that, in the not so distant future, significant investment will be required from ports to accommodate this transition away from fossil fuels. As Lars Liebig, managing director for Uniper Energy DMCC, commented on a separate panel at Fujcon, "No one who is buying green fuels will want it transported to them on a vessel which burns fossil fuels. Inevitably bunker fuels will become green as well."

Liebig and his fellow participants explored a handful of these fuels of the future in more detail:

LNG

Touted as the "bridge fuel" between oil and green fuels, much of the maritime industry has turned its attention to LNG bunkering as a low-hanging fruit to quickly reduce carbon emissions with a report by SEA-LNG and SGMF suggesting that greenhouse gas (GHG) reductions of up to 23% can be made by switching from oil-based marine fuels to LNG.

Many ports have already begun the transition of facilitating LNG bunkering. Saunak Rai, general manager of FuelNG, noted that in Singapore, LNG bunkering is already in full swing with more than 300 truck-to-ship LNG bunkering operations carried out in a safe and cost efficient manner. Regular ship-to-ship bunkering has also commenced from 2021 with the FuelNG Bellina, Singapore's first LNG bunkering vessel. Rai believed that LNG bunkering could thrive in the market now and while it would require continuous investment, bunker providers could make use of much of the existing infrastructure already present in most ports.

Vivek Chandra, LNG entrepreneur from Australia, was optimistic on the future of this fuel, but took a more conservative stance, explaining that while there is an enormous amount of LNG infrastructure in place across the world, this is geared towards supplying large off takers like provincial gas companies and not towards smaller scale supply direct to customers such as bunkering. Additionally, he noted, there is the difficulty of regulations which take a long time to overcome, and so it would be a long while before this could be introduced to ports around the world. In short, LNG was still very much in its 'infant stage'.

LPG

Turning to LNG's distant cousin, Anders Onarheim, CEO of BW LPG, discussed his company's experience with Liquid Petroleum Gas (LPG) whereby they plan to retrofit 15 ships to run off the fuel. He commented, "We see LPG as a reliable fuel, available in major ports with smaller ships able to do ship-to-ship bunkering and it can be made easily stored onshore. We have four ships on the water today, capable of loading and bunkering at the same time and able to use a combination of fuels due to the dual engines – they are performing very well. By retrofitting, rather than building new, we have generated



The Fujcon panelists discussed the future fuel landscape post 2020.

35% less carbon footprint and without too many complications. In the future, the LPG engines can be converted to take ammonia as well. If we want to think broadly, there are around 7,500 ships in total that could be converted to LPG fuel, and we think it is a very good alternative."

The drawback with LPG is its relatively high expense which can, and has, held many companies back from making the investment. Onarheim admitted this was true but suggested that looking at forward prices compared to compliant fuel BW LPG are looking at getting a very nice pay back over the next five to six years.

Methanol

Chris Chatterton, COO of Methanol Institute, championed the use of methanol, a fuel which can be produced from renewable energy and can reduce CO₂, nitrogen oxides and sulphur oxides, not to mention its relative predictable pricing. Chatterton explained, "Methanol is already available in most ports around the world because it is a petrochemical building block and used in fuel blending products. It has been bunkered now for over five years in Sweden and we will likely demonstrate methanol bunkering in May in an EU port which will more or less just demonstrate its simplicity to do so."

Liebig added, "It can be used already with existing infrastructure. You don't actually need to change much with regards to storage/tankage, bunker barges or onboard infrastructure – all you need are a few minor modifications on the vessel. Interest is coming and it is being pushed. There are concerns in the market from industry players but we just need to keep providing solutions."

Biofuels

While often disregarded for the relatively high cost and lack of expertise surrounding it, there have been a number of voices and large companies paying increasing attention to biofuels which emit far less sulphur and carbon

emissions than traditional fuels and can also be blended with them. Taking an unwavering optimistic stance, Gary Hubbard, chief commercial officer of Neutral Fuels, spoke on the versatility and availability of biofuels as a viable alternative to fossil fuels. He commented, "Biofuels is a now solution. We know feedstock is available and I believe it can be a drop in replacement for diesel. They have been available in Europe since the middle of last year and every single metric has been positive. Power output is not reduced, emissions have been reduced. We are literally sitting here with a fuel that ticks all the boxes. The more that can be done in the global waste management sector to optimise our waste into usable biofuels, the cheaper this fuel becomes. Ultimately it is operationally sustainable as well as environmentally sustainable."

A mixed fuelscape

As the panelists observed over the course of the session, the fuels discussed were just a handful of alternatives which have been put forward as an alternative to fossil fuels, to accommodate the transition to a carbon free world. In common with others not touched upon such as hydrogen or ammonia, each had positives but also drawbacks and it was clear that no single fuel would be the solution.

As Rai observed, the future fuelscape is really going to be a fuel mix, incorporating a host of alternative fuels which will be used alongside fossil fuels and, importantly, each part of the world will have a solution where this mix is different. Such a world will pose a challenge for ports such as Fujairah which will need to invest heavily in bunkering and storage facilities in order to accommodate this mix, however, as demonstrated by the first panel and reiterated by Liebig, Fujairah is relatively well positioned to do so, and is making the right investments to stay ahead of this change. If it continues to do so it will be on course to retain and even increase its importance as an energy hub in the Middle East and beyond. ■