Q4 2021

PUBLISHED SINCE 1997

WORLD BUNKERING

THE OFFICIAL MAGAZINE OF IBIA

RACE TO NET ZERO

BATTLE TO IDENTIFY FUTURE FUELS INTENSIFIES



INSIDE THIS ISSUE:

MEPC 77 REPORT

CARBON CAPTURE GOES TO SEA

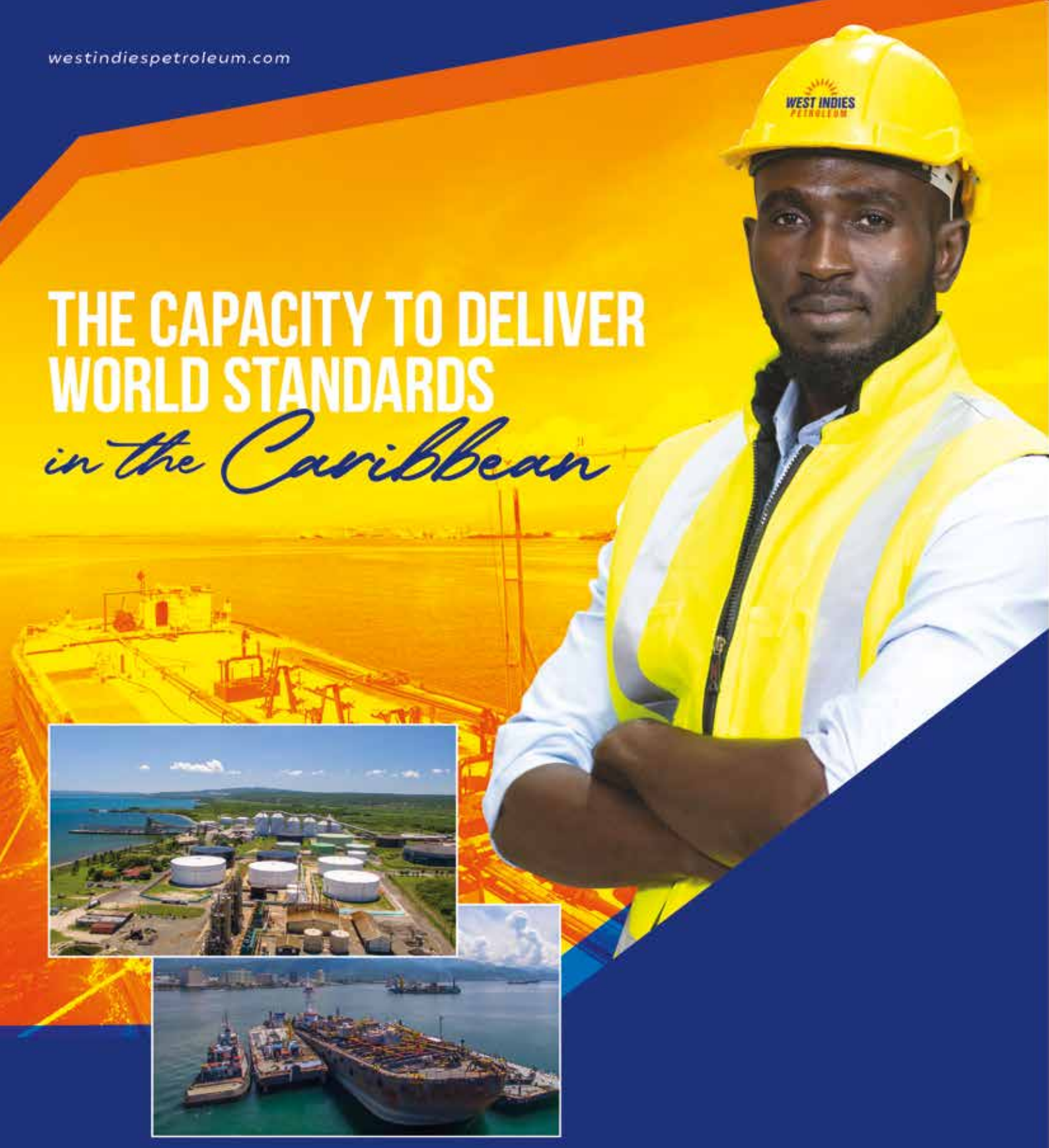
INTERVIEW: CHARLOTTE RØJGAARD

IBIA

INTERNATIONAL BUNKER INDUSTRY ASSOCIATION

westindiespetroleum.com

THE CAPACITY TO DELIVER WORLD STANDARDS *in the Caribbean*



Operating with 1.5 million barrels of storage in the Caribbean and being Jamaica's only ex-pipe bunkering terminal located at the Ocho Rios Cruise Terminal, West Indies Petroleum has become the Caribbean's leading bunker supplier with offshore capabilities in Kingston and other Caribbean ports.

We are proud to be at the forefront of the industry, and will continue our effort to maintain our reputation of integrity and reliability in supply.

WEST INDIES PETROLEUM

RELIABILITY • INTEGRITY • EFFICIENCY

BATTLES ON THE HORIZON

Dear Reader

COP 26 has come and gone. So too has MEPC 77. Our pages do comment to some extent on the former and rather more on the latter.

For shipping, COP 26 had limited direct relevance but there was a certain sense that shipping might have been listened to, a bit, in the margins of the Glasgow jamboree.

But within days, any warm feeling of being noticed that shipping organisations had allowed themselves vanished as MEPC 77 brought them back to reality with the sound of their favourite project being kicked down the road.

So there we have it, another failure at IMO and the only sensible proposal being peremptorily rejected. Or at least that is one widely held view. For a much more balanced and positive account of what the IMO meeting did achieve, read Unni Einemo's report.

As IBIA's director and representative at IMO, there are few people who have a better understanding of what is happening at IMO than Unni. She took the opportunity of MEPC 77 to comment on proposals for a realistic way to move forward towards zero carbon. Her message was that, to stimulate demand for zero carbon fuels, clear regulatory signals are needed. Moreover, a gradual phase-in of a low GHG intensity limit would be the sensible, pragmatic approach.

Right now, however the shipping organisations are focused on keeping their R&D levy proposal alive, and that is reflected in the top story on our Environmental News pages. Their disappointment is palpable and we report in some detail their case that there is a pressing need for additional funds to ensure new fuels and new technologies are developed.

Ironically most of the other stories in the same section are about promising new fuels and new technologies. It is becoming difficult to see where exactly this desperate need for more research funds lies. Nevertheless, the shipowners will no doubt battle on.

Battle lines are also being drawn on precisely what fuels will take us to the zero carbon goal. We report on A.P. Moller-Maersk's significant decision to go for methanol as the fuel for its next generation of very large container ships. The giant liner company plans to develop sources of 'green' methanol. For good measure, its CEO Søren Skou has included LNG in his call to stop further development of fossil fuel use.

Skou's comments have annoyed pro-LNG lobby group SEA-LNG. We carry their rebuttal in our LNG feature, which also reports on the group's welcome for the COP 26 announcement of an international partnership to cut methane emissions by 30% by 2030.

During COP 26 there were repeated calls for a phase-out of fossil fuels, with coal being seen as the chief villain. However, as our Carbon Capture feature reports, technologies that can extract CO_2 from emissions, or even just from the air, are advancing rapidly.

I wouldn't want to give the impression that you will find little else but decarbonisation stories in pages this issue. Far from it, as ever *World Bunkering* covers a wide range of topics, and includes geographical features on Australia, the Middle East and Northern Europe. All three provide grounds for optimism as shipping moves back to something approaching 'normality' despite the continuing pandemic.

For a fascinating insight into quality issues, do read this issue's Interview. In her replies to Unni Einemo, Charlotte Røjgaard, the Global Head for testing and inspection specialist VeriFuel, looks at the key aspects of quality and testing as they affect bunker suppliers and ship operators.

There is much else in this packed issue, including a reminder in Legal that it is still a very bad idea to discharge oil overboard and then falsify the record book.

However, on a more cheerful note as the festive season approaches, many of our pages reflect technical advances in support of our rapidly changing industry.

So with that, I hope the turn of the year affords us all a chance to take a break, and read the pages of *World Bunkering*.

Best wishes

David Hughes
Editor



الخليج لتوزيع البترول

GULF PETROL SUPPLIES

BUNKERS بنكرز

Gulf Petrol Supplies LLC is 100% owned by the largest diversified conglomerate on the East Coast of UAE, the Fujairah National Group which is owned by the Fujairah Ruling Family Members.



FOR FUELLING VESSEL'S ACROSS THE GLOBE



- PHYSICAL BUNKER SUPPLIER IN FUJAIRAH & KHORFAKKAN
- BACK TO BACK TRADING IN WORLDWIDE PORTS
- SERVING WORLDS BIGGEST SHIP OWNERS, CHARTERERS & PROMINENT NAMES IN SHIPPING WORLD
- OWNED INFRASTRUCTURE : OIL STORAGE, TERMINAL & BUNKER BARGES

- GPS holds a 60 % stake in the GPS CHEMOIL Storage Facility (a JV between GPS & Glencore) a state of the art oil terminal with total capacity of 700,000 CBM (Black Oil - 587,000 CBM & White Oil -113,000 CBM).
- In house specialized Shipping Agency & Technical Management which owns & operates 12 vessels, including 2 Bunker Barges running under GPS Bunkers.
- Offering LSFO, HSFO & LSGO

(A Fujairah National Group Company) FNG Building No. 1 , Al Mina Road, P.O Box 121, Fujairah, U.A.E

+971 9 223 5249 marketing@gpsbunkers.com www.gpsbunkers.ae

CONTENTS

7
Chairman's Letter

8
Director's Report

12
IBIA Events

14
IBIA Events
Technology is on IBIA's side

24
IBIA Africa
In Mauritius and looking into the future

28
IBIA Asia
IBIA restarts in-person training

31
New Members

32
Interview
True value

36
MEPC 77
Strong signals for change

43
Northern Europe
Rötterdämmerung

48
Middle East
Oil's well that ends well

51
Additives
Biofuels and additives

52
Fuel Saving
Clean hull, less CO_2

54
Lubricants
Shell upgrades monitoring service

56
Environmental News

61
Scrubbers
EU's qualified approval

62
Australia
On the rebound

63
Innovation
Generating fuel savings

64
Industry News

66
Traders
Adapting to change

68
Carbon Capture
Carbon capture goes to sea

72
Equipment & Services
Meeting NOx Tier III

74
LNG
SEA-LNG supports global methane pledge

77
Legal
Bulker operator fined US$2 million

78
Russian Update
Ban on loading dangerous goods while bunkering "should go"

81
Company News

88
Diary

90
Next Issue

Editor: ***David Hughes***
anderimar.news@googlemail.com

Deputy Editor: ***Unni Einemo***
unni@ibia.net

Project Manager: ***Alex Corboude***
alex@worldbunkering.net

Publisher & Designer: ***Constructive Media***
ibia@constructivemedia.co.uk

On behalf of:
IBIA Ltd, Office 239, New Broad Street House
35 New Broad Street
London, EC2M 1NH, UK

Tel: +44 (0) 20 7417 1803
Email: ibia@ibia.net
Website: www.ibia.net

The views expressed in World Bunkering are not necessarily those of IBIA, or the publishers unless expressly stated to be such. IBIA disclaims any responsibility for advertisements contained in this magazine and has no legal responsibility to deal with them.

The responsibility for advertisements rests solely with the publisher. World Bunkering is published by Constructive Media on behalf of IBIA and is supplied to members as part of their annual membership package.

IBIA
INTERNATIONAL BUNKER INDUSTRY ASSOCIATION

CONSTRUCTIVE MEDIA.

Constructive Media
50 George Street,
Pontypool
NP4 6BY

Tel: 01495 740050
Email: ibia@constructivemedia.co.uk
www.worldbunkering.net

Axiom Global



LEADING BUNKER SUPPLIER IN THE INDIAN SUBCONTINENT

We are commencing bunkering in UAE ports- Dubai (Mina Rashid, Jebel Ali), Abu Dhabi (Mina Zayed), Sharjah (Hamariyah, Khor fakkan)

Discover Our Capabilities & Network

Axion Global is an energy trading & bunkering company headquartered at Dubai, United Arab Emirates. The personnel at the helm at Axiom Global have over two decades of experience in energy trading, risk management & bunkering especially in the Indian subcontinent, Southeast Asia, Middle East and Africa region. Recently we are commencing bunkering operations is UAE Ports of Dubai (Mina Al Rashid, Jebel Ali), Sharjah (Hamriyah, Khorfakkan), Abu Dhabi (Mina Zayed), etc.

Axiom Global is built with a mission to offer and build a sustainable and profitable relationship with our stakeholders and trading partners in the field of energy trading, bunkering and risk management. As bunkering industry is under constant pressure due to its very nature, Axiom Global, strives to "deliver more for less" by offering customized solutions for specific markets with a motto of "Our Word is Our Bond.

Axiom Global strives to offer best and competitive trading experience to their trading partners by controlling the entire supply chain from procurement, storage, blending, shipping, and hedging and simultaneously keeping social responsibility and environment at its core at all stages of the supply chain.

OUR WORD IS OUR BOND

Axiom Global Oil & Gas Trading DMCC

Quality



Quantity



OnTime Supplies



Competitive Prices



Barge Operations & Oil Blending Consultancy



Bunkering



Ship Chartering



Risk Management



UNITED ARAB EMIRATES

Office no. 304, Indigo Tower, Cluster F, J.L.T, Dubai- UAE

+971 55 7255150
+971 4 5148790

info@axiomglobaltrading.com

INDIA

Building No. XI/2175/142, Heaven Plaza Vazhakkala, 7th Floor, Padamugal, Ernakulam, Kerala 682021

+91 9909305848
+91 9847565656

axiomindia@axiomglobaltrading.com

SINGAPORE

11, King Chew Street, #02-11

Singapore 059608

info@axiomglobaltrading.com

Dear IBIA members

2021 is slowly coming to an end and I take this opportunity to reflect on the year that has passed.

For IBIA as an organisation, 2021 was the year where our transition towards becoming more international made some great leaps forward.

As I write this letter, two of our five regional boards are up and running and both with great success and off to a promising start. In addition, the working groups for Americas and Middle East are both established and active, and I expect that by early 2022 we can establish the interim board for Americas. So, all in all, we are on track with the IBIA organisational development.

When Covid-19 entered our lives in 2020, there was some concern from the IBIA board's and our director's side on how our members would respond to the challenges that we were all facing. In 2020, the Covid-19 impact on IBIA was significant and we met many challenges. However, we have since then, with a strong effort from the IBIA secretariat and the IBIA board, managed to steer the IBIA ship through the rough seas. Today, we feel that we have managed to adapt to the changing conditions. We have developed new products and services for our members and IBIA is again sailing in smoother waters.

We have left the concerns about the support from our members behind us, as during 2021 we have experienced both an increase in our membership base and a very strong support for our events, new as well as old. Something we at IBIA are both very grateful and humble about.

On behalf of the entire IBIA Board I would like to extend our gratitude to all members, both the ones who have been supporting us for a long time as well as the new ones, for the continued support to IBIA.

This support confirms to us that the work that IBIA does on behalf of the bunker industry and related business adds value and that our commitment of obtaining more global reach is well received in the market. With the future transition into a more green direction, I personally believe that IBIA will be able to play an important role for the industry, as we all will need to find the ways that brings us within the objective set out for 2030 and 2050.

2021 was also the year in which IBIA rebounded on the digital and virtual platform. We have adapted and learnt how to use the new opportunities, both in terms of our more traditional membership offerings of education and conference, but also with the introduction of membership talks, where a specific topic is discussed in an open and confidential forum among members. We have all found that this has been a great way of increasing the interaction among IBIA members and an offer that supports IBIA's ambition of creating a platform where the industry players can meet and discuss and both gain knowledge but also exchange points of view without necessarily agreeing on the way forward.

The latter will be of essential importance as the green transition will continue. We do not from IBIA see a one-product solution, but lean more towards a variety of energy solutions to serve seaborne transport in a green and sustainable way in the future. Not all of our members will need the same solution or possess the same knowledge to solve the green challenge, but all will need to be aware of the possibilities and the pros and cons of each solution. This is an area where IBIA will be able to both guide and drive the discussions on the well to wake impact of the individual green alternatives.

Even though Covid-19 is still active and we seem to be facing new challenges at present, at IBIA we have been optimistic and we aim at getting back to physical gatherings to some extend during 2022. This includes a sold-out IBIA dinner in London during IP week in February 2022.

We do hope that the conditions will allow us to meet up again and resume our traditional dinner in London and to see as many of you as possible there.

If you want even more value from your IBIA membership, I can only encourage you to reach out to any of our working groups and get engaged. It is in our working groups that you are able to both gain and add value to IBIA and be part of setting the direction for the future of same.

In addition, we encourage you to continue to stay active and participate in IBIA events, whether it is the membership talks or one of our conventions.

Henrik Zederkof
Chairman





LESSONS FOR THE ROAD AHEAD

During 2021, I spoke to IBIA members and others about the road to 'net zero' shipping. In doing so, I think we have plenty to learn from IMO 2020

As we approached the end of another strange year, with Covid continuing to disrupt our pre-pandemic normality, I was invited by S&P Global Platts to speak at their 10th Annual Mediterranean Bunker Fuel Conference. Originally intended to be a hybrid event, mixing in-person and remote participation, they decided to stay fully virtual. That's been the norm this year, although a few in-person and hybrid events have taken place too.

The subject they asked me to deliver a presentation on was a review of how, nearly two years after the transition to the 0.50% sulphur limit, the bunker market responded to 'IMO 2020' and what effect Covid-19 had in the process. Is it job done, or are there still challenges?

Looking back at market reactions in 2016, when the IMO decided to introduce the 0.50% sulphur limit in 2020, and not wait another five years, we could be forgiven for thinking that this was going to be 'mission impossible'. Sound familiar? What can we learn from this significant energy transition as we grapple with the much, much bigger energy transition ahead of us? Quite a few things, I think. Three stand out: we needed that clear deadline, things don't always work out as expected, and we underestimated the industry's ability to adapt.

The 2020 decision was taken on the basis of an availability study commissioned by the IMO, which concluded that there would be sufficient availability of low sulphur fuels in 2020 to meet demand both from shipping and other sectors. There were many misgivings about the study, in particular the assertion that the majority of fuels required in 2020 – almost 74% - would be blends of various refinery streams, including residual fuel oil. With uptake of scrubbers still very low, a predicted 11% of demand being met by ships with scrubbers also looked uncertain. Many thought the 12% expected to be met by distillates with no more than 0.10% sulphur was too low.

Before the availability study, most market observers had been sure that the 0.50% sulphur limit would have to be met chiefly by distillate fuels. Indeed, the share of residual fuels, or heavy fuel oil (HFO) volumes meeting a 0.50% limit in 2018 was less than 2%, according to data from the IMO's sulphur monitoring programme. Another 3% of tested HFO volumes ranged from 0.51% to 1% sulphur, so could relatively easily be blended to compliance, with another 4.5% or so ranging from 1-1.50% sulphur. But the vast majority of HFOs tested in 2018, around 90%, had sulphur content above 1.50%, with the overall HFO average at 2.60% sulphur. Clearly, a big challenge lay ahead, one that refiners in particular would struggle to meet as major upgrades to convert more residual high sulphur fuel oil (HSFO) to higher-value, low sulphur products take time.

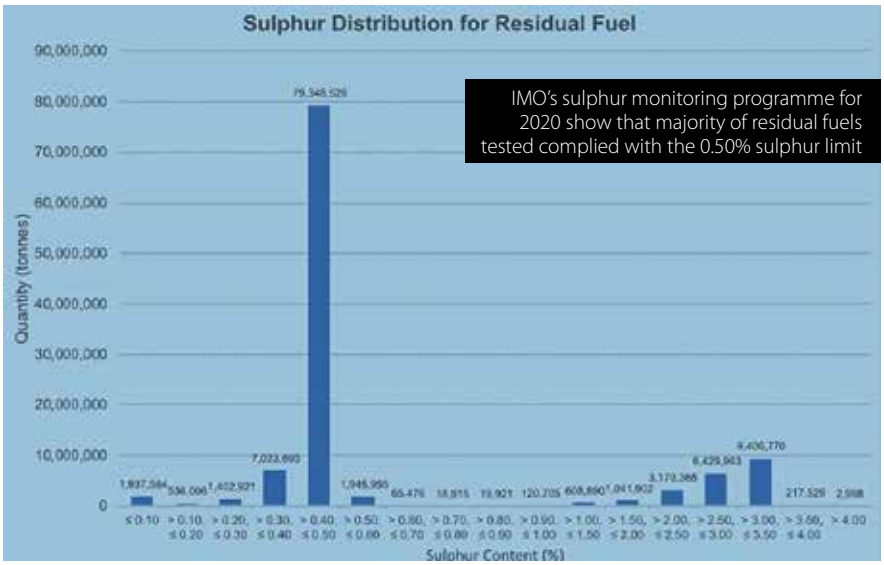
Even after the IMO availability study introduced the idea of fuels between 0.10% and 0.50% being very low sulphur fuel oil (VLSFO) blends, many continued to think that most shipowners and operators would initially prefer using MGO. There were widespread concerns about the quality of VLSFO blends, with persistent suspicions that they would not be safe to use due to instability, incompatibility, non-compliance with the SOLAS flashpoint limit and other quality issues. The fact is that fuels are still blended and sold in accordance with ISO 8217 to be commercially viable, addressing all of these issues apart from compatibility, which was and still is a fuel management issue.

In hindsight, we have seen that VLSFO fuel quality has been better than expected. Test data indicate that VLSFOs are mostly cleaner fuels with better ignition and combustion properties than HSFO. The only expectation that has come true is that VLSFOs have much more variable characteristics, in particular density and viscosity. They also appear to present more challenges with compatibility, and with cold flow properties due to being more paraffinic than aromatic. All these are issues operators need to be aware when handling these fuels. Unfortunately, there has been an increase in fuels testing off-spec for sediment, as well as fuels showing more rapid deterioration in terms of long-term stability. A comparative study undertaken by the technical committee in charge of revision the ISO 8217 standard found that fuels testing above the 0.10% limit for TSA to indicate propensity to form sediments rose from 0.23% of HSFO samples tested in H1 2018 to 1.50% of VLSFO samples tested during H1, 2020. It is a significant increase, and concerning as stability is a critical quality parameter, but thankfully still a small percentage overall. The dreaded increase in fuels testing below the SOLAS flashpoint limit did not materialise in H1, 2020.

Apart from the variability of VLSFO compared to HSFO, hardly any of the other predictions about IMO 2020 came true, which on the whole has been good news!

VLSFO became the fuel of choice, with only a small share of operators choosing to comply by shifting to distillates. Scrubber uptake, after a slow start, picked up more rapidly than predicted. Sales data from the world's leading bunkering port Singapore, and test data from the IMO's sulphur monitoring programme show this very clearly. The latter show that 20% of residual fuels tested in 2020 were above 0.50% sulphur, which correlates fairly well to data on scrubber uptake.

Other surprises were that the supply of compliant fuel was generally good, though there were some market imbalances during the transition period, which was remarkably swift. Fears that the higher cost of compliant fuels would lead to a credit crunch and incentivise



IMO's sulphur monitoring programme for 2020 show that majority of residual fuels tested complied with the 0.50% sulphur limit

widespread cheating were appeased, in large part because the onset of the Covid-19 pandemic accelerated a collapse in crude oil prices amid a dramatic fall in demand for oil products, in particular for road and aviation fuels. An expected oversupply of HSFO and associated price drop compared to compliant fuels did not materialise. This has made the so-called Hi5 spread much lower than expected, making the business case for scrubber installations much less compelling.

The lessons from IMO 2020 that we can take with us for the road to 'net zero', in my view, are largely positive. The supply challenge, which looked insurmountable to many, was overcome. The market responded to IMO 2020 with innovation in fuel blending, refiners found ways to produce more compliant fuels, uptake of abatement technology and alternative fuels like LNG increased. Supply and technical challenges were identified and, with the help of communication and cooperation among industry stakeholders, they were largely overcome.

What is also clear, however, is that none of this would have come to pass without a clear deadline. Hardly any owners began using compliant fuels until very late in 2019 due to the higher cost, making the challenge for the supply side very hard. This is why, in the message I delivered to IMO at MEPC 77 in November, I stressed that we will need the right regulatory signals to help drive the market toward low and zero carbon fuels and technologies. Price signals are clearly important. Phasing in a low GHG fuel standard also holds promise as we have, with IMO 2020, demonstrated that the market is adept at responding to demand. Change happened when needed. Let's hope that, in the not-too-distant future, we can look back on the marine fuels and shipping sector and conclude that we have met the ambitions of the IMO's initial GHG strategy, and are making good progress toward net zero.

Unni Einemo,
Director, IBIA
E: unni@ibia.ne



MTI

Oil Marketing
& Trading International

Marine Fuels in the UAE

CELEBRATING 20 YEARS

Office 2001, Saba Tower 1, JLT
DUBAI, UAE
Tel: 00971 4 4350500
Fax: 00971 4 4350505
E-mail: bunkers@oil-marketing.com

12 Kithiron Street, Alimos 17455
ATHENS, GREECE
Tel : +30 2109609860
Fax : +30 2109609861
E-mail: bunkers@oil-marketing.com

12 Eu Tong Sen Street, #05-168 The Central,
SINGAPORE 059819
Tel: 0065 6222 4028
Fax:0065 6222 4027
E-mail: singapore@oil-marketing.com

WEB: WWW.OIL-MARKETING.COM

FLUECHEM

AUS40 AND CAUSTIC SODA 50% DELIVERED WORLDWIDE.
WHEN YOU NEED IT AND WHERE YOU NEED IT.



Fluechem's **global experience** with **local knowledge** means you can rely on us for a **practical and cost-effective solution** for all your exhaust gas reduction chemicals, even at short notice.

SAVE TIME, SAVE MONEY, STAY COMPLIANT
Contact Fluechem today at **www.fluechem.com**

ADVERTISE IN

WORLD BUNKERING

Increase your visibility to the GLOBAL BUNKER INDUSTRY with an advert in World Bunkering. The ONLY official magazine to IBIA.

For more information about our media packages or to make a booking please contact:

Alex Corboude Project Manager, IBIA's World Bunkering on
Tel: + 44 207 386 6119
Mob: +44 7957 472 317

Email: alex@worldbunkering.net

www.**worldbunkering**.net


Posidonia
6 - 10 June 2022
Metropolitan Expo, Athens Greece
www.posidonia-events.com

IBIA EVENTS PROGRAMME 2022

ONLINE BUNKER TRAINING COURSE		
MODULE 1 TO PURCHASE	Bunker Market Regulations and Enforcement	Online at www.ibia.net
MODULE 2 TO PURCHASE	Understanding ISO 8217 and ISO 4259	Online at www.ibia.net
MODULE 3 TO PURCHASE	Best practice for suppliers with VLSFO	Online at www.ibia.net
MODULE 4 TO PURCHASE	Best practices for users with VLSFO	Online at www.ibia.net
MODULE 5 TO PURCHASE	Adapting to a changing market	Online at www.ibia.net
MODULE 6 TO PURCHASE	Compatibility and stability - Issues with VLSFO fuels and the measurement of Stability	Online at www.ibia.net
MODULE 7 TO PURCHASE	Sales terms and conditions - The purpose, structure and application of Sales terms	Online at www.ibia.net
MODULE 8 TO PURCHASE	Quantity measurement - The principles of quantity measurement including Mass Flow Metering	Online at www.ibia.net
MODULE 9 TO PURCHASE	Sampling - The basics of sampling, sampling methods and sample handling	Online at www.ibia.net
MODULE 10 TO PURCHASE	Fuel quality - Impact on storage, treatment and use in the engine	Online at www.ibia.net
MODULE 11 TO PURCHASE	Alternative Fuels	Online at www.ibia.net
MODULE 12 TO PURCHASE	Bio Fuels	Online at www.ibia.net
MODULE 13 TO PURCHASE	Exhaust Emissions	Online at www.ibia.net
MODULE 14 TO PURCHASE	Introduction to LNG Bunkers *NEW*	Online at www.ibia.net
5 MODULES TO PURCHASE	The IBIA Basic Bunkering Course *NEW*	Online at www.ibia.net
JANUARY		
05 - 06	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
19 - 20	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
FEBRUARY		
09 - 10	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
16 - 17	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
21	IBIA Annual Dinner 2022	London, UK
23	IBIA Conference	London, UK
MARCH		
09 - 10	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
10	IBIA Member Meeting	Online at www.ibia.net
23 - 24	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
APRIL		
06 - 07	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
12	IBIA Member Meeting	Online at www.ibia.net
20 - 21	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
MAY		
11 - 12	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
12	IBIA Member Meeting	Online at www.ibia.net
25 - 26	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
JUNE		
08 - 09	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
22 - 23	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
22	IBIA Conference	Istanbul, Turkey
JULY		
06 - 07	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
20 - 21	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
AUGUST		
03 - 04	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
24 - 25	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
SEPTEMBER		
07 - 08	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
13 - 15	IBIA Mediterranean Energy and Shipping Conference	Malta
21 - 22	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
OCTOBER		
05 - 06	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
19 - 20	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
NOVEMBER		
09 - 10	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
14 - 18	IBIA Annual Convention 2022	Huston, USA
23 - 24	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
DECEMBER		
07 - 08	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
14 - 15	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia

BUNKERING INDUSTRY EVENTS 2022

FEBRUARY		
15 - 16	Strategies for Alternative Fuels & Decarbonisation 2030 Beyond	Online
MARCH		
7 - 11	Middle East Bunkering Convention	Dubai, UAE
16 - 18	Asia Pacific Maritime 2022	Singapore, Asia
21 - 25	The Oxford Bunker Course	Oxford, UK
22 - 25	World Petrochemical Conference	Houston, USA
29 - 31	CMA Shipping	Stanford, USA
APRIL		
4 - 8	Singapore Maritime Week 2022	Singapore, Asia
25 - 27	Ship Energy Summit	Valencia, Spain
MAY		
9 - 13	Portugal Shipping Week	Lisbon, Portugal
10 - 12	The International Bunker Conference IBC	Oslo, Norway
23 - 27	Maritime Week Americas	Panama
JUNE		
6 - 10	Posidonia 2022	Athens, Greece
20 - 24	Maritime Week Las Palmas	Las Palmas, Canary Islands
OCTOBER		
3 - 7	Maritime Week Americas	Fort Lauderdale, USA
18 - 19	Marine Energy Transition Forum	Antwerp, Belgium
20 - 21	ARACON 2022	Rotterdam, Netherlands
TBC	SIBCON 2022	Singapore, Asia



London



Malta



Turkey



Houston

**All dates were correct at time of going to print but may be subject to change, please refer to IBIA's website (https://ibia.net/events/) for any updates*



TECHNOLOGY IS ON IBIA'S SIDE

IBIA is turning a page and starting its physical events and activities again, taking advantage of the digital experience we have gained and aiming to continue reaching out the industry at a global level

The IBIA Annual Convention was held, for a second year, on a digital format, as Covid-19 restrictions made travel difficult for some of our members.

The Convention kicked off with a welcome address from IBIA Director and IMO Representative Unni Einemo and IBIA Chairman Henrik Zederkof, as well as a keynote speech from IMO Secretary General Kitack Lim.

"There can be no doubt that we are in the process of evolution," Lim said in his speech. "Future low- and zero-carbon fuels will need to be supplied to ships which are already themselves undergoing innovation in design and operation to meet mandatory IMO efficiency measures. To achieve this, new marine fuels will need to be developed and the infrastructure built to deliver these fuels to the ships. The bunker industry will be at the forefront of this transformation."

Over the course of the Convention, from 2 to 4 November, IBIA arranged 11 panel discussions with speakers from across the world, discussing the key issues facing the industry.

The programme also included two live workshops. The first was Future Fuels , moderated by the chairman of the IBIA Future Fuels working group, Constantinos Capetanakis, Bunker Director of Starbulk SA and IBIA Board Member. Our attendees joined the panellists and members of the working group to participate in an interactive live extended Q&A/workshop. This workshop explored what we should expect in the years ahead, how the new fuels will work in engines and what preparations need to be done for the zero-carbon transition.

The second workshop was the 'Bunker Surgery', moderated by Adrian Tolson - Director and Lead, Blue Insight and IBIA Board Member. This covered how IBIA is taking an increasingly vital role in representing the bunker industry and the challenges of regulation and decarbonisation. IBIA is committed to helping our members and industry stakeholders be ready for this transition. As part of the IBIA 2021 Convention, we invited both members and non-members to join us for this unique session and gave them the opportunity to interact directly with the IBIA Board Members.

On the first day of the convention the panels covered the regulatory environment at the IMO and in the European Union, a conversation among top bunker executives about the state of the industry, shipping's difficult past decade and the energy transition over the next twenty years. The day ended with a workshop debating the future fuels the industry will be trading in before too long.

On the second day, the panels focused on prospects for the industry across IBIA's five key regions, how marine fuels are priced, the current situation with bunker quality and the supply chain challenges in today's market. The day ended with a workshop discussing IBIA's changing role and how the organisation can better help its members and the industry more widely.

On the third day panel discussions centred around the enforcement of emissions regulations, bunker licensing systems, mass flow meters and the increasing digitalisation of the bunker industry.



A special thank you and closing remarks were given by Sofia Konstantopoulou, Global Head, Marketing & Events. She said: "We would like once again to thank the Secretary General of the IMO Mr Kitack Lim and recognise the contribution from our moderators and panellists, our Gold sponsor: Bunker One, our Bronze sponsors: Cockett Marine Oil; Island Oil Holdings, Methanol Institute, Simms Showers, Starbulk SA, Petrol Ofisi and the Turkish Chamber of Shipping. Of course Our Media partner: Ship & Bunker and our Exhibitors: AMSOL, Prime's Bunkersplus Services, Termoil and Terpel as well as thank our supporting associations and media sponsors."

Moving to the most anticipated event of the year for the bunkering industry, we are looking forward to welcome our members and their guests on 21 February at the IBIA Annual Dinner in London. Tickets are now a sold out but in the meantime we will continue updating you on our other exciting in-person events planned for 2022.

IBIA continues running a comprehensive series of **online training courses** to educate, inform and help the members of our industry to understand the international regulations, and offer guidance on how best practice and the application of international standards can improve their ability to source, supply and use the fuels required now and in the medium term. Adding to our range, IBIA has just launched the 14th module, **'Introduction to LNG Bunkers',** as an addition to the **IBIA Basic Bunkering Course**, a programme of training modules designed to introduce new entrants or staff with limited knowledge of the bunker industry to the most important aspects of the bunker industry.

It is IBIA's honour to represent the bunkering industry, giving it a voice that is listened to and helps maintain a high profile voice for this vital sector. We are striving to ensure that the steps we take are in the right direction, for the benefit of our members and the industry as a whole.

Make sure you add to the voice of bunkering! If you and your company wish to join the IBIA community, participate in the members meetings, actively contribute to our working groups and attend conferences and training courses, you can become an individual or corporate member now! You can access all information on our website **www.ibia.net.**

Follow our social media:

https://linkedin.com/company/ibia.net

InternationalBunkerIndustryAssociation/

ibiabunkers

@IntBunkIndAssoc

Get in touch with us at ibia@ibia.net
Sofia Konstantopoulou
Global Head of Marketing & Events
T: +30 6986 624 069
M: +44(0)7531 918 914
E: sofia.konstantopoulou@ibia.net




IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Welcome
IBIA
Henrik Zederkof
Senior Director, Bunker Holding and IBIA Chairman


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Welcome
Unni Einemo
IBIA Director and IMO Representative


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
WORKSHOP
IBIA Bunker Surgery
SIMMS SHOWERS


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Future Fuels Workshop
Empower Energy Evolution
probunkers


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 1:
Regulatory Updates
Gain first-hand insights of the latest updates from the IMO and how the EU's Fit for 55 package will affect shipping and bunkering
Steve Simms
Principal, Simms Shower LLP
Jeffrey G. Lantz
Director of Commercial Regulations and Standards (CG-5PS), U.S. Coast Guard
Robert Harper
CEO, Euro Eco Fuels
Unni Einemo
Director and IMO Representative, IBIA


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 2:
Leadership briefing: Top bunker supplier and trader executives
Mustafa Muhtaroglu
Founder, Energy Petrol
Cem Sarai
CEO, Cockett
Chrysostomos Papavassiliou
Managing Director, Island Oil (Holdings) Limited
Peter Zachariassen
CEO, Bunker One
Timothy Cosulich
CEO, Fratelli Cosulich


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 3:
Shipping's Challenging Decade – dealing with the energy transition
Sadan Kaptanoglu
Shipping Manager, Kaptanoglu Shipping
Dragos Rauta
Technical Director, INTERTANKO
Peter Aylott
Director of Policy, UK Chamber of Shipping
INTERCARGO
Dimitris Monioudis
Technical Committee Vice-Chairman, INTERCARGO
Cihan Ergenc
Chairman, Turkish Shipowners Association


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 4:
What is the path for energy transition in the next 20 years?
Constantinos Capetanakis
Bunker Director, Starbulk SA
Mark Smith
Loss Prevention Executive,
The North of England P&I Association Limited
Guido Cardullo
Head of Business Development, Fratelli Cosulich Spa
Henrik Zederkof
Senior Director, Bunker Holding
Michael Banning
Associate | Thermal Science, Exponent
Chris Chatterton
COO, Methanol Institute


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 5:
Regional focus on prospects for bunker markets around the world
Jack Jordan
Managing Editor, Ship & Bunker
Timothy Cosulich
CEO, Fratelli Cosulich - (Asia)
Jon Hughes
Managing Director, SABT - (Africa)
Davide Anghinoni
Bunker Desk, Saras Trading SA - (Europe)


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 5:
Regional focus on prospects for bunker markets around the world
Jack Jordan
Managing Editor, Ship & Bunker
Zach Stansbury
Commercial Director, GCC Supply and Trading - (Americas)
Colin Holloway
Global Head - Technical, Cockett - (Middle East)


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 6:
Price Mechanism for current and future Marine Fuels
Thomas Washington
Senior Writer, Transport Fuels
Paul Hardy
Business Development, Nautical Supply
Ishaan Hemnani
Founder, BunkerEx
Thomas Sosnowski
Managing Editor, American Marine Fuels, OPIS by IHS Markit
Stefka Wechsler
Marine Fuel and Fuel Oil Price Analyst, Argus


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 7:
Bunker Quality - How is it changing
Chris Turner
Manager Bunker Quality and Claims, Integrd Fuels
Wajdi Abdmessih
President, Seahawk Services
Gunnar Kjeldsen
Global Business Development Manager, Bureau Veritas
Monique Vermeire
Fuels Technologist, Marine and Powergen, Chevron
Timothy Wilson
Principal Marine Consultant Engineer, FTIMRS, Lloyd's Register
Unni Einemo
Director and IMO Representative, ISM


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 8:
CREDIT - Supply Chain Challenges in Todays Bunker Market
Sinan Utlu
Head of Credit, Maersk Oil Trading
Kieran Michael C. Brown
Group Credit Manager, Inland Oil (Holdings)
Hasan Ozturk
Senior Credit Analyst, Dynamar
Panos Panousis
Managing Director, Infospectrum
Jonathan McIroy
Head of Trading - Bunker, Al-gharar Energy


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 9:
Enforcement: What to expect?
John Sze
Deputy Managing Partner, Joseph Tan Jude Benny LLP
Bjarke Staal
General Manager, Temaal
Russell Amacher
Environmental Compliance Coordinator, U.S. Coast Guard Headquarters, Office of Commercial Vessel Compliance
Unni Einemo
Director, IMO Representative, IBIA
Steve Simms
Principal, Simms Showen LLP
Princet Ang
Assistant Director for MPA's Flag State Control Department
Mark Smith
Loss Prevention Executive, The North of England P&I Association


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
SESSION 10 Q&A:
Bunker Licensing and Mass Flow Meters
Helle Graesdal
Eddie Fish
Alexander Prokopakis
Svend Stenberg Melholt
Oguz Onalan
Ron Van Gelder
TERMOIL
Bjarke Staal
Nicolas Yerie Vukelja Duque


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Session 11:
Bunkering and Digitalisation
Christian Plum
Co-founder, Bunkermetric
Darren Shelton
CPO, Fuel Trust
Deanna MacDonald
Co-Founder, BunkerTrace
Jeff Mildner
Founder, Vortex Development Group
Adrian Tolson
Director and Lead, BLUE Insight


IBIA
IBIA ANNUAL CONVENTION 2021 / www.ibiaconvention.com / 2-4 NOVEMBER
Closing Remarks
Sofia Konstantopoulou
Global Head, Marketing and Events IBIA


IBIA ANNUAL CONVENTION 2021
IBIA
2-4 NOVEMBER
IBIA Events Working Group
CHAIR
Sofia Konstantopoulou
Global Head Marketing & Events IBIA
Tahra Sergeant
Regional Manager Africa IBIA
Mustafa Muhtaroglu
Founder Energy Petrol
Eugenia Benavides
Marine Fuels Director Terpel S.A.
Steve Simms
Principal Simms Shower LLP
Adrian Tolson
Director and Lead BLUE Insight
Nicolas Yerie Vukelja Duque
CEO Terramar
Thank You!
www.ibiaconvention.com

IBIA CODE OF ETHICS

IBIA is appealing to all of its members to join this important initiative by showing support for our Code of Ethics. It's an aspirational statement and an important step towards our aim of promoting the adoption of a common set of ethical values across the industry. We believe that when the entire industry acts with the highest ethical standards that this will be to the benefit of us all.

FAIR BUSINESS

- We conduct our business in a fair and transparent manner
- We will always act in the best interest of each business partner and are honest with the stakeholders involved in our business
- We only engage in business using compliant products, and deliver the quality and quantity agreed with our business partners
- We always act in good faith

BEST PRACTICE

- We always act in accordance with applicable legislation, including sanctions
- We always meet contractual obligations in a timely manner
- We always do our best to avoid disputes and seek resolution promptly if disputes occur
- We comply with all applicable competition and anti-corruption laws
- We respect confidential information and do not unlawfully use any intellectual property

SOCIAL RESPONSIBILITY

- We seek to minimise our environmental impact and the risk of environmental damage
- We will always ensure employees' health, safety and security
- We offer equal opportunities, prohibit unlawful discrimination and respect human rights
- We offer the same opportunities for professional development to all our employees

TRANSPARENCY

- Our accounts and records are kept accurately and reflect the true state of the company and its operations
- During audits or investigations, we fully cooperate with the authorities
- We will not receive or give any gift or entertainment of disproportionate value
- We are fully committed to preventing both money laundering and terrorist financing

To sign up for the Code of Ethics working group email **ibia@ibia.net**

SSAL

SOUTHBOND SHIPPING AGENCY LTD.



Southbond Shipping Agency Ltd (SSAL), incorporated in Mauritius as an operator/management shipping company since the late 980's. We consider ourselves among the market leaders, given our experiences and dedicated team to achieve the best possible turn around of your vessels. In doing so we provide top class services based on attention to details, due diligence and timely communication.

The company forms part of a cluster in related maritime activities, spanning from third party management, ship handling, shipchandling, ship agency services, crew change, crew recruitment among others.

Over the years, the company has developed an unparalleled expertise in the field of its activities and our reliability and professionalism have ranked us amongst the best ship agency on the island. we recognize that every activity has its specific needs, which is the reason why we propose to you the expertise in a range of different domain and activities, all of which are backed by competent and professional staff.



Our high quality services include:

- Bunkering : brokering spot prices & arranging supply
- Crew change (immigration formalities/ provision of air tickets (own ticketing dept /local transport/meet and greet at airport)
- Crew medical attendance
- Accommodation
- Garbage, sludge, bilge disposal arrangement
- Cash to master
- Stevedoring, cargo loading/discharging
- Dry & cold warehousing facilities
- Dry docking and technical surveys
- Provision of crane services-up to 45 mts
- Pilotage and tugs services
- Clearing, forwarding and delivery of ship spares
- Custom brokerage
- Fresh water supply (inside/outside port limit)
- Freight forwarding solutions(air/sea/road/rail)
- Courier services
- Supply boat facilities
- Shipchandling and ship stores supply at quay & anchorage
- Provision of gas free and hot work permit
- Protective agency services
- Cargo, hull and machinery surveys
- In-water survey, under water inspection, cutting/welding, hull cleaning and diving assistance
- Provision of anti piracy security in High Risk Areas.







SOUTHBOND SHIPPING AGENCY LTD

MFD Business Centre, Freeport Zone 5,
Mer Rouge, Port Louis – Republic of Mauritius
Tel : (+230) 206 3988 – Fax : (+230)206 3990
Email : aeromru@ssalmru.com / ops@ssalmru.com
Website : www.ssalmru.com





IBIA Training attendees

IBIA AFRICA IN MAURITIUS AND LOOKING INTO THE FUTURE

Working with our members to further grow and develop the African Bunkering Market

As I write this article we enter into a new phase of the pandemic globally where we are seeing more face-to-face events while some countries grapple with rising infection rates and others experience a reduction in cases. There is a worldwide acceptance of an ever-changing future. Thankfully due to modern medicine the risks are lower and therefore we now have the ability to plan just that little bit more into the future.

The Africa team have just returned from a very successful conference organised by the Mauritius Ports Authority (MPA) Fostering Bunkering Opportunities – MPA Vision 2040 in collaboration with IBIA and our partners in Mauritius, CELERO which was held on November 18 at the Ravenala Attitude hotel in Balaclava.

The attendees were welcomed by the Honourable Steven Louis Obeegadoo Deputy Prime Minister and Minister of Housing and Land Use planning, and Minister of Tourism; Sanjeev Ghurburrun , Chairman of the Mauritius Port Authority and IBIA Africa's Chairman, CEO of AMSOL (African Marine Solutions) Paul Maclons. During the conference several industry professionals took the floor to assess current bunkering trends, highlighting the opportunities in the industry. Investment programs, power solutions, regulations and preparations for maritime emergencies for ports were discussed by the various speakers from IBIA, MPA, EDB (Economic Development Board of Mauritius) and a number of key stakeholders.

The MPA presented all the bunkering growth opportunities in line with the 'MPA Vision 2040' theme. "In line with the Prime Minister's vision, we want our port to become a hub for the region and a strong and modern port looking to the future. This is my mandate as Chairman of the MPA and the mission of MPA 2040. And the role of the MPA must be to develop and get out of the country to share our know-how and develop the regional circular economy," recalled Sanjeev Ghurburrun, Chairman of the MPA. The Chairman has invited and encouraged private sector and foreign companies to collaborate and grow with the Mauritian marine economy.



Robin Meech, Past IBIA Chairman & MD Marine and Energy Consulting; Captain Dave Main, Marine Consultant, AMSOL; Raymond Kramer, AGA Helicopters; Paul Maclons, IBIA Africa Chairman, IBIA Board Member & CEO AMSOL; Patrice Maury, MD Celero



Sanjeev Ghurburrun, Chairman, Mauritius Port Authority



Paul Maclons, IBIA Africa Chairman, IBIA Board Member & CEO AMSOL



Kristine Brennecke Rosenberg, Business Development Manager, Bunker One; Matthias De Larminat, Managing Director, Vivo



Tahra Sergeant, Regional Manager (Africa), IBIA; Hon. Louis Steeven Obeegadoo; Minister of Commerce Mauritius ; Patrice Maury, MD Celero



Patrice Maury, Tahra Sergeant; Shekur Suntah; Paul Maclons; Sanjeev Ghurburrun, Shankhnad Ghurburrun; Hon. Louis Steeven Obeegadoo; Hon.Soodesh Satkam Callichurn; H.E Mr. Om Kumar Dabidin


MPA Conference in collaboration with IBIA and CELERO delegates


MPA Conference in collaboration with IBIA and CELERO delegates


IBIA Training in Mauritius


Delegates enjoying evening cocktails

A BIG THANK YOU TO THE SPONSORS

DIAMOND SPONSOR

MPA Mauritius Ports Authority

PLATINUM SPONSORS

Stonewin. · MOL Mitsui O.S.K. Lines · MCB · Economic Development Board Mauritius · VIVO Energy Mauritius · polygreen circular economy solutions · GRM EOT Energy Suppliers - South Indian Ocean · Bunker One

GOLD SPONSORS

Bridge Maritime Limited in partnership with Immersub & CO. Ltd · Oceanis Bunkering · SAMLO · STC State Trading Corporation

The conference was well supported with 100 delegates and an impressive group of sponsors, whom we thank on behalf the MPA, CELERO and ourselves for their unwavering support of these types of events and initiatives.

Our previous Bunker Conference and Training courses organised in 2015 and 2018 by ourselves and CELERO contributed to improving the skills and knowledge of the Bunker stakeholders with the common objective to set Port Louis as a preferred Bunkering Hub.

CELERO is a leading regional Shipping Agency and Logistics company, also active in supporting Maritime related Training in Mauritius. CELERO aspires to support the Mauritius Port Authority in its 2040 vision to transform Port Louis into the regional Port of reference known for its efficiency and reliable support services.

Learning, capacity building, strengthening understanding and making connections are key components of IBIA's ethos. This is what we aim to achieve during our Training sessions, which brings together industry expects from all over the world.

IBIA alongside CELERO and AMSOL presented a 2 day intensive bunkering training course with information rich modules covering a number of aspects in the bunkering industry. These included: Bunker market Regulations and Enforcement; elaborating how the bunker regulations were developed and how they are enforced; how effective use of formal procedures can avoid risk; a look at best practices for suppliers and buyers of VLSFO; Fuel quality and its impact on storage, treatment and use in the engine; the principles of quantity measurement including Mass Flow Metering; geopolitics and the current pandemic and the way they may influence maritime trade and ship's fuel; the purpose, structure and application of Sales terms and 'Maritime Emergency Preparedness and, finally, an introduction to emergency response and salvage. The courses were presented by trainers based both in Mauritius and abroad, and we thank them for their support.

In the previous issue of *World Bunkering* I introduced you to the newly co-opted IBIA Africa Regional Board, and in a short space of time this dynamic Board has supported me in launching a number of projects to further understand our region with the goal of delivering a truly African solution to our IBIA Africa members.

Our first project is to fully understand and map out the African Bunkering Landscape, who the key role players are in each country, what products and services are on offer and how far and wide can we eventually grow our Africa membership and therefore have stronger influence and support the industry in influencing the direction bunkering and marine energy takes on the African continent.

This is supported by a short survey which will be shared with members and industry to enquire into what it is that IBIA can do for the African Bunker Market, as we recognise there are some distinct nuances and differences from our counterparts in the Northern hemisphere.

As we come to the end of Q4 of 2021 the IBIA Africa team are looking at furthers ways of engaging directly with our members in the form of informal get-togethers, online member meetings specific and continued dialogue on regional discussion points. We encourage you to be active and participate in all our efforts at further growing IBIA in Africa.

Should any of our members wish to engage further regarding the above, you are encouraged to contact me directly.

We would like to take this moment to warmly thank our Africa Membership for your support and continued dialogue in this year and wish you all a healthy and happy festive season.

If you would like to engage with the IBIA Africa team, or become a member of IBIA, explore opportunities to be a speaker, sponsor or find out more about our local activities, engagements and events, please contact me.

Tahra Sergeant
Regional Manager: Africa
SA Mobile: +27 (0)79 990 7544
E: tahra.sergeant@ibia.net
S: sergeant.tahra
W: ibia.net





IBIA RESTARTS IN-PERSON TRAINING

IBIA Asia's office swings into action as Singapore eases pandemic rules

On 13 November 2021, Singapore's Ministry of Health announced that 85% of the country's population had received two doses of COVID-19 vaccines, and 86% had received at least one dose, while 20% had had booster shots.

All IBIA Asia's Singapore office staff and trainers have been fully vaccinated for some time and are currently on the booster vaccination list. This has meant we were able to bring back in-person training from July 2021. All attendees on our courses have been required to be fully vaccinated to enter our training venues.

We will consider organising more in-person international physical conferences and events in 2022 if the Covid-19 situation stabilizes with high vaccination rates and low fatality and serious illness numbers.

Encouragingly, a Vaccinated Travel Lane (VTL) has been established to enable quarantine-free travel to Singapore for Australia, Brunei Darussalam, Canada, Denmark, Finland, Germany, France, Italy, the Netherlands, Malaysia, South Korea, Spain, Sweden, Switzerland, the UK and the US.



IBIA Asia Conferences

As an attendee, I was happy to physically attend the 37th Asia Pacific Petroleum Conference (APPEC 2021) from 27 to 29 September 2021. The event model was a hybrid conference - on-site at Marina Bay Sands Singapore, online globally and on-demand.

On Day 3, Session Four on "Environmental regulations and decarbonisation of the shipping industry. IBIA Director and IMO Representative Unni Einemo presented "Destination zero: Signposts on the road to decarbonizing shipping". Two other IBIA board members also participated in the same session.

IBIA Global Board Vice Chairman and Chairman for IBIA Asia Regional Board Timothy Cosulich, CEO Marine Fuel, Fratelli Cosulich, took part in the panel discussion on "The transformation of marine fuels: decarbonisation". Meanwhile, IBIA Global Board members Adrian Tolson, Director and Lead at BLUE Insight, gave a presentation on "Processing versus scrubbing: Upgrading the bottom of the barrel."





Technical Committee participation in Singapore Council

I also represent IBIA Asia in the Singapore Chemical Industry Council Technical Committees for Bunkering and LNG Bunkering. I aim to help drive the implementation of Singapore Standards for Bunkering for both conventional fuels and LNG.
A two-month public consultation on the revised SS 524 - Singapore Standard Specification for Quality Management for Bunker Supply Chain (QMBS) draft was completed on 5 November 2021.

Meanwhile, TC and the working group still review the SS600 - Singapore Standard Code of Practice for Bunkering by Tank Gauging. The target for the roll-out of both of these reviewed standards is in Q2 2022.

Current Training Programme

The IBIA Asia office offers mandatory training for the bunker sector in Singapore with courses that have been approved and certified by the Maritime and Port Authority of Singapore (MPA).

They are:

- Singapore Standard SS 648:2019 - 1 Day Training for currently approved Bunker Surveyors and Cargo Officers. In 2020, we conducted the training for 90% of certified cargo officers and bunker surveyors.
- Singapore Standard SS 600:2014 + SS 648:2019 - 2 Days Basic Training for new Bunker Surveyors and Cargo Officers.
- Singapore Standard SS 600:2014 + SS 648:2019 - 2 Days Advanced Training for new Bunker Surveyors and Cargo Officers.

The IBIA Asia office also offers specialised training for the bunker sector in Singapore with our MPA-approved course, Understanding Marine Fuel. We completed two successful live on line-courses in October and November 2020.

If you are interested in becoming part of the bunker community through IBIA membership or interested in the bunkering training IBIA Asia offers, we encourage you to contact Noraini at noraini@ibia.net or me on the details at the end of this article.

Alex Tang MIPM CMarSci MIMarEST
Regional Manager: Asia
M: +65 88 76 6491
E: regionalmanagerasia@ibia.net
W: www.ibia.net



JOIN US

- IBIA MEMBERSHIP BENEFITS -

By joining IBIA you will become part of a global network of bunker industry experts who collectively form one of the world's leading authority on bunkers. Not only will you have access to a wealth of information and insight (we publish newsletters and industry updates on current issues) which offer pragmatic advice for managing the industry's challenges; members also have the potential to shape and influence both international and local legislation. This happens through IBIA's Working Groups which are responsible for developing industry guidance, participation in IMO correspondence groups, solving long-term industry issues, and addressing both commercial and technical aspects.

INDIVIDUAL £300

- IBIA Board Member eligibility
- The right to 1 vote for Board Member Elections
- IBIA Working Group eligibility
- Free or discounted IBIA training courses/ conferences/seminars events/conventions
- Individual discounts on other industry events
- Subscription to World Bunkering magazine
- Representation at IMO (International Maritime Organisation)
- Use of IBIA logo on your website and stationery
- Access to IBIA's online membership directory
- Eligible to book up to 4 tickets at the prestigious IBIA Annual Dinner
- IBIA mediation and dispute resolution
- IBIA membership certificate

CORPORATE £1500

ALL THE BENEFITS OF INDIVIDUAL+

- Register up to two offices anywhere in the world
- The right to 2 votes for Board Member Elections
- 5 user registrations on the IBIA portal
- 2 subscriptions per office to World Bunkering magazine, sent to all registered offices
- Eligible to book up to 4 tables at the prestigious IBIA Annual Dinner
- Eligible to add further offices for a reduced fee of £500 per office

CORPORATE ADDITIONAL MEMBERS GET ALL THE BENEFITS OF THE CORPORATE MEMBERSHIP WITH THE EXCEPTION OF THE RIGHT TO VOTE FOR BOARD MEMBER ELECTIONS.

You can add as many additional offices as you pay for. Affiliation with the primary Corporate member must be authorised. Special cases can be negotiated individually with the IBIA membership management team.

IBIA
INTERNATIONAL BUNKER INDUSTRY ASSOCIATION

USEFUL INFORMATION

- 15% discount for 3 years membership, (Paid in one instalment) – Guarantee no membership price increases for the next 3 years.
- Unregistered offices will not get IBIA benefits

If you are interested in becoming an IBIA member please contact ibia@ibia.net or visit www.ibia.net

NEW MEMBERS

CORPORATE A

Port Authority
Sanjeev Ghurburrun
Mauritius Ports Authority MPA
Africa

Service
Neveraj Moodley
Carbonado Energy
Africa

Other
Captain Hari Subramaniam
The Shipowners' Mutual Protection and Indemnity Association (Luxembourg) Singapore Branch
Asia

Service, Storage
Rajiv Servansingh
State Trading Corporation
Africa

Bunker Supplier
Edwin Coppens
Orim Energy
Europe

Supplier
Patrizia Reisinger
GoodFuels B.V.
Europe

Ship Owner, Ship Manager
Michael Shiew Kiong Low
Hai Soon Diesel & Trading Pte Ltd
Asia

CORPORATE B

Oil Industry Major, Storage
Bart-Willem Ten Cate
FinCo Fuel Group BV
Europe

Ship Manager, Service
Gilbert Wenliang Liu
Hai Soon Ship Management Pte Ltd
Asia

INDIVIDUAL

Port Authority
Shankhnad Ghurburrun
Mauritius Port Authority
Africa

Simon Munch
Stem Fuels
Europe

Agent
Graham Eden
Graham Eden
Europe

Trader, Broker
Ahmet Cagatay
Bunkerist Trading and Brokering Ltd
Europe

Trader, Agent
Francesc Dianez
Next Maritime, S.L.U.
Europe

Other
Robert Bell
Multisol South Africa (Pty) Ltd
Africa

Bunker Supplier, Trader
Tim Heickmann
Hoyer Marine Trading GmbH
Europe

Broker, Trader
Burak Ekim Urun
Martime Brokerage and Trading Corporation
Europe

Trader, Supplier
Hugo Vera
Enemar
Americas

Bunker Supplier
Peter Heilner
CPG Bunkering
Africa

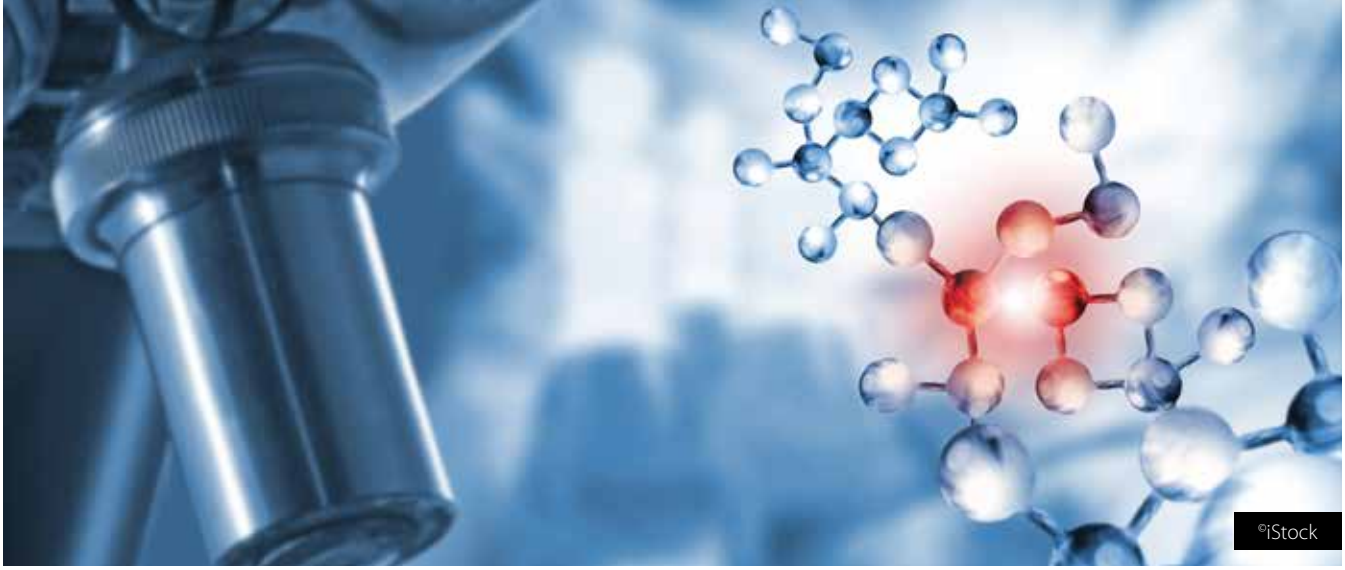
Bunker Supplier
Robert Desvaux
Oceanis Bunkering Ltd
Africa

Other
Jasmine White
Advanced Resource Managers Ltd
Europe

Bunker Supplier, Trader
Robert Thompson
Propeller Fuels Limited
Europe

Media
Rob Sheridan
OPIS by HIS Markit
Europe





TRUE VALUE

Charlotte Røjgaard joined VeriFuel, the commodities testing and inspection arm of the classification society Bureau Veritas in January 2015 as Global Technical Manager. In July 2019, she took on the role as Global Head for VeriFuel

IBIA's Unni Einemo asked her about her experiences and her take on some of the key questions in the area of fuel testing.

Unni Einemo (UE): You have worked for fuel testing agencies for a long time now. What do you enjoy most about this line of work, and is there anything you don't like?

Charlotte Røjgaard (CR): There is actually so much I like about this line of work. No two days are alike. It covers managerial, operational and marketing sides of the industry. You get to become involved in the legislative environment, provide the best solutions for customers in an industry that can be plagued by false information and strategy work. It is a global business with a local touch.

UE: What were the main changes to your role when you became Global Head for VeriFuel? Do you still find time to get involved in the details of fuel testing?

CR: Becoming the global head of VeriFuel of course changed my role to being more strategic. The heart of VeriFuel is however the team, its knowledge and the spirit. We support each other and leverage on the individual strengths, so whereas I no longer get involved in the daily production, I am supporting where relevant, e.g. trouble shooting cases and development of new services. Also, it is beneficial to have updated details of fuel testing for the work in the various industry committees of which I am a member, e.g. ISO 8217.

UE: You have recently completed a Blue MBA. Has that helped you in your role at BV and VeriFuel?

CR: The Blue MBA has provided me with various tools that supports the managerial role. Not only has it given me insights that are useful evaluating the organisation and processes, it is also very interesting applying the new knowledge identifying opportunities arising from the decarbonisation of the maritime industry.

UE: With all the anxiety around VLSFO quality, has IMO 2020 been good for business?

CR: Initially, in the early days of IMO 2020, the VLSFOs were good for business as a lot of extra testing was performed due to anxiety around their quality. We could have exploited the concern in the industry but VeriFuel's DNA is to create value to our clients. We neither believe in scaremongering nor performing unnecessary testing. For the majority of fuels, testing to ISO 8217 is sufficient. If a fuel is causing problems, additional test scope can be advised based on the issues experienced.

UE: There were a lot of concerns about VLSFO quality prior to 2020. To what extent do you think they were justified? Where are the main problems?

CR: There were justified and unjustified concerns prior to 2020. An example is the 2018 statements attempting to link the Houston fuel incidents to IMO 2020. The statements incorrectly said that the situation was a precursor for 2020, despite the fact that all involved fuels were high sulphur with no indications of low sulphur blend components. Another unjustified claim was that ISO 8217 would not cover the VLSFOs although it is a fact that ISO 8217 covers MGO, MDO, HSFO, ULSFO and VLSFO.

There were also justified and substantiated concerns related to stability, compatibility and viscosity variations of the VLSFOs. The transition did in fact show significant viscosity variations as well as more issues related to stability and compatibility.

Whereas it is good to raise awareness about potential issues to allow the industry to identify preventive measures (e.g. through the IMO "Joint Industry Guidance on the supply and use of 0.50% sulphur marine fuel"), unjustified claims only serve to scaremonger and deviate the focus from the relevant items.

UE: What about compatibility – what can you do predict if two different fuels will be compatible or not?

CR: Compatibility is about asphaltenes precipitation, i.e. it only makes sense to discuss compatibility between fuels where at least one contains asphaltenes. It can be challenging to predict compatibility and it is strongly recommended to keep fuels segregated, minimising mixing as much as possible if the compatibility is unknown.

If an indication of stability is urgently needed, a spot test can be performed. It is not accurate but it will provide an indication if the fuels are incompatible. The best way to get a good indication of compatibility between two fuels is to ask the laboratory to test TSA and TSP on a blend of the fuels. It can be done at the exact mixing ratio expected or at various mixing ratios covering the full range (e.g. 5:95, 20:80, 50:50, 80:20 and 95:5).

UE: We see a lot of BDNs describing the fuel as "VLSFO". What do you think about that? How do you know which ISO specification to test against when you receive samples with only VLSFO on the sample label and copy of the BDN?

CR: I am not sure why the supply industry keeps stating "VLSFO" rather than a proper grade on the BDN. ISO 8217 also applies to the VLSFO and a suitable grade can be chosen from Table 1 or 2. As a fuel testing agency, when receiving a sample stating "VLSFO", we would make the spec comparison to RMG 380 per default.

UE: ISO 8217:2017 allows for a range of carbohydrates from refining and non-refining sources to be used when blending marine fuels. Are there specific blend stocks that perhaps would be best avoided? Can we learn anything from the 2018 Houston problem fuels?

CR: Unfortunately, we don't know what caused the 2018 Houston fuel incidents. In Oct 2018, the fuel experts of the International Council of Combustion Engines (CIMAC) released a statement saying that "no final and concrete conclusion can be made as to what specifically in the fuel formulation may have caused these incidents".



We do know that those fuels caused problems for a lot of ships but many ships that had bunkered similar fuels did not experience any issues. The industry would greatly benefit from more openness, transparency and collaboration to get to the bottom of the incidents and gain a better understanding of the combination of factors (fuel blend components as well as ship handling / engine operational parameters). Without a better understanding, it is impossible to prevent similar situations in the future.

UE: When something goes wrong on a ship relating to fuel, it seems the shipowner tends to blame the supplier while the supplier will blame poor fuel management on the ship. Do you see a clear trend as to where the problem lies? Is it more often the fuel as supplied or how that fuel is managed? And do you find it difficult to get to the root cause due to a lack of cooperation from either party?

CR: There are no clear trends on where the problem lies. The fuel quality can be poor and the ship may not have treated the fuel properly. The root cause is easily identified in some cases whereas in other cases, it is very difficult - if not impossible - to find the root cause. Operators approaching VeriFuel asking for assistance getting to the bottom of a case are usually very cooperative. Suppliers tend to be more reluctant to share information about the fuel composition although there are big differences amongst suppliers too. The best answer to your question must be: It depends…

UE: We have seen various experts on fuel testing come out with different theories as to chemicals that they believe to be harmful to ship fuel systems and engines. These would be covered by Clause 5 in ISO 8217 and/ or Regulation 18.1 of MARPOL Annex VI – but there are no specified limits or universally accepted guidance on what is safe and not. Do you think this can be resolved, and if so – how?

CR: It would require transparency and collaboration in the industry. First, we need standardised test methods rather than each laboratory using their own inhouse method. We need the operators to provide operational feedback using specific fuels, even the non-problematic fuels. Then we need the testing agencies to start sharing their data:

- How often do they find a specific component? In which concentration?
- How often has a fuel containing that component caused problems?
- How often did it not cause any problems?
- What was the concentration at the time of reported issues?
- What was the concentration when the fuel was consumed with no issues?
- Any combination of components?

In theory, it can be resolved. In reality, I think the industry's combination of distrust and own interests makes it difficult to achieve.

UE: Do you think fuel purchasers and relevant authorities understand that there can be variations between laboratory test results, as described in ISO 4259?

CR: Some do but not all.
In 2014 and 2016, CIMAC WG7 Fuels released guidelines on how to interpret test results. The guidelines explain the concepts of reproducibility, 95% confidence intervals as well as the inherent variability that apply to all measurements and tests. The intention was to provide more reader friendly guidelines than ISO 4259, applying the standard specifically to the bunker industry.

UE: As we move toward new types of fuel to reduce GHG emissions, what role do you see for fuel testing agencies? Will they be as complex as oil-based fuel oil blends or more straightforward to test? Are there standards in place already or have they yet to be developed?

CR: The topic of the industry these days is sustainability and decarbonisation, presenting a responsible industry with interest and willingness to reduce its impact on the climate. Having said that, it is not realistic to expect the industry to decarbonise in the short to medium term. Whereas biofuels can be used with no operational changes, other alternative fuel types such as LNG, methanol or ammonia require significant design changes before they can be used on traditional installations.

ISO released a specification on LNG in 2020 (ISO 23306:2020) identifying the basic quality requirements for LNG as bunker fuel. So far, there are no standards covering methanol nor ammonia. These products are however different from traditional fuels and would therefore also have different requirements.

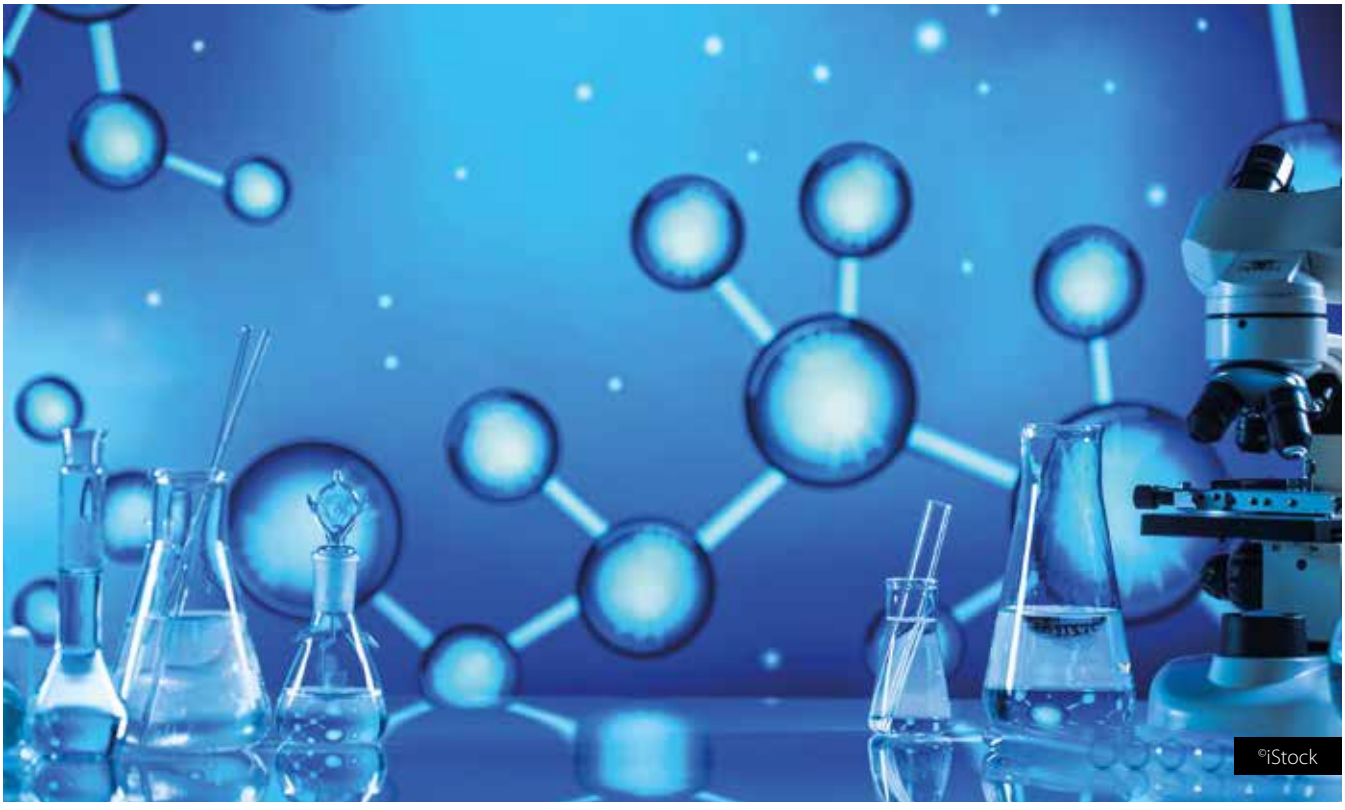
We are moving away from the traditional approach of two alternatives (distillate vs residual) fuels into a future with diverse fuels / means of propulsion. Currently, it is difficult to say if and which requirements there will be for testing in the medium to long term.

UE: Finally, as a member of IBIA, can you tell us what you want from the Association? What do you think are the most important services we provide for our members and the marine fuels sector in general?

CR: IBIA has been very good at knowledge sharing and educating the industry which is an important step in managing some of the false information.

IBIA and VeriFuel both want more transparency and cooperation in the industry between all stakeholders. IBIA can play a key role in making this happen. It would be beneficial to IBIA to attract more operators to the group to enhance discussions of issues between fuel suppliers and end users.


Charlotte Røjgaard


©iStock

IBIA
INTERNATIONAL BUNKER INDUSTRY ASSOCIATION

ANNUAL DINNER

MONDAY 21 FEBRUARY 2022

GROSVENOR HOUSE HOTEL, LONDON, UK



GOLD SPONSORS

Island Oil

MODIFI

Sea Crown Marine Services DMCC

SILVER SPONSOR

الخليج لتوزيع البترول
GULF PETROL SUPPLIES
BUNKERS

BRONZE SPONSORS

ExxonMobil

MFM+
Optimised by METCORE

SUPPORTERS

AMSOL

Bunker Holding Group

ENERGY

SIMMS·SHOWERS LLP
INTERNATIONAL PRACTICE. PERSONAL COMMITMENT.
Vessel Arrest - Debt Recovery - 24/7 - www.SimmsShowers.com

terpel

TotalEnergies

www.ibia.net



IMO must set the course for low carbon shipping ©IMO

STRONG SIGNALS FOR CHANGE

MEPC 77 brought results relating to black carbon and scrubbers, and laid groundwork for progressing faster toward net zero emissions shipping, says IBIA's Unni Einemo

Most headlines from the 77th session of the IMO's Marine Environment Protection Committee (MEPC 77) bemoaned a lack of concrete outcomes on increasingly urgent measures to decarbonise international shipping. Understandably, many were disappointed about proposals they have worked hard on that still didn't go through. After what appeared to be positive momentum at the COP26 climate conference, with a large number of countries and maritime organisations getting behind calls for net zero shipping by 2050, MEPC 77 seemed a bit of an anti-climax.

Nevertheless, there were some positive achievements, and groundwork was laid for further progress on legislative tools to deliver effective reductions in greenhouse gas (GHG) emissions.

As IBIA's IMO Representative, I took part in MEPC 77 in plenary discussions, with valuable support from long-standing members of the IBIA Technical Working Group during parallel discussions in the MEPC 77 Working Group on Air Pollution and Energy Efficiency. We were able to make good contributions in both.

IBIA statement on GHG policies

IBIA has participated in all the IMO meetings where policy and regulatory tools to cut GHG emissions from international shipping have been discussed, observing closely to assess the impact on the marine fuels sector. Outside MEPC, this work is being progressed at the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG). MEPC 77 was reviewing, among other things, the outcomes of ISWG-GHG 9 and 10.

I delivered the following statement to MEPC 77, outlining our views on what is needed to achieve GHG reduction goals:

"We thank all submitters of documents to this and previous sessions of the Committee, and the ISWG-GHG on this hugely important and complex agenda item.

Decisions taken at the IMO will have major impact on the marine fuels sector, and will set the pace for the transition to low and zero-emission shipping. We need the market to respond with fuels and technology solutions, and we need to ensure the fuels and technologies on offer are technically feasible, safe to use and truly sustainable.

To achieve this, we need the right regulatory signals.

For sustainability, we need a holistic approach, taking full well to wake lifecycle emissions into account; anything else would discourage or even eliminate several options that are carbon neutral when considering full lifecycle emissions.

We therefore need a workable lifecycle assessment methodology and associated certification schemes, preferably a methodology that will apply a single and consistent international approach to determine the lifecycle analysis of fuels as supplied to the maritime sector.

We also need to stimulate innovation, and demand for alternative fuels.

For this we will likely need a substantial price on carbon and CO_2 equivalents to effectuate real change through market-based measures.

We know from the transition to IMO 2020 that most shipping companies waited as long as possible to comply with the 0.50% sulphur limit because low sulphur fuels cost more, so it is clear that the price of fuel is a very important market signal.

The proposals for a gradual phasing in of a GHG intensity limit have great potential to stimulate demand for zero and low carbon fuels. We already have a track record for such a gradual phasing in of sulphur limits in MARPOL Annex VI.

We saw that for ships to start using lower sulphur fuels, we needed clear regulatory signals to stimulate demand. The supply market responded to that demand by providing lower sulphur fuels in time for whenever new emission control areas and reduced sulphur limits came into effect.

We also saw that, despite fears of lacking availability, low sulphur fuels or technology solutions to help the global fleet comply with the IMO 2020 sulphur limit were provided.

A gradual phase-in of a low GHG intensity limit could be a very effective tool to ensure predictable levels of demand, which the supply side would respond to."

Net zero by 2050?

It looks almost certain that the IMO will soon adopt significantly stronger GHG reduction ambitions. The Initial IMO GHG Strategy, adopted in 2018, calls for overall GHG from international shipping to be reduced by at least 50% by 2050 (compared to 2008).

There were seven proposals to MEPC 77 calling for the IMO to embrace a net zero emissions target by 2050, co-sponsored by a large number of member states. While these proposals all called for carbon neutral shipping by 2050, the approach was not fully aligned. A proposal to adopt an MEPC Resolution on "zero emissions shipping by 2050" received significant support, but others preferred to focus instead on achieving this goal when working on the revision on the IMO's GHG Strategy.

A revised IMO GHG strategy needs to be ready for adoption by MEPC in 2023.

MEPC 77 held extensive discussions on a number of proposals for further mid-term GHG reduction measures, including market-based measures, the proposal to establish an International Maritime Research and Development Board, and the outcomes of ISWG-GHG 9 and 10.


IBIA addressing MEPC 77

No new measures were agreed at MEPC 77, but proposals and relevant documents have been referred to the next sessions of ISWG-GHG for further assessment. ISWG-GHG 11 is set to meet for a week in March and ISWG-GHG 12 for a week in May 2022.

Resolution on Black carbon in the Arctic

Amid all the headlines criticising various parties at MEPC 77 for stalling progress on GHG measures, there were some positive achievements. Black carbon (BC) is a potent short-lived contributor to climate warming, particularly harmful when deposited on snow and ice. MEPC has been discussing measures to reduce BC emissions in or near the Arctic for years. The prior meeting, MEPC 76, was unable to discuss it further as it ran out of time, so every effort was made to ensure it wasn't delayed again.

Prior to MEPC 77, IBIA identified an issue with a proposed draft MEPC resolution for voluntary measures to reduce black carbon emission from ships operating in or near the Arctic. I put our points across with the following statement to MEPC 77:

"IBIA has previously commented extensively on this subject in joint submissions with IPIECA to MEPC 75 and to PPR 8, as well as in statements made during those meetings. In the interest of time, we will not go into detail and only mention two key points:

1. *Fuel type has some impact on black carbon emissions. LNG and methanol are particularly effective at significantly reducing PMs, including black carbon. For HSFO, VLSFO and MGO, however, the type of engine, and engine load, are much more significant factors in determining the propensity to produce black carbon during combustion.*
2. *Fuel testing data indicate very, very strongly that the VLSFOs supplied to the market so far are typically much less aromatic and more paraffinic than HSFO. The shift of the majority of the global fleet from HSFO to VLSFO since the start of 2020 should therefore have helped reduce black carbon emissions compared to pre-2020.*

IBIA continues to support adopting effective voluntary measures to reduce black carbon emissions by ships operating in or near the Arctic, and we therefore support in principle the proposed draft MEPC resolution in MEPC 77/9. Cleaner fuels are abundantly available, and the text includes "alternative fuels or methods" that have been shown to reduce black carbon emissions, and is hence goal-based and method-agnostic.

There is, however, a problem with the reference to 'low aromaticity' in the final paragraph. Aromaticity is not well understood, and there is no test method readily available to check if a fuel has low or high aromaticity, neither for distillates nor residuals.

We therefore propose that the text is changed to simply remove the reference to low aromaticity so as not to cause unnecessary confusion."

This proposal was well received and taken onboard, resulting in the reference to "low aromaticity" being taken out.

While the draft resolution was widely supported, serious concerns about parts of the language were raised by some member states; in particular objecting to references to findings in the 4th IMO GHG Study which were not deemed scientifically rigorous. These objections were sufficiently strong to hold up adoption of the draft resolution in plenary.

Instead of kicking the can down the road to the sub-committee on Pollution Prevention and Response (PPR) to review the draft, an informal group met after plenary meeting hours to work on a compromise text. IBIA took part in this informal group where we made constructive proposals to amend the text by removing references to science which there was no consensus on. The amended draft agreed in the informal group was presented to plenary on the final day of MEPC 77, where it was adopted.

The crucial part of the resolution is in the final paragraph, which urges Member States and ship operators to voluntarily "use distillate or other cleaner alternative fuels or methods of propulsion that are safe for ships and could contribute to the reduction of Black Carbon emissions from ships when operating in or near the Arctic".

IBIA considers the resolution to be a good outcome after years of long and difficult discussions, and hope every effort is made by ship operators to adopt the most effective measures available to them for voyages in the Arctic region.

MEPC 77 also agreed the terms of reference for the PPR Sub-Committee's future work on reduction of the impact on the Arctic of Black Carbon emissions from international shipping.

More regulation on the cards for EGCS discharge water

MEPC 77 finally completed long-delayed updates to guidelines for exhaust gas cleaning systems (EGCS), following final tweaks to draft text that was originally slated for adoption in the first half of 2020.

The *2021 Guidelines for exhaust gas cleaning systems (2021 EGCS Guidelines),* updating the 2015 EGCS Guidelines, were adopted. These guidelines are there to ensure scrubbers are effective in meeting sulphur emission limits while also meeting environmental criteria for water discharges.

A revised MEPC circular on *Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument*, and recommended actions to take if the EGCS fails to meet the provisions of the EGCS Guidelines was also approved. It will be issued as MEPC.1/Circ.883/Rev.1 (replacing MEPC.1/Circ.883).

The MEPC 77 Working Group on Air Pollution and Energy Efficiency also discussed whether to amend the draft title and scope of work on *"Evaluation and harmonization of rules and guidance on the discharge of discharge water from EGCS into the aquatic environment, including conditions and areas".*

It was agreed to not change the title or scope, apart from deleting the word "possible" from the following item in the draft scope of work: "Identify, and develop as appropriate, regulatory measures and instruments".



MEPC resolution urges ship operators to adopt voluntary measures to reduce black carbon emissions when operating in or near the Arctic ©iStock

It sends a clear signal that regulations for EGCS discharges will be developed.

The discharge water from open loop scrubbers remains a hot topic, and is subject to a number of unilateral local restrictions, including complete bans in some ports and areas.

The IMO has received a number of submissions containing studies which, inter alia, claim to prove that EGCS discharge water is harmful to the aquatic environment in various locations, or that such discharges cause no harm. It is hard to work out what to make of these conflicting studies, but IBIA hopes decisions will be made on sound science after careful assessment, without prejudice.

Flashpoint on the BDN?

A proposal to MEPC 77 to include flashpoint as a mandatory information on the bunker delivery note (BDN) was referred back to the Maritime Safety Committee (MSC).

During discussions in the MEPC 77 Working Group on Air Pollution and Energy Efficiency about the proposal, it was deemed preferable to await the outcome of the work being carried out by MSC on development of further measures to enhance the safety of ships relating to the use of fuel oil. IBIA also informed the working group that fuel oil suppliers were fully aware of the SOLAS regulation and the importance of flashpoint for the ship.

It was also noted that, once MSC had determined and agreed on the flashpoint data that ought to be recorded and reported in relation to safety, corresponding draft amendments to appendix V of MARPOL Annex VI would be a simple exercise.

Appendix V of MARPOL Annex VI details mandatory information on the BDN; currently requiring specified values for sulphur and density to be reported. IBIA has participated in both the MEPC and MSC work on his subject, and has been among the few objecting to making flashpoint reporting on the BDN mandatory. Our reasons for that were laid out in detail in the Q2, 2021 issue of *World Bunkering*.

MSC is also working on draft SOLAS amendments to report confirmed cases where oil fuel suppliers have failed to meet IMO flashpoint requirements, similar to such reporting on sulphur infractions under MARPOL Annex VI. Meanwhile, MEPC 77 agreed to add a voluntary checkbox for flashpoint to the regulation 18.9.6 tab of the MARPOL Annex VI module in the IMO's Global Integrated Shipping Information System (GISIS).

IBIA will continue to put our views across to MSC on this and other items relating to fuel oil safety, as well as working for our member's interests at MEPC on all subjects that are relevant to the marine fuels sector.





VIVO ENERGY MAURITIUS: THE BACKBONE OF THE MAURITIUS BUNKERING INDUSTRY

Our company has been a supplier to the marine sector in Mauritius for over 70 years

In 1971, when owned by Shell, we became the first company to own and operate our own barge. Since then, we have built on our expertise for 40 years to introduce new barges to cater for the expanding and evolving needs of our customers.

At Vivo Energy, we pride ourselves at delivering quality fuel and Shell lubricants to vessels in a timely manner. Our dedicated bunker desk focuses rigorously on our customers' needs, responding promptly to all enquiries for Port Louis.

Port Louis harbour has witnessed a steep increase in bunker fuel demand over the last five years. In view of responding to the ever-changing needs of our customers, and to offer the best services in this dynamic bunkering market, Vivo Energy Mauritius has entered into a partnership with Bunker One, providing product storage facilities at our terminal, as well as operational expertise to this new set up.

Vivo Energy Mauritius is ISO9001 certified, guaranteeing a solid system of quality management at all our depots and bunker deliveries.

This partnership will boost the bunkering sector in Mauritius and position Port Louis as part of a global bunkering network. Bunker One plans to start their operations activities in Q4 this year.

"We are extremely excited about this new venture and confident that we, together with our esteemed partner Vivo Energy will be able to boost and strengthen the position of Mauritius as a future bunkering and shipping hub. Trust, expertise, quality and transparency are key pillars in our continued expansion journey and joining forces with partners with the same values and mindset is key to a prosperous future" says Peter Zachariassen, CEO of Bunker One.



Under its Ocean Economy Strategy, the Mauritius Government plans to increase the bunker volume to 1.5 million metric tons by 2025. Although this may seem ambitious, we are confident that Vivo Energy's partnership with Bunker One will bring the required boost in activity, and contribute significantly in the jump from 640,746 MT handled by Port Louis in 2020 to the targeted 1.5 million MT.

"Port Louis is emerging gradually as an undisputed, competitive, reliable port of choice in the region. The Government of Mauritius and the Port Authorities have invested massively in the port development ensuring that it remains a key driver of growth, trade, and business for Mauritius," says Mr. Ken Poonoosamy, CEO of Economic Development Board, Mauritius

He adds: "The full liberalisation of bunker imports, competitive taxation regimes, and reduction in port dues has enabled Port Louis to emerge as a bunker hub with doubling of bunker trade volume in less than four years. In a bid to abide with international sustainability standards, Mauritius has also fully adhered to the IMO 2020 bunker regulations.

Our aim today is to continue to grow the sector and secure 20% of the regional market by 2025. We remain more committed than ever to unleash the full potential of this segment as the direct, indirect, induced and catalytic effects of this business on our economy are significant."

To support this growth objective, we have projects to further develop and strengthen our logistics offer in Marine Fuels storage at a new depot having access to a separate quay, not congested by commercial vessels.

Vy-Anne Young, Marine Manager of Vivo Energy Mauritius concluded: "We are looking forward to creating significant and sustainable value by bringing our core skills and abilities for the infrastructure development in Port Louis Harbour, by investing in our new terminal."

Our Marine team welcomes your questions and hopes to meet your requirements.

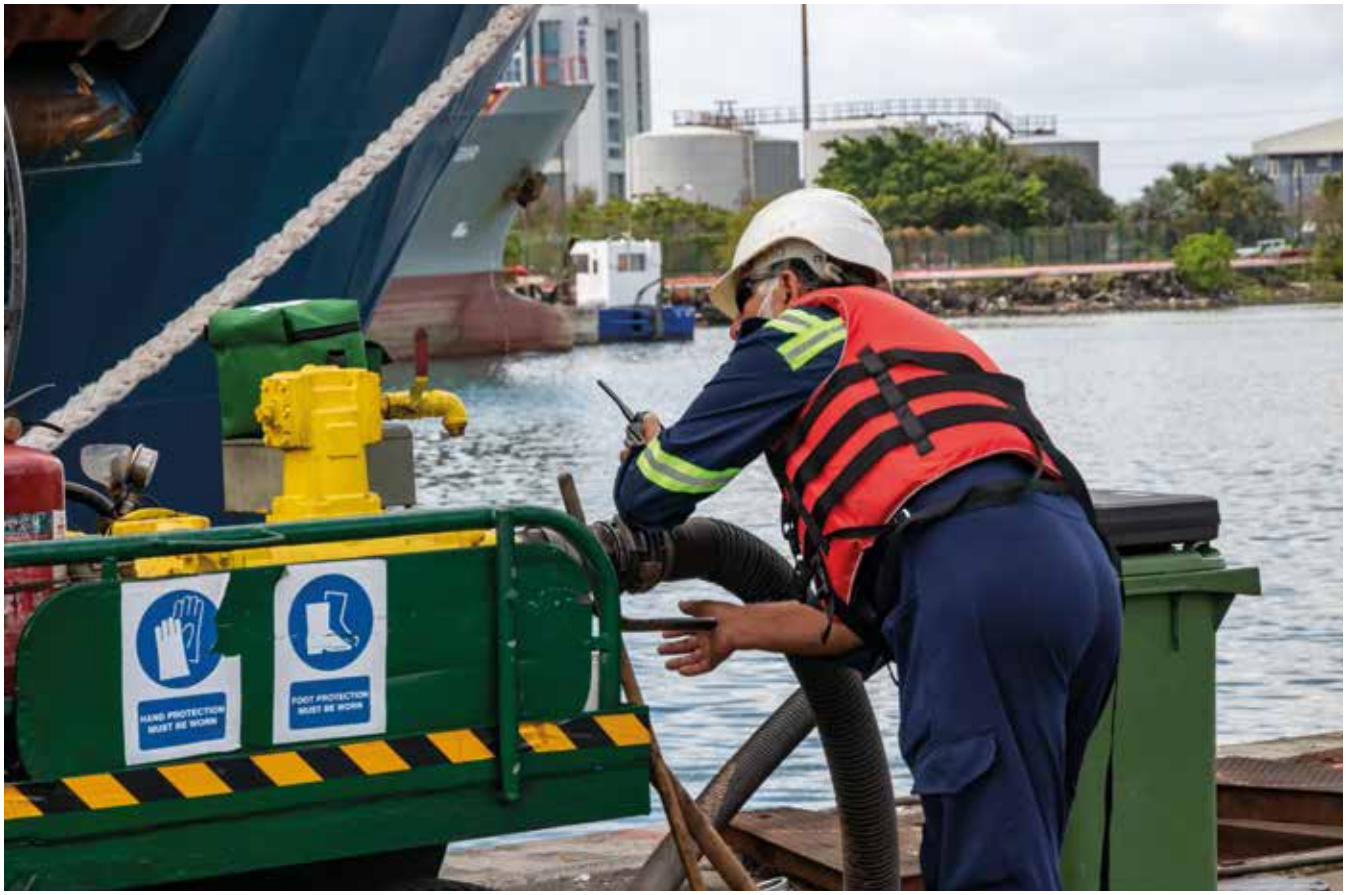
Vivo Energy Mauritius Marine Contact Desk:
Vy-Anne Young, Marine Manager, vy-anne.young@vivoenergy.com
Tel: +230 206 1227

Michelle Ah Cham, Marine Sales Support, michelle.ahcham@vivoenergy.com
Tel: +230 206 1296

Jennifer Fauvrelle, Marine Sales Support, jennifer.fauvrelle@vivoenergy.com
Tel: +230 206 1124

Bunker One Mauritius Contact Desk:
Michael Hedager, Head of Bunker One Mauritius, mauritius@bunkerone.com
Tel: +971 52 666 6614


From left to right: Jennifer Fauvrelle, Vy-Anne Young, Michelle Ah Cham



OILCHART

KEEPING YOU FULLY FUELLED 24/7



From our base in Northern Europe Oilchart are poised to ensure that you get the fuel you need. Whether it be in port or offshore our fleet of inshore barges and seagoing vessels are readily available to service you.
All grades can be accommodated including MGO, ULSFO, VLSFO and HSFO.

If we can be of assistance to you, please contact one of the team now for further assistance.

UK offshore@oilchart.com
T +44 (0) 208 7473611
www.oilchart-offshore.com

Belgium info@oilchart.com
T +32 3 232 52 34
www.oilchart.com

OILCHART GROUP



Rotterdam seems ideally set up for hydrogen infrastructure ©Kees Torn/Port of Rotterdam Authority

RÖTTERDÄMMERUNG

Not quite Twilight of the Gods yet, but Rotterdam and other North Sea ports are looking ahead to the end of high-carbon shipping, as John Rickards reports

Rotterdam was one of the first ports to partner with projects to develop hydrogen fuel infrastructure and the port has now put numbers to the future scale of the fuel's use in Rotterdam.

A study the port published in November suggests that a number of terminals will be ready for hydrogen imports by 2025 and that by 2050, demand is expected to be around 20 million tonnes, 18 million tonnes of which will be imported. Crucially, though, the port found:

"All port areas - from Pernis to Maasvlakte 2 - have the potential to import hydrogen. Depending on the volumes, the import of hydrogen is possible in all of these port areas, both in terms of space and safety, and from an environmental and navigational point of view. Four companies working in refining, energy and tank storage are actively preparing to import hydrogen. It looks like they will have both the physical space and the licences to import, process and export hydrogen in various forms by 2025. In addition, several companies are preparing to free up physical and/or environmental space by restructuring their existing product portfolio."

"Rotterdam is already familiar with hydrogen in industry and the transshipment of hydrogen carriers such as ammonia. In addition, the port has experience in the transshipment of cold energy carriers such as LNG and chemicals such as methanol. This experience can be applied to the new forms of hydrogen that are anticipated: liquid hydrogen, ammonia and LOHCs. Rotterdam's extensive, existing tank storage and infrastructure for hydrogen and hydrogen carriers add to the port's appeal as an import location. Companies will be able to develop existing fossil energy assets for hydrogen and hydrogen carriers."

"The unique navigational access means there are no restrictions to the safe shipment of hydrogen in Rotterdam."

A lot of that hydrogen will of course be for landside use or for shipment on to other places like the inland Ruhr ports of DeltaPort Niederrheinhäfen, but as with LNG before it, with engine makers and shipping companies looking hard at hydrogen as a fuel, whether as ammonia, methanol, in fuel cells, synthetic LNG or so on, availability and infrastructure will be shared to a large degree and it looks likely that Rotterdam will become one of northern Europe's first hydrogen bunkering hubs in the not too distant future.

Speaking at the signing of an MoU for the development of a 500MW hydrogen electrolysis plant on Maasvlakte with Uniper, a final decision on which should come in late 2022, port authority CEO Allard Castelein said: "The industry has to go through a massive change in making its business processes more sustainable. Hydrogen will play a central role in this process. We are working with partners towards the introduction of a large-scale hydrogen network across the port complex, making Rotterdam an international hub for hydrogen production and import and for the transit of hydrogen to other countries in Northwestern Europe. This explains why initiatives like this Uniper project are so important for the future of Rotterdam and the Netherlands."

With ready availability of reliable, large scale wind power, the North Sea looks set to be ringed by hydrogen fuel projects in the coming years. In August, AP Moller-Maersk inked a deal with Danish firm REintegrate to build a facility producing 10,000 tonnes per annum of green methanol using wind

power from southern Jutland to operate the company's first methanol-powered vessel, a 2,100 TEU feeder ordered in February and due for delivery in mid-2023. REintegrate has already built a methanol test bed in Aalborg and is constructing another production facility in Skive due to be completed this year.

In the summer, Maersk signed an order for eight dual-fuel methanol vessels of a much larger 16,000 TEU capacity due for delivery from 2024 onwards, with an option for four more the year after, and clearly sees the fuel as a viable near-term option.

In September, fellow Danish firm Unifeeder announced a trial sailing from the Elbe to St Petersburg of one of its feeder vessels fuelled by a 50/50 mix of LNG and renewable synthetic LNG (SNG) produced at Kiwi's power-to-gas plant in Werlte, northern Germany. The company and engine manufacturer MAN hope that the trial's success should demonstrate to owners that (largely unsurprisingly) any LNG-powered ship can also run just as well on SNG.

Further north, Norway is a hive of green hydrogen initiatives. Engineering firm TECO 2030 has won government funding to produce hydrogen fuel cells for maritime use at a plant in Narvik which will be the country's first such for large-scale manufacture. The factory is planned to have an annual production capacity of 60MW by 2023, with an aim to scale up to 1,200MW of fuel cells by 2030. The cells are being developed in collaboration with engine manufacturer AVL, and are scheduled to be trialled on inland vessels operated by Chemgas Shipping from next year.

In Tromsø, a joint enterprise launched in late September by renewable energy investment firm Magnora along with Prime Capital and local power firm Troms Kraft is aiming to begin commercial production of liquid hydrogen-based fuel for sale to the maritime and fisheries sector from 2025. Eidesvik Offshore and technology group Wärtsilä are converting an offshore supply vessel currently operating primarily on LNG to use ammonia fuel, initially in a 70% ammonia blend. The two companies were already partnered in the installation of a 2MW green ammonia fuel cell onboard a platform supply vessel scheduled for 2023 delivery.

Earlier in the summer, Econnect Energy and Amon Maritime launched joint venture Azane Fuel Solutions to establish ammonia bunkering through both floating and shoreside terminals. Azane was handed a tranche of government funding in September and while its modular bunkering system should be deployable just about anywhere with a supply of ammonia, press reports have suggested that northern Europe is likely to be where it sees its first outing. It says its larger shore-based systems are ideal for industrial ports and supply bases, and should be able to supply vessels quickly even allowing for the lower energy density of ammonia versus fossil fuels.

The other field to see a wave of new developments, startups and investment across the region is in onboard carbon capture and storage. Norway's Solvang and Wärtsilä again announced in October that Wärtsilä would be installing a pilot CCS system derived from a 1MW land-based test plant as a retrofit on board one of Solvang's 21,000-cubic metres ethylene carriers by 2023, with an initial aim of reducing CO_2 in the ship's exhaust by 70%.

Wärtsilä's Sigurd Jenssen said: "Joining forces with Solvang to build and retrofit a commercially viable CCS technology demonstrates to the industry that we are only two or three years away from bringing to market another vital tool in shipping's decarbonisation toolkit. We are excited to see how this collaboration with Solvang evolves in the coming months. Our land-based test unit is nearing completion, and we will then move to making it a reality on the Clipper Eos, ensuring that both Wärtsilä and Solvang remain at the forefront of maritime sustainability technology advancement."

TECO 2030 again is working with US-based Chart Industries on a system that would collect over 90% of exhaust CO_2 and store it in liquid form for discharge at port for either sequestration or industrial use.

Rotterdam-based Value Maritime is adopting a nimbler approach, with Visser Shipping's Nordica the first operational installation of 12 vessels it says will be equipped with its small prefab "CO_2 battery" Filtree systems, and five more systems on order further down the line. Value Maritime's system has approval from Bureau Veritas and store CO_2 until full, whereupon it is offloaded in port and taken to industrial customers for use, before the system is then returned empty



Solvang will be trialling CCS on the Clipper Eos ©Solvang ASA

to the vessel to be used again. Currently, the loading/offloading at Rotterdam's Short Sea Terminal will see the "batteries" taken for use in Rotterdam's agricultural greenhouses, but the company expects to expand into other locations soon, including Bremerhaven and Hamburg.

World Bunkering spoke to Value Maritime's Rein Steeman for more information about the Filtree system, which the company claims is the world's first commercially operating onboard CCS.

WB: How well does the system scale? Is there any maximum - or minimum - ship size suitable for it?

RS: The system is a standardised plug and play unit for vessels with engine sizes between 2.0M – 15.0MW. As it is a standardised unit, scalability is relatively easy.

WB: The captured CO_2 is taken for use in sectors like agriculture which reuse it. How does that translate into long term carbon emission reduction in sectors where contained carbon ends up quickly re-released?

RS: Greenhouse now use in the summer their heat power plants to produce CO_2 and deliver energy back to the net. To reduce their CO_2 footprint the energy needed for the greenhouses needs to come from solar, wind and geothermal heating. This leaves the need for CO_2 to grow the plants and this is something greenhouses then need to buy. By not using their heat power plants to generate CO_2, this is a direct win.

WB: Is that easily auditable for a company looking to track its emissions reduction performance?

RS: Yes, we provide an online dashboard to see real time the emission reduction but also the fuel savings (in case of fossil fuel oil powered vessel) of the Filtree system. The CO_2 reduction in the chain is administrated and auditable.

WB: Given the need for the industry to decarbonise, how big a market do you think there could - should - be for onboard carbon capture like the Filtree system?



CO_2 captured by Value Maritime's systems will supply greenhouses in the Rotterdam area
©Danny Cornelissen/Port of Rotterdam Authority

RS: The system generates, in the case of fossil fuel oil-powered vessels, a saving on their fuel costs earning the investment back in 1.5 years. Depending on the need and choice to reduce CO_2, our customers can do so through EEXI/CII legislation, a CO_2 tax or as end customer preference desires. In case of taxation there is an additional advantage for the system as the variable cost per tonne CO_2 is below the CO_2 tax price indicated. The CO_2 tax, legislation (EEXI/CII), need of our customers and no real alternatives that can have an impact now will drive our business. Our system is suitable for 75% of the worldwide fleet and for this we think the market will be big. We need to act now and with systems like ours you can do so in an economical and technologically feasible manner. As we are proving now on the MV Nordica of Visser Shipping, sailing for X-Press Feeder.

Promising stuff, so long as year-round industrial use for which the CO_2 can serve as alternative supply can be found.
And for those ship operators not sold on green hydrogen-based fuels or onboard CCS, there's always biofuels, which have themselves seen several landmarks in the past few months.

Rotterdam-based GoodFuels has been growing its customer base and saw its first bunkering with Unifeeder in October for its drop-in blend of marine biofuel made from waste feedstocks and MGO which it says cuts CO_2 emissions by up to 90% in addition to eliminating SOx almost entirely. Likewise, with Tufton and Stolt Tankers in September, supplying bunkers to one of the pool's chemical tankers on a voyage to Canada. In addition, the company has inked a supply deal with biofuel producer Renewable Energy Group to scale up its offerings.

MAKEEN Energy and Nature Energy announced in November that the two companies would be building and operating the first Danish liquefied biogas plant in Frederikshavn. On completion in 2023, the plant will produce 20,000 tonnes of LBG per year with a possible scaling of up to 120,000 tonnes eventually, and will be connected to the Danish gas grid, which is aimed to be entirely LBG by 2040. Bunker One will offer gas bunkering from the plant. The Samsoe ferry, already running on LNG, is likely to transition immediately.

Conventional fuels will obviously continue to dominate for years to come, but with decarbonisation clearly driving the next wave of change, northern Europe looks set to offer its shipowners plenty of options.

PURETEQ – OPTIMIZING SCRUBBER PERFORMANCE ACROSS FLEET

PureteQ – THE SCRUBBER MAKER

PureteQ designs, delivers and commissions built-to-fit maritime scrubber systems for open loop, hybrid ready and fully hybrid (closed loop, with and without bleed-off) operation to shipowners who want to save money on fuel by continuing use of heavy fuel oil. Recently, we have seen the price span between compliant fuel and HFO increase, and interest for scrubber systems seems to be increasing with the growing price span.

All scrubber systems come with state-of-the-art intuitive control systems with full real time remote accessibility. In times like these it is very convenient to get 24/7 remote on-line support/guidance to ship crews from our certified Marine Engineers. This feature has contributed greatly to all our customers gaining a competitive advantage. We also perform modular training of crews and officers as well as onshore personnel.

PureteQ has developed the Generation II Scrubber to reduce off hire and other cost of installation (by double digit percentage) considering the learnings from installing more than one hundred scrubbers on different types of ships at various shipyards around the world.

PureServ – THE SERVICE PROVIDER

PureServ is PureteQ's dedicated service organization. We offer fair-priced Service Agreements designed to meet shipowner's specific needs based on the ship's operational pattern and qualification of crew, and according to agreement; you only pay for what you get.

Our Service Team has received extensive training to assist shipowners in safeguarding continuous operation, reliability, and MARPOL compliance of Scrubber Systems. This includes expert support and guidance for all Scrubber Systems on-site or via the safe PureteQ remote system, depending on the ship's conditions and the client's requirements. Our validated concepts allow us to assist the crews from remote with trouble shooting, advice on operation and maintenance as well as optimization.

Sensors are type approved and must be factory calibrated according to maker by a certified engineer to maintain MARPOL approval for the EGC System. The gas analyzer (CEMS System) must be calibrated once per year. PureServ Service Engineers hold the necessary certification and experience to calibrate the CEMS system at a favorable rate. Sensor Replacement Program is an optional add-on service to a PureteQ Service Agreement. When pH, PAH and turbidity sensors need calibration, it will be offered as a Sensor Replacement Program through PureServ. The ship will receive a newly calibrated sensor before shipping the old sensor to PureServ or simply replaced by PureServ Service Engineer as part of the yearly service attendance.

For shipowners and operators with internet access, we offer a remote Scrubber System Modular Training Program. In times where crew changes often, "touch and go" remote training has high value for all stakeholders. Some shipowners even choose to have the onshore employees participate in the Remote Specialist Training. In general, training cannot be overestimated as it leads to higher up-time and compliance rates as well as better performance and less cost of operation.

If internet is not available on the ship, PureteQ offers a safe plug and play Emergency Remote in Box (ERiB) solution.





Worldwide coverage

It is our mission to provide uninterrupted service, anywhere and at any time. We already assist hundreds of vessels remotely with trouble shooting, advice on operation and maintenance as well as optimization. We also dispatch expert Marine Engineers from our nearest office to anywhere in the world, for on-site assistance. To further enhance our physical presence globally, we are pleased to announce the recent opening of our Singaporean subsidiary. This is yet another PureteQ Service Point in Asia, with a limited stocked warehouse, and will provide for even speedier delivery of spare-parts and full service of all client vessels arriving in Singapore.

For our new colleagues in Singapore to be fully equipped to support crews regarding ship maintenance activities, calibration, and validation of sensors (as required), they will undertake internal training through PureteQ Academy.

Service agreements for scrubber systems of any brand

Servicing hundreds of scrubber systems of almost all brands, we have gained extensive knowledge of most scrubber system. We have learned how to rectify issues by combining our technical know-how with hands-on-experience.

We have also assisted shipowners in gaining large savings by adjusting the way in which the scrubber system is operated and managed. Many Scrubber systems are adjusted to clean the gas more than required by legislation and other are operated in manual mode, thus consume much more electricity (OPEX) than needed. It is our experience that many prefer to "play it safe", hence they will put systems in manual operation to avoid alarms. Putting scrubber systems in manual operation may hamper the safety systems and subsequent lead to severe damage. In these cases, we have assisted with changing the settings for optimal automatic operation, but more importantly, just informing and training the crew in scrubber operation has allowed the crew to understand the significant impact they can make (cost reduction) by maintaining automatic operation. We also perform spare parts management to avoid unnecessary cost of replacing parts that may be repaired or calibrated. This includes cell replacement programs, sensor replacement programs but also other expensive parts.

All of this and much more are in safe hands by entering the PureteQ / PureServ service agreement. We have the tools, the manpower and the skillset to make a difference. Furthermore, we supply some of the most advanced and easy to use software in the business. We can even replace software (including some hardware) on other brand scrubbers if needed. Soon we will even offer clients free of change cloud-based software for environmental performance reporting and optimization of scrubbers across the fleet. It features the measuring of MARPOL compliance, operational performance (impact on SFOC) as well as environmental performance reporting, such as CO_2, Sulfur and, later, PM reductions. The software is a perfect match to new IMO regulation on EED(X)I & CCI, when Well-to-Wake principle applies. This software will allow for across ship / fleet learnings to crews, hence reduce cost and we see crews competing on operation of the scrubbers.

PureteQ PureServ is privileged to quote service agreements for scrubber systems of any brand.

Contact info:
Anders Skibdal,
CEO
+ 45 4017 1400
anders@pureteq.com

Michael Mouritzen,
Sales
+45 4014 4481
mim@pureteq.com
999 ord

PureteQ





Sales in Fujairah are recovering, if not yet back to their best ©Port of Fujairah

OIL'S WELL THAT ENDS WELL

Fujairah has seen steady recovery from the Covid blues, and attention in the region is also turning to a less oil-based future, as John Rickards finds out

Sitting at the heart of the petrochemical sector, suppliers on the Middle East Gulf were hit last year by both the overall pandemic drop-off in trade but also by the slump in oil demand. However, bunker demand in Fujairah and the region's smaller ports has lifted with world economic activity and the track of 2021 should hopefully offer an indication of what lies ahead for 2022.

Dubai-based Glander International Bunkering is one of the biggest names in the region, and *World Bunkering* spoke to the company's senior purchaser Sean Burgin, an expert in the Fujairah market, to get GIB's view.

WB: Trade and maritime traffic seem to be recovering somewhat from the disruption caused by the pandemic. Is this a fair assessment?

SB: The recovery continues and this is evident in the various vessel segments we are handling in Fujairah and the wider region. A clear example of this is the return of cruise vessels to Dubai which was one of the hardest hit shipping segments due to the pandemic.

The bunkering sector in Fujairah like many ports saw the pandemic negatively affecting vessel traffic in Q2 and Q3 of 2020 but port calls and bunker volumes have steadily increased almost reaching pre-pandemic volumes.

2021 sales in Fujairah have been on average 620kt per month of which HSFO accounts for approximately 25%.

WB: Is Fujairah's fairly even split this year between HFO and VLSFO likely to change as time goes on? Would the port, or the wider Gulf region, be in a position to support increased LNG bunkering or alternative fuels in the coming years?

SB: HSFO has continued to take a steady share of total sales as the number of vessels fitted with scrubbers has grown to just over 4,600. Owners have benefitted from the attractive economics of having scrubbers installed and fuel discounts are currently the largest since the IMO 2020 implementation. VLSFO is approximately priced at US$125-135 more than HSFO per metric tonne.

Forecasts suggest that the number of scrubber-fitted vessels will grow and surpass the 6,000 mark as we approach 2030. If we continue to see a lack of clarity on the availability and regulations of green fuels, it is forecasted that scrubber levels break 7,000.

Fujairah and the wider Gulf region is well positioned to establish itself as a key supplier of greener fuels with various projects and commitments in place from local governments and private entities. Fujairah's main challenge will be to secure a steady flow of those products from upcoming hydrogen projects in the region, whether by pipeline connection or other means.

The port has independent physical price assessments along with the newly established Murban crude contract, over 10 million cubic metres of land storage and 42 million barrels crude storage facility under construction. The Middle East will soon become net long on refined products as new refinery projects shift its regional role from importer to exporter. Fujairah can use this to cement its place as the regional hub for exports and supply to the global markets.

WB: Has the softening of relations between the UAE and Qatar had any effect on traffic patterns and fuel demand this year from GIB's point of view?

SB: Although the UAE along with other GCC countries ended the blockade with Qatar it did not materialise in increased vessel traffic or bunker sales in Fujairah.

During the course of the blockade, Qatar established a self-supply setup within its own ports for its fleets as well as securing regular supplies on its main trading routes in other key bunker hubs.

Qatari imports of VLSFO in 2021 fell 18% from January to September but the overall import flows of VLSFO product have increased four-fold from 2019 until today.

WB: What does the company hope to see in the coming year? Are there any particular challenges, or opportunities, for GIB on the horizon?

SB: We hope to see the world going back to pre-Covid conditions with minimal disruption to business and not least people's health and wellbeing. Hopefully we will move towards a normalisation of supply chains which are currently disrupted by bottlenecks in various links. The ongoing and future challenges and opportunities for Glander International Bunkering will go hand in hand. The shipping and bunker industry is constantly undergoing change and it is becoming increasingly complex. This presents numerous challenges for us, since we continuously have to adapt to new requirements and demands. Meanwhile, this also represents opportunity for us. By being at the forefront of regulatory requirements, the digital evolution and the green transition, we will be able to increase the value-add towards our customers and suppliers.

The sense that Fujairah and the Gulf bunker sector as a whole has reason to be optimistic going into the new year was echoed by Gaurav Dwivedi, general manager at GPS Bunkers, part of the Fujairah National Group.

"With the economies recovering, reduced curbs and the pickup of economic activities post-pandemic has translated into more movement of trade and maritime traffic, translating into recovery of demand, but not at the levels of pre-pandemic," he told *World Bunkering*. "Given the way vaccination drives in countries have progressed and travel restrictions have been loosening and countries are opening, the recovery has been gradual but consistent. We have port data officially to gauge the bunker demand growth we have seen from January 2021 till now for various grades in this area, which is a very positive side of the assessment."

The tanker sector had been reported to have picked up more slowly across the year, meaning bunker demand from tankers lagging behind the general lift in demand, which Dwivedi concurred with.

"Indeed, the tanker traffic has been slow which was primarily due to the fresh and rising cases of Covid-19 and slower economic recovery than expected in the oil-consuming countries like China, India and Japan and many Southeast Asian states, to which the majority of the tankers calling at Fujairah for refuelling are bound for," he said. "The export of oil from the AG region to these countries has been slow due to the general demand in these countries for oil being low because of a slow economy. Another reason for the slow tanker traffic has been the series of incidents in the last year in Fujairah, and in the Gulf of Oman, a few months ago on crude and product tankers, which had pushed the WRP on the tankers, making the cost per day go up and this too has deterred tanker traffic."

Several other companies have made announcements in recent months about building new or expanding their existing bunkering infrastructure in Fujairah to meet demand, but GPS owns its own storage facility, which Dwivedi believes gives the company an advantage.

"Being among very few suppliers in this market who owns and operate a storage



Good storage access is vital ©Port of Fujairah

and delivery infrastructure, certainly gives us a positive edge over the others in terms of the quality of the product that is being delivered to our clients, most of them being big shipowners and charterers. Having full control over the supply chain ensures a certain check on the parameters of quality that would be supplied to the customers, ensures a speedy turnaround on the loading of the barges, and removes our dependency, eliminating the risk of greater delays and off-spec cargo if we were to load from any other terminals. We have consistently delivered 1.2 million tonnes annually as bunkers and this is primarily due to operating our own storage exclusive for delivered bunkers."

"With the world coming out of the pandemic, we too are optimistic on the year ahead," Dwivedi said. "We have resumed high sulphur supplies on a limited capacity at the moment with a COA on the barge, wherein we would gradually start with our own owned barge for the HSFO, followed by the addition of a VLSFO barge to our existing fleet. With the market recovering and gradually moving to pre-pandemic levels, our intention is to target a total volume of 150-170,000 mt per month with 4 barges for all the three grades."

"We have all the intentions and plans to open a sister office in Singapore to cover both the two big markets and cater to many of our Far Eastern customers. It lost steam for some time due to the effect COVID-19 had on the market, but with things shaping up and the world on the road to recovery, we see it materializing in the near future."

Reasons to be hopeful then on the bread-and-butter side of the Gulf's bunker business. But there's also been significant recent movement on future fuels, with a string of projects particularly focused on green hydrogen - unsurprising, perhaps, given the region's immense solar and wind power potential and wealth of gas and chemical expertise.

One of the largest of these is in Oman, where InterContinental Energy, in partnership with state energy company OQ and Kuwait's EnerTech, has announced plans for a vast hydrogen and ammonia plant inland of Duqm in Al Wusta Governate to produce high volume renewable fuels; the total 25GW+ upstream wind/solar generation will, the company says, equate to approximately 1.8 million tonnes per annum of green hydrogen and up to 10 million tonnes per annum of green ammonia at full capacity. The first phase of the project is expected to be operational in 2027 and be running at full capacity within ten years.

A company spokesperson told *World Bunkering*: "The hydrogen produced can be used locally, exported directly, or converted into green ammonia for international export."

"The demand would partly come from the shipping sector, which requires green ammonia for its significant decarbonization needs, the aviation sector, which will utilise synthetic fuels made from green hydrogen, parts of the ground transportation sector, such as rail and trucking, which are expected to adopt green hydrogen and/or ammonia as a fuel source, as well as heavy industry located in areas such as North West Europe that will use green hydrogen to fuel their industrial processes including the production of steel. In addition, power companies across North Asia with a legacy reliance on coal and gas are planning to transition to green ammonia in order to reduce their carbon emissions."

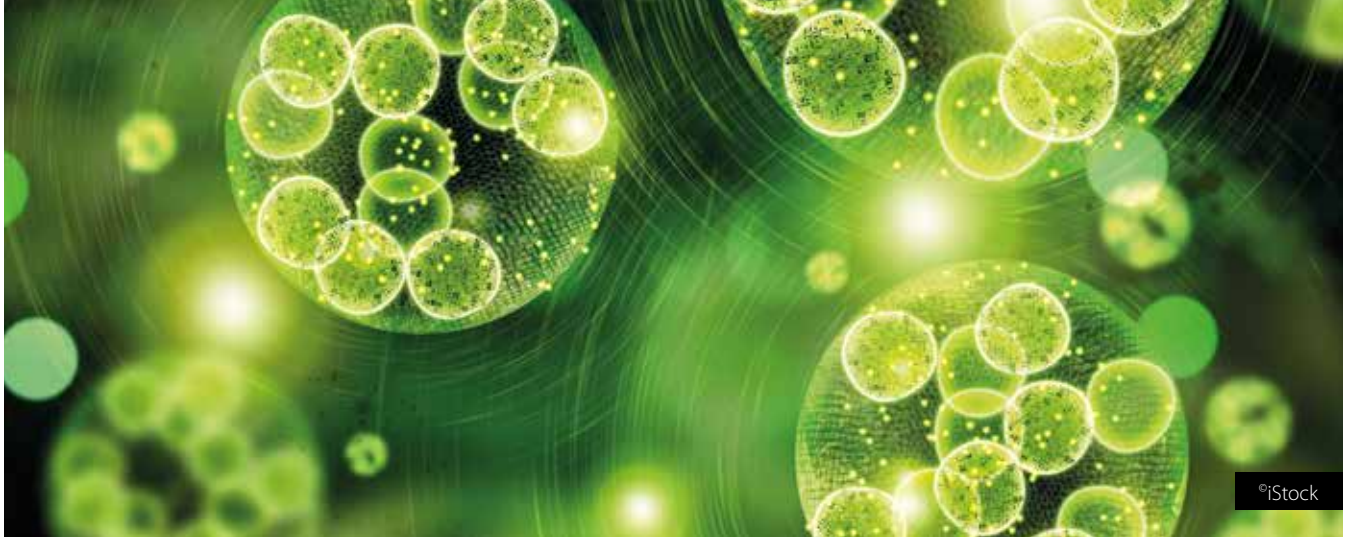
InterContinental has since signed a deal to develop a similar project with Aramco in Saudi Arabia, though the details in terms of scope and target markets have not yet been released, along with a slew of other projects aimed largely at decarbonisation.

Speaking at the time of the announcement, Aramco president and CEO Amin H. Nasser said: "Our plans illustrate our focus on developing innovative projects and investments, which support our long-term business strategy and aim to have a positive impact. Collaboration will be crucial in promoting economic development and creating new opportunities, as we expand our portfolio, diversify our business, advance low-carbon energy technologies and develop sustainable solutions."

In the immediate term, fuel production and supply in the Gulf states will of course continue to focus on traditional products - Kuwait Petroleum Corp is stepping up VLSFO production, Oman Oil Marketing Co should by the time of going to press have finished its new bunker terminal at the port of Duqm with Asyad Group handling ship management for its bunker fleet, Brooge Energy's second phase storage facility has been opened in Fujairah to make the company the region's second largest independent oil storage operator - and even with decarbonisation higher up the global agenda than ever, you'd have to be mad to expect those to disappear before the wells run dry. But huge production of what seems certain now, in its various forms, to be the large scale medium term zero-carbon fuel replacement offers real opportunity for the future.



Oman could soon be home to one of the world's largest green hydrogen production projects
©Luca Bolatti Guzzo/CC-BY



BIOFUELS AND ADDITIVES

Shoreside experience can be applied to the use of additives on marine biofuels according to fuel treatment specialist Aderco

Replacing fossil fuels with biofuels is seen by many as an important pathway towards decarbonising the transport sector. Prominent fuel treatment technology specialist Aderco, which has its roots in the maritime industry, has told *World Bunkering* that it is now set to draw on its six years of inland mining, power generation and transportation biofuels experience to support the maritime sector.

"Clearly, in addition to the industrial sector, the use of biofuels has already established itself in other markets, in particular the automotive industry where some 20% of vehicles in Europe run on biofuels today, increasing to 50% in Brazil alone. As such, with energy majors now turning their attention to the production of this renewable energy, we see this as a real opportunity for the maritime industry. Furthermore, of equal importance and when comparing other solutions available in the market, only minor adjustments are required to the existing equipment on board," said Aderco CEO Olivier Baiwir.

Biofuel is a living fuel and comes in different grades, ranging from B10 up to B100, or 10 to 100% Fatty Acid Methyl Ester (FAME) blend. One of the challenges that he said Aderco had observed with regard to FAME is that, depending upon the actual grade the pour point may vary. For example, a vessel operating in the Baltic Sea in the middle of winter using FAME derived from palm trees originating from Indonesia will present pour point challenges, compared to that of pine trees grown in the north. "Accordingly," he said, "it is imperative that the correct grade of FAME is always chosen".

He stressed that, being extremely sensitive to water contamination, either through water content or condensation, the storage management of biofuels is vitally important, as is the correct storage temperature in order to ensure the least amount of condensation present. As bacteria is already in biofuels, any water added will only encourage bacterial growth and affect the pH value which, in turn, can lead to oxidation issues during long storage periods. Regular checks of the pH level are necessary to ascertain that the biofuels remain stable. Should the pH level diverge, then fuel additive will invariably need to be added in order to ensure that the biofuel stays within the operable range.

Baiwir said that his company's experience had been that, both in terms of pour point and water settlement, the use of its Aderco 2055G product has shown to increase the former by 5-10°C, dependent upon the origin of FAME and, the latter has reacted in exactly the same manner as for other fuels.

Commenting on the prospects for increased use of biofuels at sea Baiwir said: "The calorific efficiency of biofuels is slightly lower than that of the more traditional fuels the maritime sector has become used to. As well as from a geo-political perspective, one can also expect to pay a higher price due to the blending components and the need to be a greener industry, however, the market may well balance the price ultimately."

He adds: "Having invested heavily in R&D and holding a vast number of case studies today, when combined with an efficient preventative treatment, Aderco has solutions for the optimum use of biofuels which, in turn, will perform for an extended period."

Baiwir had no doubts biofuel use will increase. He concluded: "Given the challenges mentioned, I am sure a number of readers question biofuels as a viable alternative to fossil fuels. However, with Aderco having gained a wealth of experience through our inland operations, I can categorically state that biofuels are indeed a real alternative and that we are here to transfer the extremely valuable knowledge gained over the past six years to the maritime sector, such that our customers are comfortable in the use of such biofuels."



©Biofouling Solutions

CLEAN HULL, LESS CO_2

An IMO-backed study has found keeping ships' hulls free from just a thin layer of slime can reduce a ship's GHG emissions by up to 25%

The preliminary findings of the study on the Impact of Ships' Biofouling on Greenhouse Gas Emissions, commissioned by the Global Industry Alliance (GIA) for Marine Biosafety, reveal that a layer of slime as thin as 0.5 mm covering up to 50% of a hull surface can trigger an increase of GHG emissions in the range of 20 to 25%, depending on ship characteristics, speed and other prevailing conditions.

The GIA operates under the framework of the GEF-UNDP-IMO GloFouling Partnerships project. The findings of the new study, The Impact of Ships' Biofouling on Greenhouse Gas Emissions, were revealed at the *Managing Biofouling – A Win-Win Solution to Help Curb Climate Change and Preserve Ocean Biodiversity* hybrid official side event, led by BIMCO, during the United Nations Climate Change Conference (COP 26).

An IMO statement noted that severe biofouling conditions can lead to higher emissions, showing the importance of good biofouling management. With a light layer of small calcareous growth (barnacles or tubeworms), an average length container ship can see an increase in GHG emissions of up to 55%, dependent on ship characteristics and speed.

It added: "The report clearly shows the importance of good biofouling management. It illustrates how the perceived impact of biofouling is likely to have been historically underestimated by the shipping community."

The second part of the report, currently underway, will include newly-developed research focused on analysing the effect of available industry practices for biofouling management, such as the importance of selecting the most appropriate fouling control coating, hull cleaning, propeller polishing and the use of ultrasonic antifouling systems. The preliminary report notes: "While some ship owners minimise biofouling through the use of the best available technologies, there is an opportunity for this best practice to be adopted by the entire industry."

The final version of the report is expected to be published in February 2022.

Coatings "reduce carbon intensity"

Coatings manufacturer Jotun reports that a study based on European Union Monitoring, Reporting and Verification (MRV) data has shown vessels using Jotun Hull Performance Solutions reported a 20% lower carbon intensity in operations.

The company says: "Based on the latest carbon emissions MRV data published by the EU, it can be seen that cargo vessels using Jotun's Hull Performance Solutions (HPS) reported a 20% lower carbon intensity on average in operations compared to non-HPS peers in 2019 and 2020."

The internal study carried out by Jotun investigated major cargo vessel types, including bulk carriers, chemical tankers and oil tankers, with a dataset of almost 9,000 vessels, which had their emissions report verified by accredited parties.

Nano domain coating for car carrier

Nippon Paint Marine says that its new antifouling system FASTAR has been applied to a 18,891 dwt pure car carrier

(PCC), the fourth application of the novel nano domain coating to this ship type.

Since market introduction in January, the self-polishing antifouling system has been applied to more than 60 vessels, including bulk carriers, chemical carriers, VLCCs, container ships, passenger vessels and PCCs.

Covering a 7800 m3 underwater area, FASTAR was applied to the 196 metre long ship's flat bottom, vertical bottom and boottop during a recent drydocking at a shipyard in Shanghai. One coat of anti-corrosive paint and one coat of FASTAR was deemed sufficient to meet the undisclosed vessel's 36-month drydocking schedule.

Maersk tries out air lubrication

Technology group Wärtsilä is to install Silverstream Technologies' Air Lubrication System, the Silverstream® System, on a trial basis on a large A.P. Moller – Maersk container vessel. The trial will examine possible improvements to the ship's overall efficiency, focusing on the reduction of fuel consumption and associated emission levels.

The programme will have a special emphasis on the potential application of the system for methanol-fuelled Maersk vessels.

Silverstream's Air Lubrication System creates a carpet of microbubbles that coat the entire flat bottom of the vessel. This carpet effectively reduces frictional resistance between the hull and the water. The technology is said to work in all maritime conditions, is not weather dependent, and does not constrain or negatively impact the normal operational profile of the vessel.

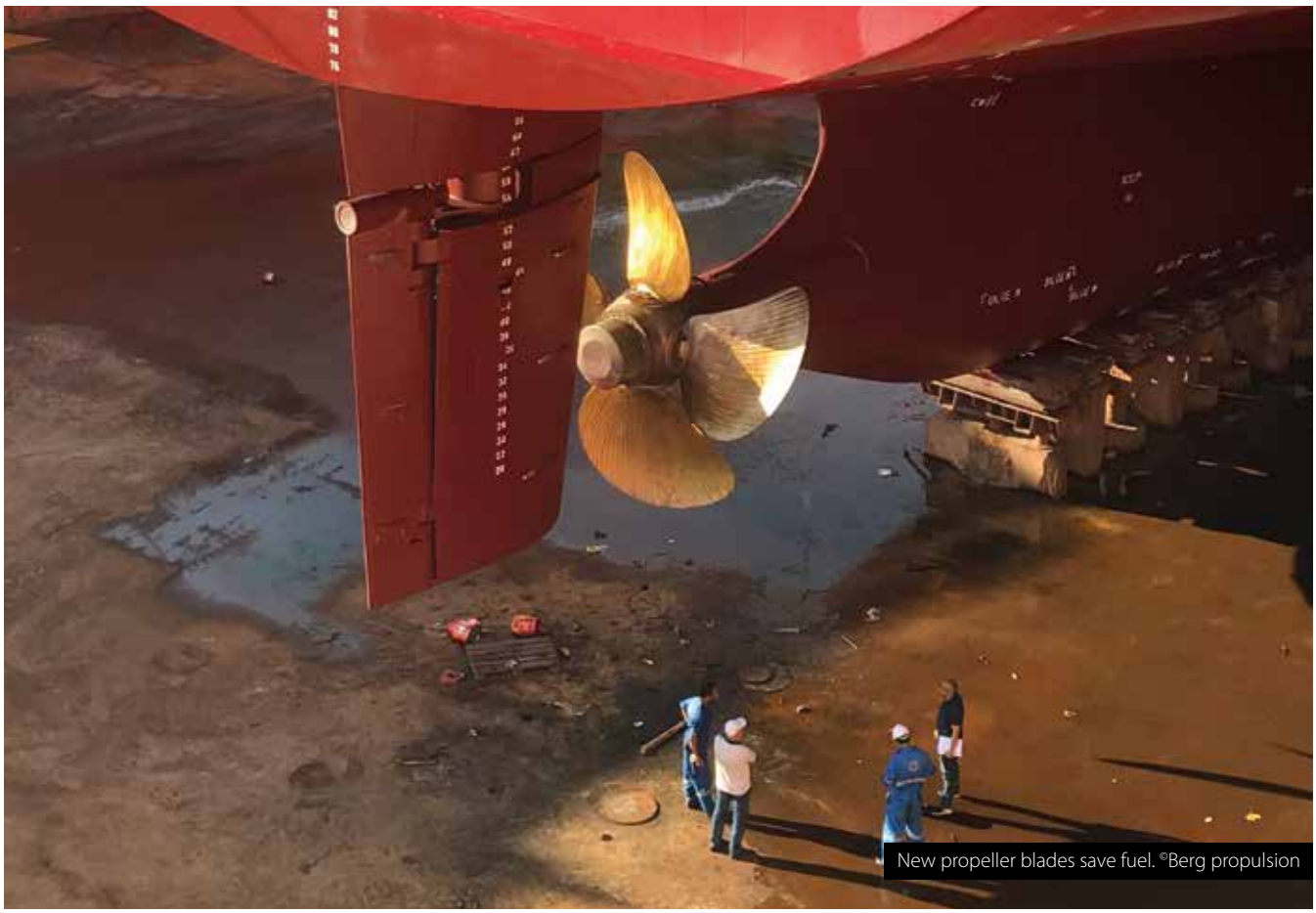
New propeller blades save fuel

Major ship operator and manager Vroon recently asked Berg Propulsion to investigate the possibility of optimizing the propulsion system on its container vessel Indian Express which was fitted with a controllable pitch propeller originally manufactured by ZF.

The aim was to find the best practical answers to lowering CO_2 emissions, ahead of the IMO's Energy Efficiency Ship Index (EEXI) and Carbon Intensity Indicator (CII) coming into force.

David Sakandelidze, Berg Propulsion Business Manager – Energy and Efficiency, explained: "In close cooperation with the ship owner and ship operator, we analysed the vessel's current and future operation needs and defined its operation profile. Next, the performance of the original propeller blades was benchmarked against the vessel's defined operation profile."

Berg Propulsion designed blades tailored for the operation, improving efficiency significantly, according to Sakandelidze. He said: "Efficiency gains are made for much of the time and, at 12 knots, the new blades achieve up to 50% higher efficiency than the ones they replace. With performance improved at the speeds most commonly required during operations, Indian Express would achieve an astonishing 22% fuel saving overall, as well as lower emissions that should go farther than the requirements of the IMO's Carbon Intensity Indicator goals for 2026."



New propeller blades save fuel. ©Berg propulsion



SHELL UPGRADES MONITORING SERVICE

LubeMonitor "transformed" for digital era says lubricant manufacturer

Shell Marine has added enhancements to its LubeMonitor service to provide comprehensive engine monitoring.
By accessing a wider range of technical and operational insights, Shell LubeMonitor aims to enable users to better understand their ship's engine performance, ensure it is operating in line with OEM recommendations and ultimately, help reduce maintenance costs.

According to Shell, while its features have become more sophisticated, the service's user interface and reports are now simpler to use.

Shell says enhanced fleet and vessel insights allow users to compare vessels from fleet level all the way down to its cylinders in an easy-to-read manner for use by both on- and off-shore users.

The package includes a step-by-step guide for on-board engineers which can help standardise the inspection process and a comprehensive engine inspection feature which allows inclusion of recorded measurements of piston ring clearance, piston ring coating and liner wear. All data can be stored and organised with the photos captured, so users can come back to them at any point in time.

LubeMonitor has been integrated with the Shell LubeAnalyst oil condition monitoring service, allowing comparison of all oil analysis results for an engine. The service can be accessed through the Internet, iOS and Android operating systems and also an offline logbook that is not dependent on connectivity at sea.

Gareth Lowe, Technical Product Manager for LubeMonitor at Shell Marine said: "Our goal goes beyond just making the programme an easy-to-use central data repository. By surfacing relevant information from onboard data, running parameters, lab data and inspection photo's all from within LubeMonitor, we can start to deliver vital insights. This provides customers with a comprehensive picture of their engine's health, and they can then use this information to make informed decisions on feed rates and maintenance schedules, which can help maintain optimal engine performance and lower operating costs."

"Unnecessary" oil changes

ExxonMobil says its data shows that many operators of high-speed engine vessels are not managing their engine's lubrication as efficiently as they could. Up to 75% change their engine oil in line with original equipment manufacturer (OEM) recommendations, but according to Mobil Serv Lubricant Analysis data the majority may not actually require an oil change at the time.

According to the company, the data indicates that up to two thirds of high-speed engine vessel operators are "missing out on a variety of potential benefits from oil drain optimisation, including reduced lubricant expenditure and minimised used oil disposal costs".

"Operators who are not optimising their oil drain intervals are forgoing a range of benefits," said Yannis Chatzakis, Global Field Engineering Services, Director, ExxonMobil. "In order to help address this problem, we have developed the Mobil Serv Oil Drain Optimization Program, a bespoke offer designed to meet the individual needs of vessel operators. It includes oil monitoring, which has the potential to improve engine reliability and a related reduction in avoidable maintenance."

Sindo Ferry, the largest ferry operator in Singapore, recently explored oil drain optimisation with ExxonMobil. The aim was to reduce expenditure without compromising reliability. According to ExxonMobil, the programme "far exceeded its original cost-cutting objective, delivering multiple benefits, including: oil drain intervals more than doubled; operating cost came down by 30% to 46% per engine and an estimated savings of 59% on oil- and filters-related operating costs.

Lubmarine



Talusia Universal

The single cylinder oil solution for all 2020 compliant fuels.

Find out more at lubmarine.totalenergies.com/tu

TotalEnergies

MAN Energy Solutions

WIN GD

Talusia Universal is approved by MAN Energy Solutions and WIN GD.



IMO HQ

MEPC 77 DISAPPOINTS SHIPOWNERS

Shipping organisations voiced their frustration at "lack of progress" at IMO meeting post COP26

Following on closely after COP 26 in Glasgow, hopes were high among shipowner groups that IMO's Marine Environment Protection Committee's 77th meeting (MEPC 77) would give the green light to a proposal to set up a research and development (R&D) fund paid for by a US$2 per tonne levy on bunker fuel.

In the event, MEPC 77 put off a decision and sent it to a working group that will take place in 2022 for further consideration.

The reaction was predictable. ICS Secretary General, Guy Platten, said: "We are disappointed that the words and commitments made by governments at COP26 have not yet been translated into action. This week's meetings have missed the opportunity to take forward a range of GHG reduction measures which would accelerate the development of zero emissions ships that are urgently needed at scale to decarbonise our sector. It's almost as if COP 26 never happened."

He added: "Governments can't keep kicking the can down the road; every delay moves us further away from reaching pressing climate goals. We will continue to work with governments to agree to the suite of measures which the industry has proposed, including the 5 billion dollar R&D fund as an immediate step to be followed by a levy based carbon price for shipping. The adoption of both these measures will be the only way to deliver on net zero emissions from shipping by 2050 while ensuring an equitable transition that leaves no one behind."

Platten's frustration was apparent as he concluded: "The IMO Maritime Research Fund is the only proposal on the table ready for immediate agreement. If it is not taken forward soon, we fear this will signal to the world, following COP 26, that IMO is no longer truly serious about maintaining its leadership on GHG issues and that others may then move in to fill the vacuum. We will continue to work with governments to ensure that concerns are address so that this fund can be implemented as soon as possible."

The World Shipping Council (WSC), which represents liner shipping companies, said it had been encouraging to see the maritime sector being included in the discussion between governments during COP26. But it added in a statement: "International liner shipping companies, who for some time have been taking the lead when it comes to commitments as well as investments in actual technology development, were at the fore in Glasgow calling for government action. Some promising coalitions and declarations were launched and going into the IMO MEPC 77 this week there was a positive undercurrent. It is then all the more disappointing to watch the same governments that were making lofty statements at COP26 just days ago, again fail to walk the talk when it comes to real action at the IMO."

WSC President & CEO John Butler explained why he thought the R&D fund was necessary: "Our challenge as a hard-to-abate sector is that the technology and fuels needed for a transition to zero are not yet available. We see the direction, and now need to drive progress towards a tipping point where the technologies for zero-GHG shipping can be applied and a clear demand picture can drive availability of and infrastructure for alternative fuels. That is why IMO member countries inexplicable stalling around the IMRB/IMRF is so dangerous. We can talk all we want about the ambitions for 2050, but unless we put initiatives to drive real progress in place, we are not going to get there."

Maersk's 10-year, €500 million green bond

Shipping group A.P. Moller – Maersk has launched its Green Finance Framework which it says is designed to allow the company to issue a variety of sustainable financing instruments which may include bonds, loans, project finance and other instruments as part of a funding strategy to enable it to become carbon neutral by 2050.

Maersk's inaugural 10-year, €500 million green bond will be used to fund the construction of a feeder vessel and a series of eight ocean-going methanol-fuelled container vessels. Maersk intends that the methanol used by these ships will be carbon neutral.

"Issuing Green Financing Instruments is a further step to integrating sustainability into our financing operations as it is an effective tool for channelling investments to projects with positive environmental impact and thereby contributing to the achievement of the UN Sustainable Development Goals (SDGs) and the Paris Agreement. With this green bond, we aim at diversifying our investor base by reaching out to new investors and increasing the transparency of our ESG ambitions and performance even further towards our stakeholders," said Maersk CFO Patrick Jany.

Maersk is also considering using hydrogen to fuel some vessels, but that option would be problematic for deep-sea ships, Maria Strandesen, head of future fuels at Maersk told the Global Manufacturing and Industrialization Summit in Dubai. Platts reported her as saying: "We are looking at our vessels that have a maximum round trip of 2,000 km -- we don't have many of those -- but we do have a few there [and] we are actually looking whether hydrogen could be used as fuel. My team's main headache is to figure out solutions for the deep sea going vessels and there hydrogen is simply not an option and that is based purely on the fact it takes too much cargo space."



Maersk Shipping Vessel

LR: "Global trade at risk of disruption without urgent action on zero-carbon shipping"

A new Lloyd's Register (LR) study warns of potential future supply chain upheaval from energy transition uncertainty.

According to the LR report "leaders from across the global supply chain" are calling for immediate action on maritime decarbonisation if a successful energy transition to zero-carbon supply chains is to be achieved.

LR's *How To Make Shipping's 'Decade of Action' a Reality* says the transition to zero-carbon shipping will be among the most significant in the sector's history, with investments made today preventing future supply chain interruptions and minimising disruption to the backbone of world trade.

Nick Brown, Chief Executive, Lloyd's Register, said: "Our industry is no longer asking 'if' or 'when' decarbonisation should take place. We know we must act now and many of us are. The question that remains is 'how' will the maritime industry deliver meaningful change during this crucial decade of action. This report brings together expert views and insights from the public and private sector on what the global maritime industry needs to do to make this decade of change a reality. The challenge is immense, but the commitment is real, from many organisations and governments. Everyone involved in the maritime supply chain must play their part."

Lindsay Zingg, senior director of sustainability, at freight forwarder DSV Panalpina, said in the report: "If you cannot offer a 'green' product, you will lose business – it is an absolute requirement. Our customers are constantly asking what we can do to lower CO_2, and we will launch our green logistics programme later this year. Customers push us, we push our suppliers, and we will make a difference."

Ammonia/LNG dual-fuel feasibility study

Technology group Wärtsilä and Norway based Simon Møkster Shipping have signed a collaboration agreement to carry out a feasibility study on utilising ammonia as the main fuel in dual-fuel engines where

LNG is the alternative fuel. The aim is to demonstrate the feasibility of converting vessels for dual ammonia – LNG operation, and that it can be carried out safely and efficiently. The agreement was signed in October 2021.

"We are excited to join Wärtsilä in this project. We see this as a step towards meeting our targets for reducing greenhouse gas emissions, and our ambition is to cut our fleet's CO_2 emissions by 40% by 2030. By 2050 we expect to reach net-zero carbon emissions," says Anne Jorunn Møkster, Owner and CEO Simon Møkster.

"Decarbonisation is central to the future of shipping, and Wärtsilä is totally committed to helping our customers achieve this goal. This collaboration agreement represents further evidence of this commitment. We are leading the way towards the adoption of alternative cleaner future marine fuels through extensive testing and research, and we see ammonia as an extremely promising option," says Cato Esperø, Head of Sales Norway, Wärtsilä.

The testing will be carried out on the Stril Pioneer, an offshore supply vessel (OSV) currently operating with Wärtsilä 32DF dual-fuel engines using LNG as the primary fuel.

Methanol Institute - EU's Fit for 55 agenda is an "opportunity for progress"

The Methanol Institute (MI) has welcomed the EU's package of proposals known as Fit for 55 as an opportunity to advance the availability of alternative fuels for shipping but has called for the application of the EU's Emissions Trading System (ETS) to shipping not to start until 2030 and then to be phased in over five years.

In a recently published policy position paper MI states that supply-side mechanisms aimed at spurring the uptake of renewable fuels should be emphasised so as to make low carbon and net carbon neutral fuels more affordable and so drive the switch to renewables. MI also recommends a steeper incremental increase of the FuelEU Maritime GHG reduction targets beyond 2030, accelerating faster than currently proposed, to direct investment towards alternative fuels offering transitional pathways towards carbon neutrality.

MI also supports the extension of the ETS to shipping as long as the system is grounded in Lifecycle Assessment (LCA) and the concept of CO_2 equivalence. It proposes a five-year phase-in, starting in 2030, to help overcome industry resistance to change and enable experience-building to be incorporated into the policy.

"To successfully facilitate the increased supply and use of alternative marine fuels, it is critical that the EU ETS yields a carbon price that proves sufficient to trigger a systemic shift towards renewable and lower carbon fuels for the maritime sector," said Matthias Ólafsson, MI's Manager of Government and Public Affairs, Europe. "The ETS and FuelEU Maritime initiatives must address the most significant challenge to achieving greenhouse gas emission ambitions of the maritime sector, which is the lack of clear vision and corresponding support required to ensure uptake of sustainable marine fuels."

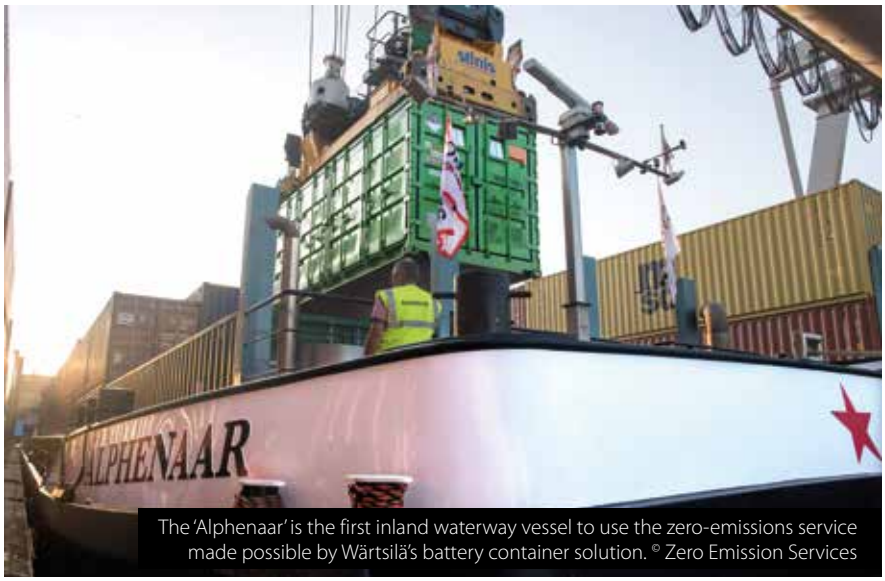
To safeguard interoperability between other Fit for 55 proposals and regulations formed on the international level, MI believes the well-to-wake/LCA methodology used in FuelEU maritime should also be reflected in the EU ETS and EU taxonomy for measuring emissions from maritime activities.

Emission-free inland shipping vessel

Zero Emission Services (ZES) commenced inland freight shipping services in September, using the Alphenaar, described as the first Dutch inland vessel to use



Tests will be carried out on the offshore supply vessel (OSV), 'Stril Pioneer' © Simon Møkster



The 'Alphenaar' is the first inland waterway vessel to use the zero-emissions service made possible by Wärtsilä's battery container solution. © Zero Emission Services

interchangeable energy containers for propulsion. The vessel sails between Alphen aan den Rijn and Moerdijk transporting beer for Heineken.

The energy containers, ZESpacks, are standard 20ft containers filled with batteries, which are said to be charged with "green" electricity. The first two ZESpacks are loaded and exchanged at the first charging station at a terminal at Alphen aan den Rijn. ZES hopes to scale up in the short term and aims to realise 30 zero-emission shipping routes by 2030. The company was founded last year by ENGIE, ING, Wärtsilä and the Port of Rotterdam Authority with the support of the Ministry of Infrastructure and Water Management.

Sustainability-focused financing

Law firm Watson Farley & Williams (WFW) has advised a major financial services company regarding a US$25 million financing to companies controlled by Union Maritime Limited secured on three dry bulk carriers with a focus on sustainability and, more specifically, the IMO's aim to reduce international shipping's carbon footprint through the recent adoption a new operational carbon intensity indicator.

The transaction involved drafting of a margin adjustment mechanism based on carbon intensity rating as an incentive for the owners to reduce the carriers' carbon emissions, which also included disincentives for non-compliance demonstrating our client's commitment to promoting sustainable ship financing. WFW advised the client regarding the legal and commercial implications of the mechanism by proposing various drafting solutions in order to best document the commercial agreement.

'Carbon neutral' Italian shortsea voyage

Swiss-Italian dry bulk ship operator Nova Marine Carriers undertook what it describes as it first carbon neutral voyage in September, offsetting the CO_2 emitted by its 8,063 dwt general cargo vessel Sider Rodi by voluntarily purchasing carbon credits for a Madagascan solar farm project. The Ambatolampy solar power plant provides green electricity and a stable power supply to around 50,000 Malagasy households. The project developer GreenYellow recently announced plans to significantly expand Ambatolampy's output.

The Sider Rodi had been chartered by a major European power utility company to deliver 3,395 tonnes of woodchip from Livorno to Porto Vesme in Italy, in the process consuming 28.2 tonnes of marine gas oil and low sulphur fuel oil, equating to 94 tonnes of CO_2. This figure includes the vessel's ballast leg from Genoa to Livorno to undertake the charter as well as the fuel consumed in port during loading and discharge operations.

The trade was brokered by IFCHOR ClearBlue Oceans, a carbon market specialist and international shipbroker and verified by carbon accounting standard organisation Verra. The not-for-profit Verra organisation runs the Verified Carbon Standard (VCS), the world's most widely used voluntary greenhouse gas programme. According to Verra, the Ambatolampy solar power plant reduces Madagascar's CO_2 emissions by 25,000 tonnes per year.

Biofuel bunkering

Biofuels manufacturer GoodFuels and the international feeder and shortsea company Unifeeder completed their first bunkering of "sustainable" marine biofuel in the Port of Rotterdam in October.

The shortsea container ship Elbsummer was bunkered with a blend of marine biofuel produced from 100% sustainable feedstock and marine gas oil (MGO) before starting its journey towards Helsinki, Finland.

GoodFuels says its sustainable marine biofuels reduce CO_2 emissions by up to 90% well-to-exhaust, and eliminate SOx emissions almost entirely. It says its entire portfolio of biofuels are 100% sustainable because they are produced from various certified feedstocks labelled as waste or residue.


The Ambatolampy solar power plant reduces Madagascar's CO_2 emissions by 25,000 tonnes per year.



PureteQ

THE SCRUBBER MAKER

PureteQ scrubber systems feature the lowest OPEX in the business and are easy to install. All scrubber systems come with state-of-the-art intuitive control systems with full remote accessibility. It is very convenient and cost efficient to get 24/7 remote on-line support/guidance to ship crews from certified Marine Engineers.

We are presently releasing a newly developed cloud-based software for optimizing of scrubber systems across fleet and scrubber makes. It features the measuring of MARPOL compliance, operational performance (impact on SFOC) as well as environmental performance reporting, such as CO2, Sulfur and PM reductions. The software will enable sharing of learnings between crews, resulting in lower energy consumption and other OPEX. The software is a perfect match to new IMO regulation on EED(X)I & CCI when Well-to-Wake principle applies.

Today, we service all brands of Scrubbers worldwide.

WWW.PURETEQ.COM



Wärtsilä will retrofit exhaust gas abatement technology on two Trasmed GLE S.L. owned passenger ferries. ©Wärtsilä

EU'S QUALIFIED APPROVAL

A new report acknowledges role of scrubbers but also points to concerns over washwater

September's publication of the European Maritime Transport Environment Report (EMTER) has been seen by scrubber protagonists as a positive development, despite it raising the washwater issue.

The European Environmental Agency (EEA) and the European Maritime Safety Agency (EMSA) study has been billed as the "first comprehensive health-check of the sector". It covers environmental impacts including GHG emissions, air and underwater pollution, non-indigenous species and oil pollution.

Pro-scrubber lobby group Clean Shipping Alliance (CSA) highlights that the report acknowledges that exhaust gas cleaning systems (EGCS) are "one of the most mature after-treatment technologies" designed to remove SOx matter from the exhaust gases and that scrubbers are recognised by EU rules as an alternative to using low-sulphur marine fuels.

EMTER refers to two EU co-funded projects that promote the use of scrubbers in sulphur abatement: the Back from Black project that studies the deployment of affordable retrofitted scrubbers for SME shipowners, and the Closing the Loop project that uses scrubbers to increase the environmental performance of short-sea shipping routes in northern Europe.

CSA comments: "It is clear that EGCS play an important role globally in improved marine air emissions; however, the report also mentioned that wash water discharge from open-loop scrubbers is a matter of potential concern for some member states especially in high-traffic density areas. The CSA hears these concerns, and will continue to work with the EU by providing the sound scientific data to further demonstrate that the EGCS washwater is benign with no negative impact on the marine environment."

The lobby group reiterates it case for using scrubbers: "As an effective and widely-accepted technology for sulphur abatement as underlined by the report, scrubbers have contributed to the implementation of the Global Sulphur Cap. The global legislation has had a huge impact in the reduction of sulphur emissions from ships: the percentage of sulphur in emissions in September 2019 was 2.38%, while by February 2020 it had fallen to 1.1 %. However, in addition to lower sulphur (SOx) emissions than the alternative compliant fuels, EGCS using HFO are also emitting less NOx and PAHs, and contributing substantially less CO_2 to the atmosphere on a lifecycle basis, making EGCS an important step to a zero-carbon future. Already the industry is exploring methods of carbon reduction and carbon capture with these systems."

Open loop scrubbers for Med-trading ferries

Wärtsilä Exhaust Treatment is to install its open loop exhaust gas abatement technology on two roll-on/ roll-off passenger ferries owned by Spanish company Trasmed, part of the multinational logistics company Grimaldi Group.

Four of Wärtsilä's I-SOx open loop scrubbers with exhaust de-plume systems will be fitted on the RoPax vessels Volcan del Teide and Ciudad de Granada which operate Mediterranean routes. Each vessel will have four scrubbers installed, one on each main engine. The order was booked in November 2021.

The scrubbers are flexible to enable compliance with MARPOL Annex VI sulphur limits. The scrubbers will enable Trasmed GLE's vessels to meet the 0.10% sulphur limit if required.



Mining giant Fortescue is banking on ammonia ©Fortescue Metals Group Ltd

ON THE REBOUND

Change is in the air for Australia's fuels and energy sector, John Rickards writes

There's something of a changing of the guard feeling about the Australian energy sector and those it supplies at present. At the turn of the year, ExxonMobil announced to no one's great surprise that it was shuttering its Altona refinery to convert it to a products import terminal, leaving the country with just two remaining oil refineries of its own - Ampol's at Lytton and Viva Energy's Geelong refinery. The futures of both of those were eventually only secured in May when the government agreed to subsidise their operations and upgrade their plant to produce lower sulphur fuels rather than see them close too due to their struggles to compete.

The loss of the cruise industry to Covid caused a huge knock to sales of both VLSFO and HSFO through 2021 - to the extent that at least one main supplier switched barge coverage to New Zealand instead. With the continued prospect of navigating periodic local lockdowns and a very cautious approach to reopening to foreign tourists, it seems likely that the slump will be a persistent one.

So far, so gloomy. However, the longer-term picture for the Australian fuels market might be rosier - just not in the traditional segments.

Australian mining group Fortescue through its Fortescue Future Industries arm is some way through the planning stages for a 250MW green hydrogen plant in Bell Bay in northern Tasmania and has signed a deal with TasPorts to handle all land and access requirements to the site. The plant could produce 250,000 tonnes per year of green ammonia.

FFI CEO Julie Shuttleworth said: "We are excited to be working with local communities and all stakeholders to develop this important opportunity for the future prosperity of Tasmania and a world that needs to decarbonise. FFI's Tasmania green hydrogen project could be one of the world's largest green hydrogen plants when commissioned, creating a significant export market for green hydrogen from Australia."

"The signing of this agreement with TasPorts marks the beginning of a ground-breaking partnership, aiming for the first export of green hydrogen from an Australian port."

The company is also keen on developing an ammonia-fuelled bulker for ore shipments from its Pilbara operations in Western Australia. After large-scale engine tests and design work with class society approval in principle, these are now in the closing stages of development, with liquid ammonia chosen specifically over LNG for decarbonisation.

If FFI's Tasmanian hydrogen plant is to be the first, or the largest, in Australia, it's going to have to be green-lit quickly. In July, a consortium consisting of InterContinental Energy, CWP Global and Mirning Green Energy announced plans for a mammoth production project dubbed the Western Green Energy Hub, in Western Australia between Esperance and Kalgoorlie-Boulder. The WGEH is earmarked for production of 50GW of solar and wind energy driving the production of up to 3.5 million tonnes of hydrogen or 20 million tonnes of ammonia for use as fuel domestically or for export - a huge amount by any standard.

The consortium will have to be sure of its paperwork, though. A similar mega-project in the Pilbara, Western Australia, the 26GW Asian Renewable Energy Hub, has been forced to resubmit its plans for environmental approval after a switch from exporting electricity to using the power to produce green ammonia.

The switch in purpose and the resultant infrastructure needs - and their effect on wetlands near Eighty-mile Beach - saw the proposals surprisingly knocked back by federal environment minister Sussan Ley. The WA state government, in the form of minister Alannah MacTiernan, pointedly remarked that more controversial coal projects have won approvals in the past. The AREH consortium itself merely said that it would take concerns on board and address them in the future.

Assuming these hurdles can be overcome, it still looks as though hydrogen-based fuel is likely to be a huge part of Australia's future.



Two new LNG Carriers being built for Capital Gas Ship Management will feature Wärtsilä's advanced shaft generator systems. ©Capital Gas Ship Management Corp.

GENERATING FUEL SAVINGS

Shaft generator systems to provide power take-off for LNG Carrier vessels

Technology group Wärtsilä is to supply four shaft generator systems to provide power take-off from the main engines for two LNG Carrier vessels, which should deliver fuel savings and efficiency gains

The ships are being built at the Hyundai Heavy Industries (HHI) shipyard in Korea for the Greek ship management service provider Capital Gas Ship Management Corp. The order with Wärtsilä was placed in August this year.

By enabling power take-off, the systems allow the main engine to generate electricity for onboard use, thereby reducing fuel consumption, lowering emission levels, and improving both the vessels' Energy Efficiency Design Index (EEDI) and future Carbon Intensity Index (CII).

"In aiming to continue improving our fleet efficiency and reduce our environmental footprint, we have decided to adopt the latest available technologies. The installation of advanced shaft generator systems was one of the investments we are making in this direction," says Miltos Zisis, Managing Director of Capital Gas Ship Management Corp.

Each of the two 174,000 cubic metre capacity vessels will be fitted with two 1.9 MW Wärtsilä shaft generators. The equipment is scheduled for delivery to the yard in 2022.

Using behavioural science to reduce carbon emissions

Bernhard Schulte Shipmanagement (BSM) Germany has formed a strategic partnership with London-based software start-up Signol that aims to use behaviour-based data science to reduce fuel consumption and carbon emissions.

The two companies are exploring how giving personalised performance feedback to its masters and chief engineers can positively impact their behaviour in selecting the optimum speed for the vessel and ultimately lead to more fuel-efficient voyages. BSM's operational data analytics per vessel are combined with behavioural science in a dedicated app built by Signol, creating personalised targets and feedback for each crew member.

"Whilst shipping is the most efficient means of global transport with the lowest carbon emissions, we at BSM believe that the potential for improvement in this field is still immense," says Nick Topham, Managing Director at BSM Germany. "By introducing our crew to the direct impact of their actions, we hope that we can drive them to make measurable fuel and CO_2 savings."

More than 60 masters and chief engineers on 28 vessels are taking part in a pilot project that started in August. Over a period of six months, each participating crew member is receiving individualised targets via the Signol app which are calculated based on the crew's recent performance. Every week, the participating seafarers will obtain updates on personal milestones and achievements via the app and email. They can digitally review their voyages and the progress they have made on fuel efficiency and submit their personal feedback via the app, which will contribute towards further improving the solution.

According to BSM and Signol, the use of the app is intended to not only improve crew decisions with regards fuel consumption, but boost seafarer morale and well-being onboard due to ongoing communication and personal interaction.

"Our studies have shown that changing the master's behaviour alone could result in over 5% lower fuel usage as well as in much higher job satisfaction by giving employees a sense of empowerment," says Dan White, CEO and Co-Founder at Signol.

"Achieving carbon neutrality requires structural and incremental change and can only be achieved if corporations act in unison," added Topham. "That is why BSM is forming strategic partnerships worldwide to develop and implement innovative solutions that monitor and mitigate the environmental impact of our managed fleet."



Downtown Houston ©iStock

INDUSTRY NEWS

Recent moves and developments

TFG Marine pushes mass flow meters

TFG Marine has announced it is fitting mass flow meters (MFM) on its supply vessels across its operations. It said the move provides customers "with unrivalled accuracy and full transparency on their marine fuel deliveries".

A statement added: "We are also calling for their mandatory use in key bunkering hubs around the world."

Speaking at S&P Global Platts Shipping 'Mediterranean Bunker Fuel Virtual Conference, TFG Marine Global Head of Bunkering Kenneth Dam said: "Mass flow metering provides a simple, innovative and cost-effective solution that can transform the marine fuel delivery process and by working together to encourage the widespread introduction of technologies such as these, we can transform the industry and help build a more open, modern and efficient future."

Meanwhile TFG Marine has said it is looking forward to collaborating closely with GRM-EOT Mauritius. The Port Louis-based company has been awarded a bunkering licence by the Mauritius Ports Authority. TFG said that it intends to "further develop the marine fuel supply offer, including biofuels, for maritime customers from this strategic location in the South Indian Ocean".

Trafigura commits to 25% cut in emissions intensity

Singapore-based commodity trader, and major shipping and bunker markets player, Trafigura has announced a target to reduce the intensity of its total shipping emissions by 25% by 2030, compared to an IMO 2019 adjusted baseline.

A statement in its annual accounts said: "The target encompasses over 70% of Trafigura's reported Scope 3 emissions in 2020 and will see the emissions intensity profile of the Group's owned and third-party leased shipping fleet decline by 48% compared to the 2008 IMO industry baseline. This compares favourably to the IMO industry target of a 40% emissions intensity reduction over the same time frame."

Trafigura's overall revenues increased by 57% to US$231 billion year on year, reflecting higher commodity prices and increased trading volumes as the Group continued to grow its customer base and expand into new markets. Underlying EBITDA rose 13% to US$6.9 billion million.

According to the company's financial report to 30 September 2021, "bunker markets stabilised in 2021 after the readjustments that accompanied the IMO 2020 rule change reducing permissible sulphur content in maritime fuel". It noted that fuel oil prices moved up in tandem with crude oil and by the end of the financial year were double the level 12 months previously. It added that in the second half of the year, as the impact of Covid-19 faded, the market saw a significant pull of Asian demand driven by the use of fuel oil in power plants, which was caused by global shortages of coal and gas power.

The company added: "Trafigura's fuel oil trading desk performed well in challenging conditions, adapting arbitrage positions to the new pattern of specifications and requirements in different regions and optimising flows to match new market requirements. Traded volumes increased strongly during the year and despite intense competition, Trafigura maintained an elevated level of competitiveness in a much less volatile market compared to 2020."

According to the report: "Good progress towards achieving previously announced greenhouse gas emissions reduction target to reduce total Scope 1 and 2 emissions by 30% by 2023, compared to 2020. Together with targets to align the Group's leading Responsible Sourcing programme with ISO20400 and invest in a portfolio of renewable power generation US$5.5 billion European revolving credit facility."

Monjasa opens in Houston

Denmark-based international bunker trader and supplier Monjasa has opened an office in Houston. A company statement said: "With an increasing number of customers and suppliers located in Houston, this is a natural next step for Monjasa Americas. Located in down town Houston, this daily presence brings new opportunities to bridge upstream and downstream business relationships as well as offering a new recruitment channel in the US Gulf region. Since opening the first US-based office in Stamford, volumes have increased year on year."

Initially 40,000 tonnes were supplied in 2011. Last year Monjasa supplied 1.4 million tonnes in 2020. It said in a statement: "Strong demand in the Panama Canal and across US ports represent important drivers for this development."

Monjasa operates three barges and supplies all main bunker grades across the Houston Greater Area, which includes 12 different supply locations ranging across more than 400 km.

Hapag-Lloyd's bunker use up 3%

German liner shipping company Hapag-Lloyd has reported increased bunker consumption in its nine-month financial statement. Revenues rose in the period by approximately 70%, to US$17.9 billion. The company said the rise can primarily be attributed to a higher average freight rate of 1,818 US$/TEU, compared to 1,097 US$/TEU in the same period in 2020.

According to the report, bunker consumption totalled approximately 3.15 million tonnes in the first nine months of 2021 and was about 3.3% higher than in the previous year period. It said this increase was essentially caused by a rise in ship capacity and transport volume compared with the prior year period, the additional NileDutch fleet and longer waiting times at and outside of ports.

The report also notes: "For the first time 1,972 tonnes of LNG was used as a fuel in the first nine months of 2021."

The percentage of low-sulphur bunker fuels and LNG fell slightly from 94% of total marine fuel consumption in the first nine months of 2020 to 92% in the first nine months of 2021. Bunker consumption per slot (as measured by the average container storage capacity, annualised) increased to 2.39 tonnes in the first nine months of 2021, up from 2.34 tonnes in the same period in 2020). In terms of transported TEU, bunker consumption remained stable at 0.35 tonnes per TEU.

MOL sets up $2.6 million Mauritius charity

Mitsui O.S.K. Lines (MOL) has established the MOL Charitable Trust in Mauritius "as part of its benevolent and philanthropic actions to support activities for the public benefits of Mauritius and its people to address the impacts of the oil spill" to mitigate the damage caused by spilt bunkers when the bulk carrier Wakashio grounded on the island nation's coast in July 2020.

The ship was on charter from a subsidiary of Nagashiki Shipping Co. In a statement MOL said: "In cooperation with the shipowner and relevant authorities, MOL has been working to restore the natural environment of Mauritius and contribute to local communities, with the assistance of experts and organisations specialised in the restoration and protection of the environment. The newly established Trust is part of a total of 800 million yen (US$7 million) fund announced in September 2020 by MOL."

MOL said the Trust would be locally based and managed "to ensure quick support when required". In addition, the Trust will incorporate not only projects related to the restoration of the natural environment, but also provide support to local communities in line with the United Nations Sustainable Development Goals (SDGs) and the Mauritian Government's National Priority Areas.



Port Louis, Mauritius ©iStock

ADAPTING TO CHANGE

The lines dividing traders, brokers and suppliers have become increasingly blurred, however, all three face the challenges of a changing market with an increasingly diverse range of products

A trend towards large traders moving into both bunker broking and physical supply has made it difficult to label firms by their main activity. But they all have to cope with increased risk.

Norwegian marine fuel trader and broker Bergen Bunkers has opted for Bunkertech, the bunker trading risk management software from Inatech, to 'future-proof' its operations.

Bergen Bunkers had been seeking a new system that delivered the automation needed to capture data likely to be demanded by audit and regulatory reporting requirements while at the same time maintaining efficient operational workflow.

"We needed to future-proof our operations and conducted a thorough selection process," said Sveinung Juvsett, CEO of Bergen Bunkers.

Bergen Bunkers is focusing on changing environmental requirements, in particular the path that the bunker industry is taking towards more environmentally friendly fuels, and to guide its customers to optimal purchasing decisions amid the conversion to low carbon fuels.

The cloud-based system caters not only to the company's back-to-back trading operations – in which it serves as an intermediary between supplier and client – but also to its brokerage work.

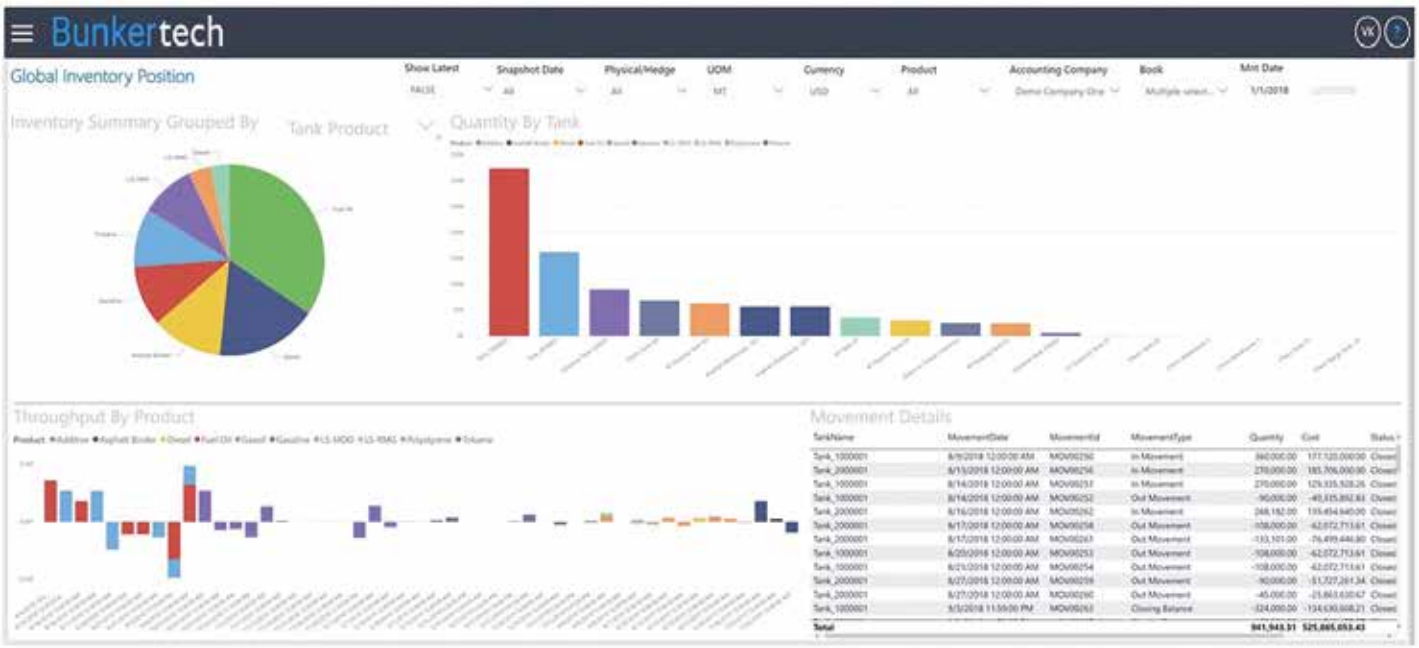
Bergen Bunkers says it needs a software solution that will be developed and improved along with the marine fuels market changes in the years ahead.

Inatech describes Bunkertech as an extension to its Techoil software for managing complex physical oil trading, and is fully integrated into existing back-office systems to provide a full trading and risk management solution. It has been designed to support the entire business processes and workflow, from responding to initial client inquiries to delivering full electronic invoicing and accounting procedures, as well as providing real-time information on credit lines and trading profits and losses.

Meanwhile Rotterdam-based brokerage Bunker Connect and bunker supplier and trader Delta Energy Fuel Supply & Trading have set up a joint venture, Delta Connect DMCC, to further develop and expand Bunker Connect's digital bunker platform.

The two parties say that the Delta Connect venture will ensure Delta Energy's bunkering processes become more automated and more transparent. Bunker Connect's digital platform will have access to a wider marketplace and can take advantage of Delta Energy's credit and business development resources, the two companies said in a release.

A statement says that Delta Energy's physical bunkering locations and trading offices will remain independent and continue business as usual. It adds that, at a group level, Delta Corp operates



and purchases bunkers for anywhere between 50-70 dry bulk vessels and will also have their volume bought via the digital platform over time as it is integrated internally.

Reflecting the need to adapt to the transition towards zero carbon, broker and trader KPI OceanConnect has launched its Alternative Fuels and Special Projects "division to enhance its counterparts' ability to achieve their sustainability ambitions".

Experienced bunker industry manager Bill Wakeling is heading up the new division. He commented that "the industry must accelerate its decarbonisation progress in line with the International Maritime Organization's 2030 and 2050 targets".

He added: "In the last 18 months, we've helped our partners successfully navigate through IMO 2020, and showcased our agility and innovation by completing one of the shipping industry's first carbon offsets. However, there are no shortage of challenges for shipowners and operators as they seek to realise a more sustainable future, and we'll be working with them side by side through our long-term partnership approach to help achieve their sustainability ambitions and regulatory compliance."

In another development Trafigura is pushing the expansion of its TFG Marine bunkering joint venture. In a comment in its 2021 annual report the Singapore-based commodity trading group noted: "The growth of TFG Marine has given Trafigura's Fuel Oil desk a much larger trading platform and improved access to customers across the globe, especially in Asia where larger opportunities lie.

Looking forward, according to Trafigura the key challenge will be understanding how supply and demand are likely to change in a post-Covid-19 world, with a number of large new refineries coming online and demand dynamics evolving fast as alternative fuels, including bio-based products, enter the market. Liquefied natural gas, gasoil and crude oil prices will have increasing influence over fuel and feedstock markets.

The major trader says that TGF Marine will give it "exceptional inter-product communication" that will "continue to provide a strategic advantage". It continues: "We intend to grow our fuel and feedstocks business further through close customer relationships and cooperation with TFG Marine and its other trading partners, with a target to build a leading position in alternative fuels and to provide sustainable long-term solutions to customers."

That might not might not be what smaller traders would like to hear as they plan their own strategies.



©iStock



Experts and crew next to the CO_2 capture plant on the Corona Utility ©K Line

CARBON CAPTURE GOES TO SEA

The past few months have seen major developments from projects aimed at removing CO_2 from emissions as well as a new direct air capture shore-based facility in Iceland which may be relevant to shipping

Major Japanese shipping group "K" Line has announced that, in August, it had successfully separated and captured carbon dioxide (CO_2) from the exhaust gas emitted by the coal carrier Corona Utility, operated by the company for Tohoku Electric Power Co.

The captured CO_2 had a purity of more than 99.9%, which means it could be used for industrial processes. The trials of this equipment are continuing.

Meanwhile, Wärtsilä Exhaust Treatment and Norwegian shipping company Solvang ASA, have agreed on a full-scale pilot retrofit installation of a carbon capture and storage (CCS) system on one of Solvang's ethylene carriers, the 21,000- cubic metre Clipper Eos.

Wärtsilä Exhaust Treatment is designing the retrofit unit while it also completes a land-based 1MW test system at its Moss headquarters in Norway. The land-based unit will be completed in autumn 2021, and the companies expect to retrofit the pilot CCS system on the Clipper Eos by 2023.

Wärtsilä says it is initially aiming for a 70% reduction in CO_2 emissions at the point of exhaust with its pilot unit.

The Clipper Eos has been time chartered by Marubeni Corp since her delivery from the shipyard in 2019. Marubeni has said it is committed to cooperating with Solvang and Wärtsilä to enable the parties to perform relevant testing and installation of equipment on the vessel in "a mutual effort to drastically reduce the CO_2 footprint of the vessel".

In addition to signing a letter of intent with Solvang and scaling its Moss CCS test unit, Wärtsilä recently announced it is partnering with the LINCCS consortium to scale and create carbon capture technologies and infrastructure. The consortium recently received NOK111 million (US$12.8) million in funding to CCS research and development.

A development that, initially at least, is not intended for use at sea attracted considerable media interest just before COP 26.

Swiss-based company Climeworks launched what it described as "the world's first and largest climate-positive direct air capture and storage plant, making direct air capture and storage a reality".

The Orca plant in Iceland is powered by the Hellisheidi Geothermal Power Plant. The facility consists of eight collector containers, with an annual capture capacity of 500 tons each. The containers, roughly the size of 40 TEU boxes, are arranged around a central process hall that accommodates all electrics, such as the processing unit, allowing to the facility to be operated and controlled from afar.

The founders of Climeworks are clearly motivated by a strong 'green' ethos. The company says: "An important aspect was that Orca is smoothly integrated into the beautiful Icelandic landscape. We therefore chose earthy colours and natural materials that give it a natural touch."

It adds: "With our technology, we capture carbon dioxide directly from the air; removing unavoidable and historic CO_2 emissions. The air-captured carbon dioxide can either be recycled and used as a raw material, or completely removed from the air by safely storing it. Direct air capture, therefore, is one of the key ways to stop global warming by reducing the amount of potentially harmful CO_2 in the Earth's atmosphere."

According to Climeworks: "Our machines consist of modular CO_2 collectors that can be stacked to build machines of any size. Climeworks' direct air capture machines are powered solely by renewable energy or energy-from-waste. An independent life cycle assessment has shown that the grey emissions of our machines are below 10%, which means that out of 100 tons of carbon dioxide that are captured from the air, at least 90 tons are permanently removed and only up to 10 tons are re-emitted."

So, when could we see Climeworks containers stacked near ship's funnels and using the waste heat to grab carbon from the air? The answer is not any time soon, apparently.

World Bunkering contacted Climeworks. Its public relations company replied that, as a business developing a new technology Climeworks needs to focus its efforts. It had chosen to concentrate on land-based plants that are powered by renewable energy rather than marine-based plants.

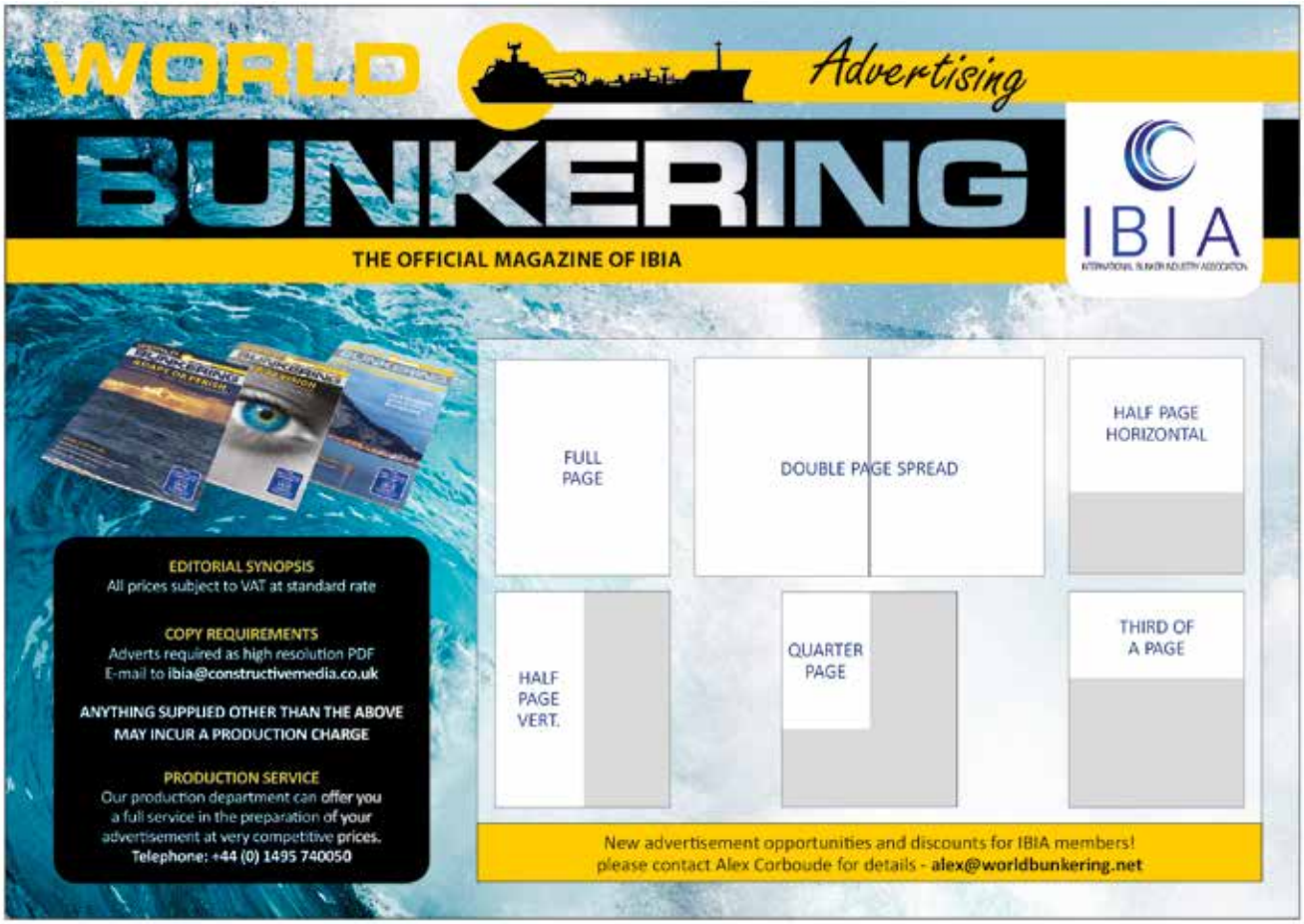
The spokesperson said: "I am sure in the future it will be possible to put some of the Climeworks' carbon dioxide removal modules on a ship – but right now.... that's not the focus and it would require considerable additional engineering to make this possible and ensure it was powered entirely by renewable energy, not by the fuel the ship was carrying (which would defeat the point)."

The PR agency explained that "Climeworks technology is not a point source capture technology, rather it is direct air capture".

So it seems it would go against Climeworks' ethos to use low grade heat from ships' exhausts, let alone a small amount of additional fossil fuel, to make practical use of the technology at sea.

World Bunkering also suggested that shipping companies could support Climeworks plants ashore to offset their emissions at sea. That didn't go down too well either, eliciting the response: "Climeworks is not focused on providing 'offsets' to anyone. It captures and removes historic CO_2 from the atmosphere." So there.

But if direct air capture can be made to work effectively, and it looks like it can, it must be inevitable somebody will take the technology afloat before too long.



KEEPING OPTIONS OPEN

Carbon capture could be part of shipping's 'green transition' says Anders Skibdal, CEO of scrubber manufacturer PureteQ

The United Nations Panel on Climate Change (IPCC), the International Energy Agency (IEA) and the Climate Council state that CO_2 capture and storage (CCS) is a key tool in diminishing climate change.

Shipping is a hard to abate industry, but it must take part in the green transition towards a less carbon emitting future. The most obvious approach is simply to switch to various types of fuels that emits less or no CO_2. However, these fuels are not available in scale for years to come.

Due to the large variety of ship types and ship trades, there is not a 'one-size-fits-all' solution for the transformation of waterborne transport towards a zero-emission mode of transport. The optimal pathways towards rapid emission reduction, zero-emission ships and climate neutrality are by no means straightforward.

Therefore, all options for clean technologies, alternative fuels and their optimal integration onboard vessels need to be researched, developed, (financially and legally) supported and facilitated.

Whether onboard carbon capture will be part of the solution remains to be seen, but presently many reputable companies are working overtime in R&D activities. PureteQ Group is involved in numerous projects, of which some may end up onboard ships.

Consequently, any legislation and policy actions on zero-emission waterborne transport should stimulate flexibility and refrain from imposing or prescribing specific technological solutions or specific alternative fuels.

Without a goal-based approach, technological and fuel neutrality and legal certainty, the road to a zero-emission waterborne transport sector may be seriously hampered and promising opportunities for the sector may be missed.

PureteQ and its sister company Estech have already made history by erecting a successful pilot plant at Odense, Denmark. It uses innovative new technology to capture CO_2 from exhaust gas and produce hydrogen in a highly efficient way in one and the same process - using only green energy.

The technology makes it possible to capture CO_2 that can be re-utilised or stored, and in one and the same process produce hydrogen. Even the by-products - oxygen and heat can be recycled. The CO_2 capture project has been running since January this year, and the documented results are so promising that the solution is now ready to be scaled up 40 times.

The ambition is to have the first commercial plant with integrated CO_2 capture and production of green hydrogen ready around the turn of the year 2023/24. The plant will have the capacity to produce 1 tonne of hydrogen and remove 30-45 tonnes of CO_2 from exhaust gas per day.

The new technology has several advantages - in addition to using less energy by integrating CO_2 capture with hydrogen production, the construction cost is less than other technologies and the health risks are also significantly decreased. Finally, the investment in new technology seems more sustainable against technology leaps because it accommodates both CO_2 capture and hydrogen production.

Results from the pilot plant in Odense include: up to 83% of CO_2 is captured, producing purer hydrogen than expected through the built-in electrolytic process - up to 99.7% hydrogen in the final liquid.

The plant is very energy efficient and uses up to 75% less energy than other plants, which have typically focused on one of two independent processes - either CO_2 capture or hydrogen production.

The plant's built-in control panel is simple and intuitive, which ensures optimal operation and maintenance. The control system is based on well-proven software from PureteQ, which allows full remote control in real time. Up to 400 data sets per second are measured simultaneously. The control system is connected to a cloud-based system, which enables management and optimization across several facilities, as well as environmental and technical reporting

To combat climate change, solutions for CCS technologies are needed and there is as an increasing demand for hydrogen for e-fuels, hence this technology has great potential. The possibilities for application to industrial plants are almost limitless. However, this technology targets small and medium-sized companies, who today have access to electricity. The plant can be installed at combined heat and power (CHP) plants and waterworks as well as any industrial production that emits CO_2.

At present we do not foresee that this combined technology will end on-board ships, but that they will be providing building blocks for e-fuels which in turn may be used by ships and other hard to abate sectors.

These categories entail many thousands of companies in various industrial sectors, but also utility companies and other major energy consumers in the public sector, such as hospitals: In principle, the plant will enable anyone with a gas boiler of a certain size to optimize the use of traditional energy sources with exhaust gas purification and CO_2 capture combined with hydrogen production. This segment is not offered similar cost-effective solutions today, and the many companies and institutions together emit a very large part of total CO_2.

The PureteQ / Estech solution is also one of the technologies that is included as part of the Danish government's climate

strategy. This strategy is focusing on new technologies within carbon capture and production of green energy in Denmark, to make Denmark climate neutral in 2050 and reduce CO_2 emissions by 70% already in 2030.

Estech has quickly come a long way in the development work because they have been able to draw on PureteQ's patented exhaust gas purification technology which is based on hydrodynamic fluid distribution. The hydrodynamic fluid distribution ensures optimal conditions for reaction between gas and fluid, whereby the size of reaction chamber/scrubber can be reduced. PureteQ has already digitalized their service business via a cloud-based digital solution, which is currently used for servicing ships that sail with PureteQ scrubbers as well as scrubbers from other makers. PureteQ's skill set does not only pertain to scrubber systems but moreover the process control and digitalization of complex industrial processes. The plants are serviced via remote control and AI-based tools. All parameters can be safely monitored from the distance and repaired / adjusted when necessary.

There is a future need for transporting and storing CO_2. Storage may be accomplished in old underground oil wells, but it requires significant investments in infrastructure such as pipelines, ships, wells, pumps, and onshore facilities. Strangely enough, we will in few years run out of CO_2 due to an increased demand for e-fuels, therefore some of the captured CO_2 may be re-utilised for other kind of fuels which in turn reduces the need to store CO_2.

First and foremost, we need to use less energy, so energy efficiency becomes ever more important and all existing technologies as well as new technologies must be put in play if we are to succeed. There will no doubt be a need for traditional energy sources in hard to abate industries while further developing green energy sources, such as windmills and solar power.

It also means a concentrated focus on reducing CO_2 emission from exhaust gas and use or store the captured CO_2 – Carbon Capture Transport and Storage (CCTS). CCS plays a vital part in meeting the climate targets as the CCS-technology contributes to reducing emissions, which are challenging to reduce by other methods.



Estech

MEETING NOx TIER III

New collaboration aimed at compliance with marine diesel engine emission regulations

Emissions control specialist Eminox and turbocharger maker Kompressorenbau Bannewitz (KBB) say they are collaborating to meet increasing emissions compliance requirements for marine diesel engines.

They are offering a "fully integrated" system that enables medium speed diesel engines to meet IMO Tier III, European Stage V and US EPA regulations, which set limits for nitrogen oxide (NOx) emissions.

By working together, the two companies plan to provide marine engine manufacturers and vessel operators with a fully integrated emissions control solution, from turbo to tailpipe, to deliver clean marine diesel engines.

Marine diesel engines are subject to Tier I and Tier II of the NOx Technical Code in MARPOL Annex VI.. Additionally, vessels constructed after specific dates, when operating in specific emission control areas (ECAs), including the Baltic Sea, North Sea and North American ECAs must meet much stricter IMO Tier III limits. For vessels to be compliant when operating on European Inland Waterways, Stage V regulations apply.

"Diesel engines are the backbone of the marine industry, making it vital to optimise their performance to lower emissions as we move to a zero carbon future," said David Phillips, Engineering Director, Eminox. "Working with KBB, we're committed to helping achieve this. We've developed a complete, integrated solution for the maritime industry that builds on the proven strengths of diesel while reducing harmful emissions, preserving investment in existing engines. Given the need to plan for the long-term, now is the time for marine operators and engine manufacturers to accelerate their emissions reduction journey by working with partners that can provide an in-house solution for all their needs."

Integrated voyage planning

Weathernews Inc (WNI) and Vessel Performance Solutions (VPS) are "joining forces" to integrate critical performance data from ship systems with its leading weather routing system to further optimise voyage planning.

The VESPER software platform by VPS records continuous performance data from the hull and propellers, main and auxiliary engines and boilers to determine speed, RPM and fuel consumption estimates that can be accessed seamlessly within WNI's Optimum Ship Routing (OSR) service.

Tokyo-based WNI's advanced weather forecasting solution uses AI technology, supported by human intelligence and logistics, to provide what it describes as "highly accurate forecasts for avoidance of bad weather that can disrupt voyage schedules". It is currently used by about 10,000 vessels worldwide.



Powered marine and power generation exhaust management solution © KBB EMx

Propulsion optimisation technology for Algoma bulkers

Canadian shipping company Algoma Central Corporation is to install Yara Marine Technologies' FuelOpt propulsion optimization technology on a further eight of their bulk carriers. This agreement follows an initial installation on the Algoma Conveyor in early April 2021.

David Belisle, the Vessel Performance Manager at Algoma Central Corporation, said that the system allowed the company to maximise the benefits of pitch/RPM regulation possible on their vessels equipped with controllable pitch propellers.

He added the installation was allowing Algoma to comply with the IMO's incoming Energy Efficiency Existing Ship Index (EEXI) framework.

Allowing for direct control of speed, fuel consumption, engine power, or a combination thereof via an intuitive panel on the bridge, the system dynamically controls the vessel propulsion based on the commands set. The system adapts propulsive power to changing environmental conditions and avoids costly variations in speed and power, leading to increased efficiency via real-time fuel savings and emissions reduction.

For vessels with a controllable pitch propeller, such as Algoma's bulk carriers, FuelOpt allows additional efficiency gains through dynamic pitch/RPM optimization. It regulates propeller pitch and engine RPM separately to operate the engine and propeller at optimal conditions, optimizing energy use by achieving the maximum amount of propeller thrust with a minimum amount of power spent.



Algoma Central Corporation is to install Yara Marine Technologies FuelOpt on eight more bulk carriers. © Yara Marine Technologies



WinGD has expanded its network of LNG training locations and added new online tools ©WinGD

SEA-LNG SUPPORTS GLOBAL METHANE PLEDGE

Lobby group welcomes promised curbs on methane emissions and is confident methane slip from engines will be almost eliminated, but is worried by calls to ban LNG as a future fuel for shipping

The Global Methane Pledge, an international partnership to cut methane emissions by 30% by 2030 announced by EU Commission chief Ursula von der Leyen and US President Joe Biden during COP26, is positive news for LNG as a marine fuel according to SEA-LNG. More than 100 countries have signed up to the initiative, first proposed by the US and the EU in September, although countries with major methane emissions, including China and India, are not among them.

LNG-supporting industry organisation SEA-LNG commented in a statement: "Stronger regulation of methane emissions should create more certainty for the shipping industry regarding LNG's positive emissions benefits. The Global Methane Pledge is yet another step towards the recognition of the importance for measurement of greenhouse gas (GHG) emissions from all marine fuels on a well-to-wake (WtW) basis, including carbon dioxide, methane, and nitrous oxides. Comprehensive WtW measurement is the only way to accurately compare the viability of future fuels in a decarbonised shipping industry."

SEA-LNG notes that there has been a growing focus on methane as a way of buying extra time to tackle climate change. Although there is more CO_2 in the atmosphere and it sticks around for longer, individual methane molecules have a more powerful warming effect on the atmosphere than single CO_2 molecules.

While one of the key goals of COP26 was to get countries to commit to achieving net zero by 2050 - meaning not adding to the amount of greenhouse gases in the atmosphere - both leaders stressed that they needed to act now.

"We cannot wait for 2050," EU Commission chief Ursula von der Leyen told the summit. "We have to cut emissions fast." She said that cutting methane was "one of the most effective things we can do to reduce near-term global warming", calling it "the lowest hanging fruit".

The pledge covers countries which emit nearly half of all methane, and make up 70% of global GDP, president Biden said.

Peter Keller, Chairman of SEA-LNG said: "The pledge to reduce GHG emissions, including methane, by 2030 presents a challenge for the shipping industry but it is a target we are confident can be met. Due to the scale and breadth of International shipping, a basket of fuels, as exists today, will continue to be necessary for shipping to achieve a net-zero target."

According to SEA-LNG, engine manufacturers and LNG bunker fuel suppliers are already developing new technologies to address methane slip and fugitive emissions both from ships and in



the LNG supply chain. It says: "With very high rates of combustion efficiency, the latest engine technologies already have virtually no methane slip. Where methane slip still exists, engine manufacturers, and fuel suppliers are accelerating their technological developments to address these issues and satisfy the signatories to the pledge."

The lobby group asserts that bio-LNG and then renewable synthetic LNG "will drive decarbonisation". It says that hydrogen, manufactured through the electrolysis of water using renewable electricity, when available at scale, will deliver a net-zero fuel for LNG-powered vessels through the use of renewable synthetic LNG. It will be fully interchangeable with today's LNG engine, storage, and bunkering infrastructure. Until then, bio-LNG as a drop in fuel will offer significant GHG emission reductions beyond what LNG already delivers today, up to 23% on a WtW basis.

Keller concluded: "As we look to the future, methane reduction coupled with the growth of bio-LNG products followed by the introduction of renewable synthetic LNG will be capable of providing the air quality and carbon-free future we all see as essential."

Methanol push worries LNG Lobby

While SEA-LNG is sure using LNG has a significant future as fuel for the shipping industry, several major players are opting to develop the use of alternative fuels, and that is concerning the organisation. Calls by the CEO of shipping giant Maersk, Søren Skou, to stop further investment in LNG infrastructure appear to have particularly worried SEA-LNG.

It has issued a statement that says: "It is often overlooked that all synthetic fuels, such as synthetic LNG, green ammonia, and green methanol are derived from the same building block – hydrogen produced from electrolysis using renewable electricity. Consequently, they all face the same challenge – the need for massive amounts of renewable energy that does not exist today. Hundreds of billions of dollars will need to be invested over decades before these fuels can be scaled to the level needed to serve the maritime industry."

It says in a statement: "Knowledgeable shipowners understand this fact and accept the reality that a basket of future fuels will likely be needed to reach the shipping industry's greenhouse gas (GHG) reduction goals. Vessel types, deployments and usage will all be factors when deciding the best alternative fuel in the coming decades."

It continues: "With this in mind, it is troubling that the CEO of a large carrier suggests that LNG should be banned from the maritime sector. His solution is to embrace methanol and accept the risk that sufficient green methanol production capacity can be developed for the industry, a massive challenge likely a decade or more away. We should not forget that the industry needs roughly 250 million tonnes of conventional fuel or, given methanol's lower energy density, approximately 510 million tonnes of green methanol.

"The same carrier admitted the supply constraint even for its own needs: "We will have to be a little creative about where we bunker... when the supply of green methanol will be scattered in different places.

"So, what happens in the interim? This carrier's ships will likely have to burn conventional fuel or methanol produced from fossil fuels, which will have significantly higher GHG emissions than current marine fuels. The rest of the industry, many being owners with smaller fleets who can't afford to build their own supply, will struggle even more to find green methanol. The scale of the challenge facing the maritime industry clearly demonstrates the need for a basket of fuels as opposed to a prescriptive solution that some are inappropriately suggesting."

SEA-LNG concluded by arguing: "The proposal to ban LNG, a proven and viable fuel that begins decarbonization now, would seriously delay the shipping industry's ability to meets its GHG reduction obligations. Waiting really is not an option. To be successful in meeting its GHG reduction targets, the industry needs to begin using all alternative fuels, including LNG, bio-LNG, and synthetic LNG, that are safe and operationally effective. Serious issues surrounding toxicity, flammability, energy density, pilot fuel requirements, and infrastructure need to be openly addressed. Further, well-to-wake GHG emissions through independent life cycle analysis will be required for all future alternative fuels."

WinGD invests in LNG training

Marine low-speed engine developer WinGD has strengthened its training capabilities as the number of gas-fuelled vessels on order increases. Among the investments, the company has expanded its network of training locations and added new online tools, making it even easier for ship operators to give their crews the skills they need.

According to DNV's Alternative Fuels Insight, the number of gas-fuelled vessels in operation is expected to grow from 221 today to nearly 500 by 2023. WinGD comments that while much energy goes into projecting the supply and bunkering infrastructure needed to support that growth, less focus is placed on the extra demand it will create for seafarer training.

"Marine engines in general are getting more complex and require more understanding from the crew to operate them in an optimal and safe way," said WinGD General Manager Customer Training, Operations, Gregory Sudwoj.

WinGD's engine operating courses have historically been delivered through its owned facilities in Winterthur, Busan and Shanghai. However, over the past few years, WinGD has established a global network of training partners at locations including the Philippines, India, Greece and Poland. It says: "Further locations will follow."

As well as expanding access to training, WinGD says it has also worked with partners to build bespoke simulation training facilities for customers using its X-DF dual-fuel engines. The company plans to unveil a simulator dedicated to LNG carriers soon.

GTT fuel tanks for LNG-fuelled container ships

France-based LNG specialist GTT is to design the cryogenic fuel tanks of six LNG-fuelled container vessels to be built at Korean shipyard Samsung Heavy Industries (SHI).

Each LNG fuel tank will be fitted with the Mark III membrane containment technology developed by GTT, "demonstrating that GTT technology is as attractive for mid-size size container vessels as for very large ones". The vessels' deliveries are scheduled to occur between the third quarter of 2023 and the fourth quarter of 2024.

In addition to the engineering services and technical assistance at the shipyard, GTT is to assist the operator through every step of its first LNG-fuelled projects, including commissioning of the LNG tank, first LNG bunkering operations, as well as further specific LNG operations and maintenance of the vessels. GTT will also provide LNG training for the crews, supported by its G-Sim training simulator, which replicates the future LNG operations of the vessels.

GTT will also offer its HEARS emergency response service with 24/7 technical assistance.

In addition, GTT will fit these six vessels with its GTT Digital platform, described as a "smart shipping" solution to monitor and optimise the operational performance of the vessels and further reduce their energy consumption and environmental footprint.

AET's first LNG bunkering in US

In October, major operator AET completed its first LNG bunkering in the US, working in coordination with Shell to refuel the LNG dual-fuel aframax tanker Pacific Ruby off Port Canaveral in Florida.

The transfer of 600 tonnes of marine LNG onto the 113,305 DWT petroleum tanker from the bunker barge Q-LNG 4000 was completed within three hours, while the entire bunkering operations took nine hours. The operation was coordinated by AET and Shell NA LNG LLC while the Pacific Ruby was on its way from Houston bound for Rotterdam.

AiP for Malaysian LNG bunker barge

French classification society Bureau Veritas (BV) has given approval in principle (AiP) to LNG Marine BHD for its first LNG bunkering vessel concept, which is also the first such vessel being developed by a Malaysian company.

LNG Marine Chairman Datuk Capt Ahmad Sufian Abdul Rashid said: "The demand for LNG as fuel in the South East Asia Region is set to increase, in line with IMO's sustainability agenda and the industry's wider push towards net zero carbon. Malaysia is a significant LNG bunkering hub, with over 100,000 vessels passing through the Malacca Strait each year. Moreover, the availability of two regasification terminals and one FSU along the shores of Malaysia will provide steady supply. The decision by LNG Marine to get its conceptual design approved in principle is further reinforced by the fact that local shipping companies are keen to be part of the LNG bunkering cycle."



AET completes its first LNG bunkering in the US



BULKER OPERATOR FINED US$2 MILLION

Diana Wilhelmsen Management pleads guilty to oil record book offences by bulk carrier's crew

Cyprus-based Diana Wilhelmsen Management Limited (DWM) has been fined US$2 million and placed on probation for a period of four years after pleading guilty to violations of the Act to Prevent Pollution from Ships by the bulk carrier Protefs.

DWM pleaded guilty to two felony offences in two judicial districts – the Eastern District of Virginia and the Eastern District of Louisiana. US District Court Judge Rebecca Beach Smith in Norfolk, Virginia also ordered the company to implement a comprehensive Environmental Compliance Plan as a special condition of probation.

Diana Wilhelmsen Management Limited describes itself as a 50/50 joint venture between Diana Shipping Inc. and Wilhelmsen Ship Management, and was established in May 2015 and manages a fleet of dry bulk carriers.

In pleading guilty, DWM admitted that crew members onboard the M/V Protefs, a 40,230 gross tonnage ship knowingly failed to record in the vessel's oil record book the overboard discharge of oily bilge water from mid-April 2020 until before the vessel arrived in Newport News, Virginia, on June 10, 2020. The vessel also arrived in New Orleans, Louisiana, on June 1, 2020 with a knowingly false oil record book.

DWM admitted that the crew on the vessel used an emergency de-watering system to illegally discharge oily water directly into the ocean from the vessel's bilge holding tank, duct keel and bilge wells. Those discharges were not recorded in the oil record book as required. The Chief Engineer, Vener Dailisan, pleaded guilty to making a false statement to US Coast Guard inspectors about the existence of a Sounding Log which is routinely sought by inspectors in order to ascertain the accuracy of the oil record book. Dailisan was sentenced to a fine of $3,000 and placed on probation for two years.

"The United States will vigorously enforce laws that protect our ocean resources," said Assistant Attorney General Todd Kim of the Justice Department's Environment and Natural Resources Division. "Holding shipping companies to account when wastes are unlawfully discharged overboard, and covered up through falsified documents, is vital to protecting our environment."

"We are firmly committed to enforcing federal environmental laws and will not tolerate conduct that pollutes our water, imperils natural ecosystems, and endangers our wildlife," said Acting U.S. Attorney Raj Parekh for the Eastern District of Virginia. "As this case demonstrates, those who contaminate our most precious natural resources by illegally dumping hazardous waste into the ocean will be held accountable, especially when they falsify their records to avoid detection."

"The commercial shipping industry is essential to commerce in this region, but their work must ensure they do not neglect their professional and legal obligations," said US Attorney Duane Evans for the Eastern District of Louisiana. "Today's announcement emphasizes that our office along with our federal partners are committed to holding accountable all parties whose criminality jeopardises our environment and places the public and the ecosystem at risk."


Vostochniy Port

BAN ON LOADING DANGEROUS GOODS WHILE BUNKERING "SHOULD GO"

As Olga Bogacheva reports, the Russian bunker industry would like to see the lifting of the country's prohibition on dangerous cargo handling while bunkering

The Russian Association of Marine and River Bunker Suppliers wants to see the government give the green light to simultaneous bunkering, including with LNG, during loading of dangerous goods onto a vessel.

The Association has asked the Government of the Russian Federation's Maritime Board for a proposal to lift the current ban to be included in its discussion of plans for 2022.

A 2017 Ministry of Transport order approving the Rules of Navigation and Mooring of Ships in the Seaports of the Russian Federation contains a direct ban on the simultaneous bunkering of ships with fuel and handling of dangerous goods.

Bunkering of vessels while loading non-dangerous goods is not prohibited by the 2017 order. However, port authorities may establish bans through local port regulations.

The Association is putting forward the case that modern vessels' equipment and highly automated spill protection systems allow stopping the bunkering operation at any time, thus minimising the risks of spills or leaks.

Simultaneous bunkering and loading/unloading of vessels saves time for the shipowners time and, accordingly, reduces their costs. This is the main reason the Association proposes, in cooperation with the Ministry of Transport of Russia, to develop and accept relevant amendments to the regulatory documents by mid-2022.

The Maritime Board is a permanent state body intended to ensure coordinated actions of executive authorities, enterprises and organisations in the interests of implementing the national maritime policy of Russia.

Vladimir Sergeev, Chairman of the Association's Council, was a member of the Board for several years. He believes that the Maritime Board "works out important decisions and is able to affect efficiently the processes in the shipping industry".

He adds: "Undoubtedly, participation in its activities is a direct and quick way to convey the problems of the industry to decision makers at the highest level."

Methanol-powered vessels

An international consortium consisting of Russian banks, the methanol producer UST Group and Japanese companies Marubeni Corp and Mitsui OSK Lines is preparing to build methanol-fuelled seagoing vessels. It is assessing proposed technical solutions and a business case in order to develop a roadmap for the project.

In September, the consortium members signed a memorandum ensuring project implementation in a brief period of time.

Kommersant Daily reported that initially the methanol-powered vessels would be used to transport the production UST's methanol plant in the Russian Far East to the countries of Southeast Asia. Initially two, or possibly three, 50,000 dwt dual fuel (methanol and fuel oil) vessels, are to be built. Each vessel is reportedly expected to cost in the region of US$50 to 55 million.

The construction should begin by 2023. The project could reportedly involve construction of several dozen methanol-fuelled ships in the "medium-term".

UST Group is a Russian investment and management company. It specialises in fuel and energy sales and engineering companies. It also owns two oil loading terminals at Uyar and Skovorodino in the Far East.

Methanol production at Skovorodino is due to start in 2024. It will have an annual capacity of 1 million tonnes but this could be doubled by an expansion of the plant. Marubeni has contracted to buy 500,000 tonnes a year for 20 years.

A UST press release says that the group's project in Skovorodino could potentially become the main supplier of methanol for ships moving from Asia to Europe via the Northern Sea Route.

Gazpromneft new VLSFO source

Gazpromneft Marine Bunker is using its Moscow refinery to produce VLSFO, and an initial batch of 10,000 tonnes has been supplied at St Petersburg.

The company already produces 0.50% sulphur compliant fuel at its Omsk Refinery in Siberia. This means transporting the fuel a long distance to the company's key Baltic Sea and Arctic Basin markets. Gazpromneft says that VLSFO production in the European part of Russia optimises logistics and expands the geographic range of its of sales network.

VLSFO production at the Moscow refinery is expected to reach about 100,000 tonnes by the end of this year.

In 2020, Gazprom Neft produced 1.1 million tonnes of VLSFO and ULSFO, amounting to over 20% of the Russian bunker market.

First Russian LNG bunkering vessel

The construction of the first Russian LNG bunkering vessel has been completed. The *Dmitry Mendeleev* belongs to Gazpromneft Marine Bunker.

The company has announced the successful completion of all trials of the gas and cryogenic equipment, loading systems, pumps, as well as compressors for LNG storage and unloading.

The ship has been named after a famous Russian chemist and will provide LNG transportation and ship-to-ship refuelling services in the Baltic ports of St Petersburg, Ust-Luga, Primorsk, Kaliningrad and Vyborg.

Russian fuel oil price hits three-year high

By the end of September 2021, the spot price of fuel oil in the Russian Federation had soared by 42% compared to the beginning of the year and had reached a historic high of US$370 per tonne.

The previous maximum price, US$220 per tonne, was recorded in 2018. In January-August 2021, 28.7 million tonnes of fuel oil were produced in Russia. The largest producer is Rosneft at 11.8 million tonnes, accounting for 40% of total production.

Congestion hits Far East ports

Delays have been in increasing at container terminals in the Far East. The situation gradually got worse over a six-month period and by October the number of ships waiting to discharge had reached unprecedented levels, with most ships waiting several days.

The situations have been caused by a sharp growth of transit cargo from China due to soaring container freight rates from Asia to Europe through the Suez Canal. At the same time, transit costs through Russia have remained stable.

Kommersant reports that transport containers through Vladivostok and



Vladivostok Port

Nakhodka and then on the Trans-Siberian Railway is 30 to 40% cheaper than the southern sea route. That is about 20% less than the differential in February this year, but nevertheless remains significant. Market players reportedly expect the current situation to continue into the coming year.

Grain terminal back in operation

Delo Group's grain terminal at the Black Sea port of Novorossiysk has restarted operations following reconstruction.
The berth is now capable of simultaneously loading two 100,000 dwt vessels, double its previous capacity. The grain is expected to be mainly shipped to Southeast Asia.

Uncertainty at St Petersburg

The possible moving of St Petersburg's city centre-located Great Port to a new location has become a live topic during 2021.

In March Andrey Bokarev, President of Transmashholding JSC, sent a letter to the President of Russia, in which he proposed to relocate.

In July, President Putin publicly expressed interest in the idea. However, he stipulated that there should be an assessment of the project's economic viability, and full clarity on possible sources of financing was needed.

In August, the project of transferring the Petersburg seaport to nearby Ust-Luga was discussed by an interdepartmental working group headed by Alexander Poshivay, Deputy Minister of Transport of Russia.

Stevedores of the Petersburg seaport, especially those implementing multibillion-dollar projects on existing sites, naturally regarded the possibility of the relocation of the port very sceptically.

The Association of Commercial Sea Ports (ASOP) has officially appealed to the government with a request to work out in detail the possible consequences of moving the port outside St Petersburg before making any decision.
The document outlined the consolidated position of the businesses operating on the territory of the port.

The head of USC, Russia's largest shipbuilding corporation, has denied that the port relocation had been discussed or approved by him. He claimed that relocation of five large USC plants from the centre of St Petersburg as a part of port relocation will inevitably reduce the competitiveness of their products.

In September the Governor of the Leningrad Region, Alexander Drozdenko also commented. He clarified that negotiations on where to place port facilities are still at a preliminary stage. Only two sites are under consideration, either Ust-Luga or Primorsk. He said there were no other suitable places in the region. He pointed out that the expansion of Ust-Luga would be restricted by existing nature reserves.

The Great Port of Saint Petersburg, located on the coast of the Gulf of Finland at the mouth of the Neva River, is one of the largest ports in the North-West of Russia. In 2020 its cargo turnover amounted to 56 million tonnes. Currently the port occupies about 746 hectares. The various terminal operators at the port have a combined annual total capacity 110 million tonnes.

Sovcomflot and Gazprom Neft in green technology deal

Sovcomflot, the largest Russian shipowner, and Gazprom Neft have signed an agreement on mutual understanding and cooperation for the development of innovative technologies and the use of marine fuels with a low carbon footprint in marine transport.

The agreement defines relevant areas of cooperation between the two Russian companies, including reducing emissions during marine transportation, improving the efficiency and safety of marine transportation of hydrocarbons through the introduction of innovative technical solutions and digital technologies.

In addition, the companies are exploring the prospects for building ships powered by alternative types of marine fuel, including LNG, ammonia, hydrogen, and methanol, and intend to jointly develop the necessary engineering solutions.

Meanwhile Sovcomflot has said in a statement that the use of LNG by some of its vessels has allowed it to reduce annual CO_2 emissions by 64,000 tonnes. The company claimed this achievement to be equivalent to planting 1.5 million new trees.

Rosnefteflot's second dual-fuel aframax tanker

The second vessel in a series of 12 dual-fuel 114,000 dwt tankers for Rosnefteflot has been launched the Zvezda Shipyard, at Bolshoy Kamen, Primorsky Krai.

The lead ship of the series of aframax ships, the *Vladimir Monomakh*, was delivered at the end of 2020. The vessels can use LNG or fuel oil.


Zvezda Shipyard



DISCOVER OUR CAPABILITIES AND NETWORK

Axiom Global

Leading bunker supplier in the Indian subcontinent

Axion Global is an energy trading & bunkering company headquartered at Dubai, United Arab Emirates. The personnel at the helm at Axiom Global have over two decades of experience in energy trading, risk management and bunkering especially in the Indian subcontinent, Southeast Asia, Middle East and Africa region. Recently they started commencing bunkering operations is UAE Ports of Dubai (Mina Al Rashid, Jebel Ali), Sharjah (Hamriyah, Khorfakkan), Abu Dhabi (Mina Zayed), etc.

Axiom Global is built with a mission to offer and build a sustainable and profitable relationship with their stakeholders and trading partners in the field of energy trading, bunkering and risk management. As bunkering industry is under constant pressure due to its very nature, Axiom Global, strives to "deliver more for less" by offering customized solutions for specific markets with a motto of "Our Word is Our Bond

Axiom Global strives to offer best and competitive trading experience to their trading partners by controlling the entire supply chain from procurement, storage, blending, shipping, and hedging and simultaneously keeping social responsibility and environment at its core at all stages of the supply chain.

The strength of Axiom Global lies in its team. They believe in "happy employees, even happier customers". Axiom Global believes and practices the philosophy that a engaged team helps in establishing better relationships with customers, suppliers and other channel partners and stake holders.

Axiom Global offers bunker fuels that meet the unique needs of their customers at affordable rates through multiple distribution points (in-port and out-of-port limits) in all major and minor ports in India, Sri Lanka and Iraq.

Axiom Global promises to provide services through its progressive and innovative approach to delivering energy. They offer broad range of marine fuels which comply with international standards like ISO, MARPOL as well as localized requirements to meet customer satisfaction.

Based on this principle "our word is our bond", Axiom Global's team, over a period of time have developed a satisfied clientele of ship owners, oil majors, government shipping companies, OMC's, bunker buyers and bunker traders who look upon us for meeting their bunker requirements for their ships calling in Indian sub-continent, Middle East and other ports like Egypt, Singapore, etc.

Axiom Global has working offices in Dubai, Singapore and India and soon will be establishing an office in London to increase and closeness with our customers and stakeholders.

www.axiomglobaltrading.com





NEW FUEL SOLUTIONS ON THE HORIZON

Lubmarine

Is the single oil concept creating new opportunities to support shipping in its transition to cleaner fuel technologies?

With new fuel solutions on the horizon, owners, operators and port authorities are looking for clarity and insights about the different engine lubricant solutions that will be coming on stream. Delivering confidence and flexibility for the shipping community in today's new 'cleaner' operating regime – and in the lead up to 2030 – is essential.

IMO2020 regulation has transitioned the shipping industry towards lower sulfur fuel oils. With new fuels and engine technologies coming into play, engine lubrication is adapting to help ship operators achieve safer operations, and higher levels of performance in a more complex environment.

As we journey through to the start of the third year of IMO2020, challenges around fuel quality have brought with them real issues for modern marine engines, including concerns about cleanliness. Responding to this requires an understanding of the multiple operating parameters of the engine, combined with smart engine monitoring and drain oil analysis and interpretation. Engine lubricants must handle the potential issues related to each fuel mix available to the operator.

For lubricant development the on-going use of multiple fuels means a cylinder oil formulation that is suitable both old and new fuels is required. Lubrication is needed in engines to ensure their smooth and efficient performance. Advancements in the chemistry of lubes ensures engines can run cleaner and are optimized for better performance.

Lubmarine is already seeing success with its Talusia Universal 2-stroke engine product range, which is designed as a single cylinder oil that covers the full range of IMO2020 compliant fuels (from 0.0% to 1.5% sulfur content, including LNG), aligning perfectly with ship operator current fuel strategies. The product has been validated across a range of dual-fuel engines including WinGD and MAN ES engines, and is suitable for all vessel types, engine types and trading patterns, and is certified for ECA regions.



- Talusia Universal is helping ship operators maintain engine cleanliness without engine deposit build up, reducing the risk of engine failure – preventing costly engine damage, downtime and repair. It reduces the risk of engine corrosion and engine deposit build up.

- As a single oil solution, it makes the onboard operation, supply and management of lubricant easier as operators and engineers using 2-stroke engines no longer need to match different BN lubricants to different fuel types, avoiding complex BN management and CLO switching.

- Proven to provide additional safety margins compared to BN40 CLO, Talusia Universal achieves substantial feed-rate reductions compared to other current generation cylinder oils when based on visual inspection and drain oil analysis.

- Ship operators can use with confidence Talusia Universal as their single cylinder oil solution for any 2020 compliant fuel, including those operators making the switch to LNG to help reduce SOx, NOx and fine particle emissions.

Flexibility and correct lubrication selection go hand in hand, helping deliver a significantly simplified lubrication strategy whilst creating operational efficiencies and benefits including:

- Avoiding complex BN management and CLO switching

- Removing the challenge of matching lubricants to different fuel types

- Simplifying lubricant management operations for crew and mitigating any risk of handling error

- Delivering flexibility to meet a vessel's lubrication tank arrangement

- Creating improved lubrication logistics, storage, administration processes and cost savings

As an industry, we must look to change our paradigm and thinking. Lubricants are not just for a unique fuel type – the conventional fuel oils market – but for engines of various technologies, flexible enough to run on many different fuel types, from the 'here and now' solution of LNG to the future fuels such as biofuels, synthetic fuels, ammonia, or on mixtures and combinations of these fuels that at the end of the day, aim to match the IMO targets on GHG emissions of vessels running internal combustion engines. Talusia Universal is an example of this where Lubmarine has created a single cylinder oil for multiple fuel use, including LNG.

https://lubmarine.totalenergies.com





20 YEARS OF OPERATION

Oil Marketing & Trading International celebrated in May 2021 twenty years of operation in UAE

Founded in May 2001 as a physical supplier and bunker trading company, OMTI has since then remained true to its core values of reliable and flexible bunker supplies.

A 100% private and independent company, operating in one of the world's top 3 bunker hubs, Fujairah, OMTI has been providing undisrupted top-tier service to its clients.

Strategically located offices in Fujairah, Dubai, Singapore and Greece, offer 360° view and contact with the majority of the world's ports and clients without any delay or disruptions.

The company's trading team, most of which are with OMTI since its establishment, guarantee continuity in the quality of service and supplies. A long-standing network of business partners worldwide make OMTI a one stop shop for any bunker requirement anywhere in the world.

In Fujairah, OMTI's physical operations are equivalent to the company's legacy.

Operating a young fleet of SIRE and Oil Major approved barges, OMTI guarantees that charterers and owners can pride themselves on supplying their vessels via the best available barges in the region.

Complimenting the company's supplying operations, a floating storage of 75,000MTs allows for seamless loading – supplying – loading cycles that are completely independent from terminal congestions and shortages providing OMTI and its clients the flexibility and peace of mind every shipping company desires. Neighbouring ports of Kalba and Khorfakkan compliment the supply options and cater to the schedules and routes of its clients.

All the above, coordinated by a senior operations team with a combined experience of over 150 years that has been with OMTI since its inception, allows OMTI to remain the largest by volume supplier in Fujairah year after year.

Supplying all distillate and residual grades of bunkers with experienced barge crews and officers, OMTI pioneered in supplies of high quality VLSFO since the IMO 2020 regulation was enforced and continues to do so today. Always looking ahead, OMTI is already in a position to handle and supply the Biofuel requirements of its clients. With the facilities and the relationships already in place, tested in a span of 2 decades, the next milestone of bunkering carries OMTI's guarantees.

Contact us on:

Office 2001, Saba Tower 1, JLT
DUBAI, UAE
Tel: 00971 4 4350500
Fax: 00971 4 4350505
Email: bunkers@oil-marketing.com

12 Kithiron Street,
Alimos 17455
ATHENS, GREECE
Tel: +30 2109609860
Fax: +30 2109609861
Email: bunkers@oil-marketing.com

12 EU Tong Sen Street, #05-168 The Central
SINGAPORE 059819
Tel: 0065 6222 4028
Fax: 0065 6222 4027
Email: singapore@oil-marketing.com

EFFECTIVE MARINE LUBRICATION

Lubmarine White Paper Offers Shipping Operators the Latest Insights To Effective Marine Lubrication

A new white paper – "Adapting to Life in the Post IMO2020 Landscape" – has been published by marine lubricant specialist, Lubmarine, providing vessel owners and operators with key insights into the vital role that correct lubricant selection and onboard lubrication oil management plays in preventing costly engine failures.

The new 40-page white paper looks at the key impacts experienced by the shipping industry's transition to IMO2020 and beyond.

It reveals the critical role that a correct lubrication strategy can play in helping vessel operators ensure safe and reliable engine operation, minimize risk, and ultimately extend engine life expectancy.

"The aim of the white paper is to provide operators and engineers with additional insights, advice and guidance, enabling them to truly understand how vital correct lubrication selection and ongoing analysis is in the post IMO2020 landscape." said Lubmarine General Manager, Arnaud Guichard.

This white paper forms part of a series of reports that are being launched by TotalEnergies to provide the shipping sector with critical insights across a range of key industry topics. It reinforces the company's commitments across the entire marine-related value chain – including marine fuels, lubricants, fuel additives, and battery technology production, as well as in its shipping operations.

"Using the right lubricant in the right amount to deliver optimum performance together with smart engine monitoring is the goal every vessel operator is ultimately seeking. Our goal through this white paper is to guide operators and help drive home the importance of engine cleanliness," added Lubmarine Global Marketing Manager, Serge Dal Farra.

To find out more about Adapting to Life in the Post IMO2020 Landscape and to download a copy, visit:
https://go.lubmarine.totalenergies.com/lp-talusia-universal-cylinder- oil-white-paper-2021

www.lubmarine.totalenergies.com





BUNKER ONE AIMS TO FUEL DJIBOUTI IN NEW PARTNERSHIP

Bunker One and Djibouti's Red Sea Bunkering have forged a new, strategic partnership with a common goal to grow the bunker market in Djibouti by offering clients reliable, flexible bunker supplies along the Northeast African trade route through the Red Sea

Strategic alliances have long been a way for companies to stay relevant – and the benefits of commercial partnerships are ubiquitous to companies and clients alike.

By bringing together the unique skillsets and competencies of the two companies, Bunker One and Red Sea Bunkering have demonstrated exceptional synergy, offering clients a robust, streamlined supply of marine fuels in Djibouti and throughout the East African region.

A Mutual Exchange of Value

The port of Djibouti relies on Red Sea Bunkering as its sole physical bunker supplier. Specialized in providing clients with very low-sulphur fuel oil (VLSFO), high-sulphur fuel oil (HSFO) marine gas oil (MGO), and lubricants – the company operates two bunker barges and one floating storage unit at the port of Djibouti.

Bunker One, a part of the Bunker Holding Group, has already established itself as a global market leader and trusted partner in physical bunkering at several key maritime trade locations.

Combining Bunker One's global experience and recognition with Red Sea Bunkering's local operational expertise allows both companies to provide their clients with a wide-reaching, competitive supply of bunker products across the region.

Furthermore, the new partnership enables ships passing the Suez Canal and the Red Sea to take advantage of bunkering HSFO – a product Bunker One is currently seeing an increase in demand for, partly due to an influx of vessels using scrubbers.

"I'm excited about this new partnership with RSB and really believe we are an ideal business match given RSB's local knowledge and operational experience combined with our global reach and group volume. At the same time, I also look forward to being a part of the expansion of Djibouti as a preferred bunkering location along the West-East trade route." - **Michael Hedager, Bunker One Africa**

Increasing preference for Scrubbers & HSFO

With the global shipping industry slowly beginning to recover from the pandemic, so is the need for marine fuels. Surprisingly, the demand for high-sulphur fuel oil is experiencing a similar revival as prices for low-sulphur fuel oil reach an all-time high - given increasing crude prices.

Bunker One and Red Sea Bunkering's partnership makes way for a supply of HSFO, VLSFO and MGO at Djibouti Anchorage.

With a floating storage of 75,000 DWT, both companies can provide their clients with an industry-compliant, stable, and competitive flow of products.

The newly formed partnership between the two companies rounds out Bunker One's geographic coverage of strategic bunker locations along both African coasts with operations covering West Africa, Djibouti and upcoming Port Louis which further underlines its global position leader in the physical bunkering market.

PLEASE CONTACT:
Michael Hedager, Bunker One Africa
Phone: +971 52 666 6614,
E-mail: djibouti@bunkerone.com



Bunker One

A MODERN COMPANY WITH A LONG TRADITION

Exciting developments at Reseaworld

RSW RESEAWORLD MARINE FUEL AND OIL

An emotional joint venture'… This is how Valeria Sessa describes the new company that Reseaworld have recently established in Athens, Greece.

"Just a few days ago we formalised the opening of the new branch, whose main strength will be it's partner Maria Karayianni, a professional with over 30 years of experience with both BP and other very important international companies continues Valeria. 'The new branch will act as another main office to export the services of marketing and supply of bunker and lubricating oils for ships. We see this as an expansion of what we already offer from our headquarters in Torre del Greco, Naples' said Valeria.

It's full circle for Reseaworld as Maria Karayanni was the one person, more than 5 years ago, who encouraged Valeria Sessa to Return to the World of the Marine transport… launching a society that today operates in the market of the trading of bunkers and lubricating oils. The market target of the new Greek company is that of the local, both of which the Italian staff and Maria Karayanni will propose their own trading services.

ReseaWorld provides bunkering and related services globally and aims to achieve the highest level of customer satisfaction everywhere in the world. With over thirty-five years experience in the Shipping world, ReSeaWorld are a competent and reliable partner.

Reseaworld continues to grow in both quality and services offered and step by step is reaching its business goals. Shipowners continue to show their trust and satisfaction in Reseaworld's work philosophy.

Reseaworld gains the most satisfaction when new clients are acquired and relationship can be established – this is one of their core strengths.

In addition its Reseaworld's previous experience, from the side of the shipowners, that gives them added value in understanding the needs of their clients. Finally an important new goal of Reseaworld is the supply of lubricants, this is in addition to their focus on the common bunker supplies it offers to their clients.

Email: reseaworld@reseaworld.com



Alberta Della Gatta, Valeria Sessa, Luciana Della Gatta



Maria Karayianni



DIARY

1 - 2 DECEMBER 2021

MEDITERRANEAN BUNKER CONFERENCE

ONLINE

With COVID-19 acting as a larger disruptor than IMO 2020 in the bunker market, it is not clear whether the true impacts of the sulphur in fuel limit will only be visible when the market recovers. Following 2020, the bunker industry must balance the needs for recovering out of the Covid-19 induced demand destruction with investing in the shift to low and zero-carbon fuels for the next regulatory milestones. As IMO 2020 moves in the rear-view mirror, the market must look ahead to the next IMO target of meeting at least 50% lower greenhouse gas emissions by 2050 compared to 2000. How can the bunker industry adapt and be part of the transition toward low and zero-carbon fuels? Will lower-emission fuels be the only option for suppliers and what is the fuel of the future and how will we get it in mass?

For more information: https://plattsinfo.spglobal.com/2021_Med_Bunker_Virtual_Conference.html

14 DECEMBER 2022

MONTHLY IBIA MEMBER MEETINGS

THE IMPORTANT ROLE OF SHIPOWNERS

Join IBIA for our monthly online member meetings, where we invite our members to join an informal discussion on various topics. We have found all our IBIA member meetings to be well attended, very informative and an opportunity to share concerns and experiences with frank and open discussion conducted under the Chatham House rule. Should you have any topics you would like to see addressed in the meetings or you would like to be one of our pre-designated speakers

Please email: tahra.sergeant@ibia.net

21 FEBRUARY 2022

IBIA ANNUAL DINNER 2022

LONDON, UNITED KINGDOM

The much-anticipated IBIA Annual Dinner returns to the luxurious Grosvenor House Hotel for 2022 as a physical black-tie evening. As a well-established fixture in the bunker industry's calendar, we are looking forward to welcoming our members and their guests for an evening of networking after two years of very few in person events. We are, just for this year, reducing the capacity of the dinner to a maximum of 500 attendees to assure our guests of their comfort and safety. Due to the overwhelming popularity, the IBIA Annual Dinner 2022 is now fully sold out. Tables may become available due to cancellations. Should you wish to be notified of any cancellations please email ibia@ibia.net and we will ensure to keep you updated.

23 FEBRUARY 2022

IBIA IN LONDON

LONDON, UNITED KINGDOM

Meet with the IBIA Secretariat and Board for a half day member and industry meeting. IBIA will host a round table discussion where you will be able to hear from the experts, engage in dialogue and have your say as we look towards the future of the industry as a whole.

Should you wish to attend or know more please email: sofia.konstantopoulou@ibia.net

For more information: www.ibia.net

7 - 11 MARCH 2022

MIDDLE EAST BUNKERING CONVENTION

DUBAI, UAE

Now in its seventh year, the Middle East Bunkering Convention returns to Dubai in March 2022, providing a key forum for lively and informed discussion about the state of play for the bunker industry and wider shipping markets as global trade adjusts to the constraints and challenges caused by the COVID-19 pandemic. MEBC will look at the issues that have an impact on bunkering in the Middle East, whilst providing a useful and comprehensive overview of the global marine fuel supply and demand picture.

For more information: https://www.petrospot.com/events/mebc22-dubai

16 - 18 MARCH 2022

ASIA PACIFIC MARITIME 2022

SINGAPORE, ASIA

Asia Pacific Maritime (APM) is at the centre of maritime conversation. Held in Singapore, it is the arena where the global maritime industry convenes every two years to forge partnerships and discover business opportunities. With Asian economies expected to regain pre-pandemic levels in 2022, APM is even more essential as a gateway between Asia and the world.

For more information: https://www.apmaritime.com/en-gb/Discover.html

29 - 31 MARCH 2022

CMA SHIPPING 2022

STANFORD, USA

AFocusing on bringing the shipping industry together after the last two years, this year's agenda will focus on the lessons learned and the opportunities that lie ahead as trade gets back on track with shipping leading the way. Choose the sessions you would like to attend from Greener Shipping, Bunkering, Legal and The Human element. Plus keynotes, shipping association panels and the Commodore Debate.

For more information: https://informaconnect.com/cma-shipping/

All dates were correct at time of going to print but may be subject to change, please review the related websites

10 - 12 MAY 2022

41ST INTERNATIONAL BUNKER CONFERENCE IBC

OSLO, NORWAY

The International Bunker Conference (IBC) has become a world-renowned forum for the international bunker industry. The previous IBCs have focused on the industry milestones and challenges presented by MARPOL Annex VI. Challenges, consequences and opportunities approaching new regulations in the bunker industry. We have passed the doorsteps of a paradigm shift in bunker fuels as we know it. Did we manage and succeed? IBC 2022 will summarise 2020, provide market overviews and solutions in the new regulatory regime and ask whether the real storm is brewing on the horizon.

Don't miss the chance to obtain an update on what's happening in the bunker industry as well as to meet old and new friends at this great networking arena.

For more information: https://www.bunkerconference.com/

23 - 27 MAY 2022

MARITIME WEEK AMERICAS

PANAMA

Maritime Week Americas 2022 returns to Panama with a week of key maritime events, including the MWA Conference plus top-level training. MWA remains the largest and most popular bunkering conference in the Americas.

For more information:
https://www.petrospot.com/events/mwa22-panama

22 JUNE 2022

IBIA IN TURKEY

ISTANBUL, TURKEY

Meet with IBIA members and Industry for a full day member and industry meeting. IBIA will host panels and round table discussions where you will be able to hear from the experts, engage in dialogue and have your say as we look towards the future of the industry as a whole. Should you wish to attend or know more please email: sofia.konstantopoulou@ibia.net

For more information: www.ibia.net

All dates were correct at time of going to print but may be subject to change, please review the related websites

WORLD BUNKERING Advertising

THE OFFICIAL MAGAZINE OF IBIA

IBIA INTERNATIONAL BUNKER INDUSTRY ASSOCIATION



EDITORIAL SYNOPSIS
All prices subject to VAT at standard rate

COPY REQUIREMENTS
Adverts required as high resolution PDF
E-mail to **ibia@constructivemedia.co.uk**

ANYTHING SUPPLIED OTHER THAN THE ABOVE MAY INCUR A PRODUCTION CHARGE

PRODUCTION SERVICE
Our production department can offer you a full service in the preparation of your advertisement at very competitive prices.
Telephone: +44 (0) 1495 740050

FULL PAGE

DOUBLE PAGE SPREAD

HALF PAGE HORIZONTAL

HALF PAGE VERT.

QUARTER PAGE

THIRD OF A PAGE

New advertisement opportunities and discounts for IBIA members!
please contact Alex Corboude for details - **alex@worldbunkering.net**

WORLD BUNKERING

Q1 2022... NOW OPEN FOR BOOKINGS

Q1 2022

SPECIAL FEATURES:

Fuel Quantity

The use of mass flow metering systems on bunker barges has many advocates worldwide, but most administrations have so far stopped short of following Singapore's example in making this equipment mandatory. We look at the situation worldwide.

IT

The coronavirus pandemic has given a boost to the use of IT in bunkering, from increased automation to electronic bunker delivery notes. We catch up with the latest developments.

Lubricants

Over the past couple of years lubricant manufacturers have concentrated on meeting the demands of IMO 2020 compliant fuels. What is the situation now?

GEOGRAPHICAL FOCUS:

Western Mediterranean

Our annual review of this important region located on the main East-West sea route. We look at how the main and competing bunker hubs are faring, and also how these ports are looking ahead to an era of a diverse range of fuels.

Indian Subcontinent

The coronavirus pandemic has hit the subcontinent hard. We ask how the bunker sectors in the region's different countries have coped, and at their plans for the future.

Regular Features

IBIA Updates, IBIA Africa Report, IBIA Asia Report, Diary, Event Previews & Reviews, News, Views, Analysis, Scrubbers, Alternative Fuels, Interviews, Industry News, Environment, Testing, LNG, Innovation, Legal News, Equipment and Services, Russian Update, Conference Previews, Conference Reviews



WWW.WORLDBUNKERING.NET **ibia@constructivemedia.co.uk**



WORLD-CLASS BUNKERING SERVICES FOR OCEAN-GOING VESSELS

IMO 2020 COMPLIANT MARINE GAS OIL AND LUBRICANTS



Takoradi Port MGO Facility



Sekondi Naval Base MGO Facility

GOIL BUNKERING

GOIL supplies Marine Gas Oil (MGO) to ocean-going vessels in Tema, Takoradi and Sekondi. In the provision of these services the Company lays emphasis on Product Quality, Product Availability and stringent Environmental, Health & Safety (EHS) standards.

Our MGO meets the requirements of our esteemed clients in accordance with ISO 8217-2010 fuel standard. GOIL is IMO 2020 Low Sulfur Fuel (0.5% Max) compliant.

TEAM OF EXPERT

GOIL BUNKERING is a team of highly skilled professionals with expertise who work passionately to give you a world class satisfactory service.

QUALITY AND QUANTITY

We don't compromise on the quality of our products. Delivering premium quality and equitable distribution (quantity) is our mantra.

GOIL OFFSHORE TANKER FOR FAST AND FLEXIBLE DELIVERY

You don't have to sweat when you're in Ghanaian waters, GOIL Offshore Tanker is very close to serve you. We are able to guarantee fast delivery and large volumes of fuel with our tanker. We save you time because we know you don't have time for berthing.

EFFICIENT, RESPONSIVE, RELIABLE AND AVAILABLE

You can always rely on GOIL Bunkering for high premium quality fuel. If reliability is your challenge, then that is our drive. We are always on our toes to keep you moving. We are always happy to keep you going.

LONG TERM BUSINESS RELATIONSHIP IS OUR PRIDE

We take pride in personalizing and customizing bunkering. Customers' expectations drive us to always do more and better. Our aim is to establish and maintain long term business relationships. We have a continuous focus on delivering value for money. GOIL Bunkering is the solution to your bunkering needs.

HEALTH, SAFETY AND ENVIRONMENT

We believe that, safety and security don't just happen; they are the result of collective consensus and public investment. For safety is not a gadget but a state of mind. Therefore our team of expert prepares and prevent, they don't repair and repent.

24-hour Contact on:
+233 244 274 027
+233 208 442 522
+233 509 220 000
+233 244 372 328
email: bunkers@goil.com.gh

GOIL
Good energy

Bunker One

LET US BE YOUR PROFESSIONAL COUNTERPART

