Lloyd's List
Maritime intelligence | informa

Daily Briefing
Leading maritime commerce since 1734

Shippers prepare for delays and disruption following Suez reopening

AS CONTAINER SHIPS resume their passages through the Suez Canal and the backlog of ships awaiting transit begins to abate, the focus is now moving towards the deluge of volumes about to hit Europe's already disrupted supply chain.

Leth Agencies, the canal's largest agent, reports that 163 vessels have passed through the canal since it reopened on Monday afternoon.

However, data from Lloyd's List Intelligence shows that there are still 74 containerships waiting to transit the canal, 43 of them waiting at the southern entrance and heading to Europe.

And Leth warned that on average another 53 vessels were arriving to join the queue each day.

Carriers will be searching for berths in ports around Europe to offload their cargoes. But shippers are already expressing concerns over what will happen to cargoes and asking that carriers communicate clearly over delays and diversions.

The containerised freight supply chain was already struggling with high levels of demand and pandemic-related constraints before the Suez Canal closure, and the latest blow threatens to further disrupt supplies of goods.

"The champagne cork has suddenly popped open and I think we're going to see similar pressure brought to bear on northwest European and US east coast ports," said James Hookham, secretary-general of the Global Shippers' Forum.

"I think the lines have learned from last year that there needs to be greater interaction with ports to try to manage this, rather than just turn up and queue.

"There will be some skips and diversions, but they need to keep us informed."

Customers with containers destined for Southampton or London Gateway could find those boxes sent to Rotterdam or Antwerp, he warned.

That could also incur additional surcharges for repositioning, depending on the terms of the contract signed.

But during the crisis last year, stock arrived from Asia just as the shops were closing due to lockdown, Mr Hookham said.

"This time it will be the complete reverse. With UK shops reopening next week, I'm sure a lot of summer stock and garden furniture will be on those ships. That may frustrate some of the retailers. The challenge will be getting that into stores as quickly as possible."

But the situation may not be as bad as last year, when there was a massive disembarkation of stock that no one wanted.

On mainland Europe, however, which remains badly affected by the pandemic and which could be heading into further lockdowns, the situation will be less favourable.

"There will be a shortage of empties coming back. You could start to prioritise UK ports because you know you're going to get cleared faster."

Some European ports are already preparing for the onslaught of containers.

Valencia has announced that two of its terminals, MSC Terminal Valencia and CSP Iberian Terminal Valencia, will bring forward gate openings by two hours and CSP Iberian Terminal Valencia will extend its gate closing time until 2100 hrs.

According to Port Authority of Valencia estimates, the increase in traffic is expected to be between 20,000 teu and 25,000 teu, based on traffic held up on the south side of the canal.

This will be added to the daily traffic handled in the port, which averages of 15,000 teu per day.

"The Port Authority of Valencia expects that the arrival and departure of this retained traffic will be spaced out over the 10 to 15 days following next weekend, which will allow the impact to be minimised," it said.

Maersk warned in its latest customer advisory that while it was doing its best to mitigate the impact and minimise the total impact of supply chains, it was expecting a "significant loss in capacity over multiple weeks"

"Depending on market dynamics, we have decided to temporarily cease short-term bookings placed via Spot, as well as short term contracts this week and in the immediate future."

This would apply to all exports out of Asia, exports from Europe to Asia, the Middle East and Oceania, and from North America to the Middle East and Indian sub-continent, along with some smaller regional trades.

It assured shippers that the suspension would be temporary to allow it to move existing laden cargo and empties to the areas they were most needed.

Separately, Mediterranean Shipping Co said it expected that the disruption from the canal closure could continue through the second quarter as ships and empty containers were repositioned.

Freight rates have not yet shown any appreciable rise due to the Suez closure, but there are fears that the reduction in capacity caused by many ships taking the longer route around the Cape of Good Hope, along with equipment shortages, could soon lead to rate hikes as shippers struggle to book space.

Some carriers are already predicting a rise in spot rates and surcharges due the disruption.

"GSF is warning shippers to be wary of this signalling of future prices and of demands for new surcharges," said Mr Hookham. "This incident was not our fault and the reasons why customers should be expected to pay extra, on top of record shipping rates for goods delivered late and for reasons ultimately of the industry's own making, should be challenged.

"The shipping industry is reminded that 'Suez' is a canal in Egypt, not an excuse to price-gouge your customers."

Suez tailback shrinks but 300 vessels still queueing

THE logjam at the Suez Canal is receding but just over 300 vessels still remain queued at northern and southern ends, Lloyd's List Intelligence data show.

There are currently 307 vessels over 10,000 dwt awaiting transit, compared with 372 just before the containership *Ever Given* was re-floated and removed from blocking the Suez Canal.

While the queue has dropped by 17%, to total 25.9m dwt, based on vessel-tracking data, figures suggest that the Suez Canal Authority is prioritising clearing the backlog of containerships.

Some 100 containerships with teu capacity of just over 1m were trapped at the peak of disruption. This is now at 74 ships with combined teu of 763,442 capacity, according to Lloyd's List Intelligence information.

Not only have 26 of the waiting 100 boxships gone through, but also 10 were the largest Europe-bound containerships. There were 17 containerships of 17,000 teu and above waiting on Monday. That has fallen to seven.

Bulk carriers appear to be facing longer delays while any reduction in the number of tankers waiting is negligible, although bigger ships awaiting transit are down.

There are 101 bulk carriers of 7.6m dwt in the queue, which has not changed very much since Monday, when 108 of this vessel type were recorded.

There are some 33 crude tankers of 5m dwt, including 16 suezmax tankers. That compares with 36 tankers and 24 suezmaxes on Monday.

Some 50 vessels normally transit the canal daily, with weekly containership transits between 75 and 90 ships depending on the season and demand. When the *Ever Green* was first stuck on March 23, some 165 vessels were waiting some 24 hours later.

Suez blockage impact is a taste of climate change threat, says WTO

THE Suez Canal blockage and the disruption it has caused is a warning of how global trade will suffer if climate change goes unaddressed, according to the head of the World Trade Organization.

Ngozi Okonjo-Iweala, its director-general, warned that failure to address climate change could directly affect trade.

"We all saw what happened recently with the *Ever Given* in the Suez Canal," she said during the International Energy Agency's net zero online summit. "It was not a climate change event... but it brought to mind what could happen to trade and to supply chains should we have these climate change type of events."

The 20,000 teu boxship *Ever Given* (IMO: 9811000) ran aground in the Suez Canal on March 23, blocking one of the world's busiest trade lanes for six days until it was refloated.

The incident left hundreds of vessels waiting to pass through the canal, forcing some of them to re-route. It is also expected to lead to months of trade disruptions and rate hikes, especially for boxships.

"Sea level rise and extreme events could affect transport, distribution, communication and logistics networks underpinning modern day supply chains," Ms Okonjo-Iweala said of the dangers posed by climate change. She said making trade greener, through internationally agreed rules, would be an important contributor.

"International trade and WTO rules must support effective action on climate change," she said.

WTO member states will convene their 12th Ministerial Conference, the organisation's most important decision-making authority, at the end of November in Geneva.

Ms Okonko-Iweala said WTO member states should converge their positions on climate change and trade as the meeting edges closer. They will meet a couple of weeks after COP26, the United Nations Climate Change Conference being held in Glasgow in November.

The conference is considered a crucial meeting for climate change policy as it will see governments submit new national plans to support the 2015 Paris

Agreement and negotiate wider implementation issues around the Paris Agreement goals.

Governments that signed up to the Paris deal agreed to limit global temperature increases this century to below 2 degrees Celsius and aim for 1.5 degrees Celsius.

COP26 president Alok Sharma said that even though countries accounting for around 70% of the global economy had committed to carbon neutrality, current actions meant they would fail to hit those targets.

"On our current course we are heading for global temperature rises of over 3 degrees. That will cause devastation in each and every country that is represented here today in this conference. And in many ways it will be the catalyst for an apocalyptic future," he said during the IEA summit.

The world needs to halve global emissions by 2030, Mr Sharma added and said the next decade must be one of action not deliberation.

He highlighted the significance of the development of renewable energy and stressed that coal in particular needed to be phased out and funding for coal projects brought to an end.

"The 500 gigawatts worth of new coal power stations that are planned around the world are, quite frankly, anathema to the Paris Agreement," said Mr Sharma.

WHAT TO WATCH

Tanker companies merge to form third-largest US-listed shipowner

INTERNATIONAL Seaways' planned merger with Diamond S Shipping will result in a tanker fleet of 100 and overall net debt of $1.2bn, with the two companies earning a combined $1bn in 2020.

Three senior executives from the tanker owner and operators held a conference call to reveal details of the all-stock deal which combines International Seaways' owned and operated fleet of 34 crude tankers with the 65 ships under Diamond S, which includes 50 medium-range product tankers.

Talks on the merger, which aims to be finalised by the third quarter of 2021, began over a year ago, according to Diamond S Shipping chief executive Craig Stevenson.

"We thought the two cultures made a lot of sense together," he said.

He was with Diamond S back in 2011 when the then-private company paid $900m to buy 30 product tankers from Cido Shipping, which form the base of the existing fleet.

That purchase was backed by China Investment Corp sovereign wealth fund, marking China's first foray into international shipping in the US.

The International Seaways and Diamond S consolidation is the first significant merger since 2018, which marked the takeover of Gener8 by Euronav, and BW Tankers' buyout of Hafnia's product tanker fleet. Hafnia's overtures to merge with Ardmore Shipping last year were rejected.

The merged fleet's average age of 9.5 years is similar to that of Euronav and Frontline. The MR tankers with Diamond S Shipping average 12 years, which is double the average age of Scorpio Tanker's 59 owned vessels, Lloyd's List Intelligence data show.

International Seaways chief executive Lois Zabrocky said that the merged companies would have an enterprise value of $1.8bn and become the third-largest US-listed tanker company by deadweight, at 11.3 million dwt, and the second-largest by vessel count.

Before today's announcement their market capitalisation was $514.3m with Diamond S at $388.2m.

Last year, International Seaways posted a $5.5m loss on $421.6m in revenue. Diamond S Shipping had a full-year net profit of $26.3m on $595.9m in revenues.

The two companies declined to provide overall cash breakeven rates required for the merged company, noting that it would produce $23m in savings and $9m in "revenue synergies".

After the transaction, International Seaways shareholders will own 55.75% of the combined company and Diamond S at 44.25%, a statement announcing the deal said.

Seventy-one per cent of the fleet would be focused on crude and the remainder on moving refined products, the company said.

Decisions about commercial management have yet to be made, the conference call heard. International Seaways has some of its product tankers in a pool with Chile's Ultragas while Diamond S Shipping has vessels in the Norient product tanker pool.

These would all be evaluated in the coming months, the executives said, with Mr Stevenson staying on in an advisory role during the merger.

OPINION:

Suit the technology to the ship – not the ship to the technology

SHIPOWNERS' technical teams recognise the danger posed by polished salesmen pushing the latest shiny solution, *writes Richard Clayton.*

Even so, with so much emphasis now given to improving efficiency and reducing emissions, it's hard not to be seduced into fitting propeller boss cap fins, rotor sails, air lubrication, sleek paints, batteries, or kites.

"People are being offered silver bullets wherever they look," said Sean Mclaughlin, adviser to the board of UK-based consultancy Houlder. It's hardly helpful.

In fact, he suggests, technical teams are so busy doing their day job they have little time to independently trial each new technology to see whether it helps to meet EEXI requirements, RightShip stipulations, or investors' environmental, social and corporate governance expectations.

This leaves the thinly-stretched tech team somewhat vulnerable to the purveyors of new tech. It's even more unlikely they will have time to assess the combined effect of two technologies to calculate whether 2 + 2 = 5.

Short of bringing in a consultancy, where should the owners' technical team begin?

The advice is sound: do not begin with the shiny technology, begin with the ship.

The trouble taken to understand the vessel's operating characteristics at a granular level, the design details, the specific trading pattern, and the prevailing weather and sea conditions related to that pattern will pay off in the long run.

"Based on a vessel's actual operating profile, you need to find out where the significant amounts of fuel consumption are," adds Jonathan Strachan, Houlder's director for ship design and engineering. "From that, what are the best options to reduce your fuel consumption?"

Vessels built in the past two or three years will struggle to gain any fuel saving from new technology, whereas ships of 15 years or older might not secure a return from the investment. The timing of the sweet spot depends on the vessel and its operational characteristics, not the technology.

It also depends on whose expectations are the more significant.

"There's a disparity in terms of measures," Mr Mclaughlin says. "If you are saving fuel, you are saving emissions, and saving money — but it doesn't help you much with an EEXI calculation.

"If you want your bank to comply with the Poseidon Principles, then a real fuel saving will tick the box." But if charterers are focused on the RightShip greenhouse gas rating, you'd better achieve another standard.

"The challenge for the in-house tech team is not only the technology itself but matching it to the commercial objectives. The charterer's perspective is significant, along with the fuel saving," he comments.

Shipowners have their own needs, such as not wanting to employ another crew member to look after the technology, thereby negating any saving made.

Battery technology might be rejected because of the additional weight, while shore power might be rejected because port authority intentions do not go that far. Even wind solutions fit certain trades but not others.

The key is to think of the installation of new technology not as bolting on an appendage but as a minor redesigning of the ship. Does the operating profile suit such a redesign? If not, think again.

In short, know your ship and do the math.

ANALYSIS:

Is carbon capture the solution shipping has been waiting for?

COULD carbon capture and storage be the miracle cure that shipping needs to tackle emissions?

Those developing such technologies certainly think so, at a time when zero-emission fuels have yet to fully take off.

Several solutions are being worked on which could be developed within this decade.

One such solution — the decarbonICE technology — is moving from the conceptual stage to regulatory approval. It has the potential to cut greenhouse gas emissions from shipping by about 90%.

The technology is being developed in Denmark by the Maritime Development Centre and has the backing of leading shipowners and charterers, namely NYK Line, Teekay, BW Group, Ardmore, Sovcomflot, Vale and Knutsen OAS. South Korea's Daewoo Shipbuilding and Marine Engineering is involved on the technical side.

The solution involves carbon capture through the cryogenic cooling of exhaust gases, which is then sunk into the sea at high velocity.

"With global carbon emissions heading in the wrong direction, sending carbon ice blocks down to the sea floor at depths of 2,800 metres and below will allow for carbon neutrality using conventional fuels," according to project developer Jan Boyesen.

"Shipping could even become carbon negative, if combined with using biofuels or some synthetic fuels such as methanol."

When carbon is emitted into the air, a large amount is absorbed by the surface of the sea, which leads to acidification, he explained. However, when carbon is captured and made into dry ice, only 1%-2% ends up in the water.

The entire ocean floor is not suitable for the task, however, due to mountain ranges and/or marine life, said Mr Boyesen.

A geologist working with the project has mapped out the seabed and has identified abyssal plains as suitable areas where carbon descent vehicles, of about 1 tonne, can be torpedoed from the ship's stern at 28 metres per second into the soft seabed soil, where they will stay for time immemorial as CO_2 hydrate.

"The speed at which it is dropped, through pure physics, ensures that the carbon block, which is minus 78 degrees Celsius, will sink 10 metres below the seabed," he said, adding that the CDVs would be launched every 10-15 minutes from the larger vessels, which emit up to 300 tonnes of CO_2 every 24 hours.

Some bacterial organisms that live on the seabed could potentially be affected at the point of impact, although no formal study has yet been carried out.

Since the total area for storing shipping emissions will cover about 15,000 square kilometres per year, it is envisaged that the effect will be insignificant, given the actual extent of the sea floor, Mr Boyesen said.

The project's leaders are in talks with flag, port and coastal states to make recommendations to the International Maritime Organization for an amendment to the London Convention on Pollution of the Seas to allow the storing of CO_2 in seabed sediments, as an addition to subsea storage, which has been permitted.

Due to rigorous procedures at the IMO, the proposal could take a minimum of one year up to six years to be approved, Mr Boyesen said.

In addition, specialist training would need to be carried out for handling of the ice blocks on board the vessel.

Other solutions are also being developed, which will provide some choice for owners.

Finnish scrubber manufacturer Wärtsilä recently highlighted the potential to capture carbon at the point of exhaust, much like current scrubbers remove sulphur oxides.

Its initial findings showed that carbon capture and storage on ships was "technically viable" and it will be installing a one-megawatt pilot plant in Moss, Norway, to test the theory.

"Carbon capture is exciting because it can provide significant reductions in a relatively short timeframe" said the company's director Sigurd Jenssen. "CCS is an important piece in the puzzle to bring down greenhouse gas emissions from shipping by 2050."

It could take between three to six years to develop compared with say, alternative fuels, which need a much longer time to build the necessary infrastructure.

"Carbon capture is more ready for marine applications and what we want to test is whether land-based designs can be transferred to ships, but there are operational constraints like space that need to be overcome," he said.

The system would likely require a separate scrubber, but more work needs to be done to establish whether existing scrubbers could also handle the CO2 extraction, said Mr Jenssen, who is based in Norway. The only difference would be the type of solvent used.

"On land, carbon emission cuts of 90% are possible, but for shipping, we will start with 70%, which is the IMO target reduction per vessel."

The CO2 captured will be stored on tanks and be deposited at port reception facilities, which are mostly in Northern Europe, where the CO2 is pumped into used oil fields.

"As there is not only one single solution to shipping's environmental impact, the sector must innovate broadly across multiple areas," Mr Jenssen said.

Every year, about 1bn tonnes of CO2 is produced from ships, which represents 2%-3% of global emissions.

Swiss-based start-up Daphne Technology is also looking to target CO2 from all fuels over the next few years.

While several pilot projects are underway, its universal green converter aims to eliminate up to 99% of SOx and particulate matter, and up to 85% of NOx from ship exhausts. It is also expected to cut methane slip from ships by about 80%, using liquefied natural gas dual-fuelled engines, and will be able to convert ammonia slip from future ammonia fuel, according to the company.

The CO2 conversion from all fuels could be ready by 2025.

"We started by developing a solution for SOx, NOx and PM (Black Carbon) emissions, as these were the primary pollutants released by the maritime industry under regulatory focus," the company's founder and chief executive Mario Michan said.

"As new regulations and new fuels have been introduced, we saw the need to further develop our system. We discovered we could use the same patented technology to remove all toxic and greenhouse gas pollutants."

The technology involves high-energy electrons that break down the molecules in the funnel, so what is released can be captured and stored and re-used for fertiliser.

The company, which is funded by Saudi Aramco Energy Ventures, part of Saudi Arabia's national oil company, and a grant from the European Union, is aiming to install the world's first dry exhaust gas cleaning system with a circular economy at the end of 2021.

A circular economy is an economic system aimed at eliminating waste and which has a continual use of resources.

While alternative fuels with zero carbon emissions are developed to meet IMO decarbonisation goals, carbon capture, storage, and potential recycling into useable products may be the golden answer for shipping.

Ammonia: The trillion-dollar question

THE cost to build a plant that will produce enough green ammonia to supply marine fuel for just four post-panamax-sized vessels is currently between $690m and $791m.

That sobering statistic best illustrates the enormous commercial challenges shipping faces to transition to a zero-carbon, emission-free world.

Ammonia might be carbon-free, but it is also highly toxic, comes with serious safety risks, and has not been used for internal combustion engines for cars or aircraft. It represents a giant leap into the unknown for shipping.

The money that needs to be spent to decarbonise the global maritime sector is staggering.

Some $70bn needs to be invested by 2025 if international shipping wants to switch 5% of marine fuels to zero-emission alternatives by 2030 and meet climate-change objectives, according to Peder Osterkamp, the shipping lead from COP26 Climate Champions.

A further $390bn needs to be spent within the following five years to meet 2035 targets – and $1.9trn in total by 2050, Mr Osterkamp's analysis shows.

Some 87% of that $1.9trn cost accounts for building ammonia marine fuel infrastructure, while 13% finances the building of zero-emission vessels.

These figures do not include the huge investment needed to produce hydrogen-based fuels such as ammonia on the scale needed, only highlighting the financial barriers alongside already considerable technical uncertainties.

It will cost up to $6trn to build green ammonia and renewable energy plants around the world to decarbonise 40% of international shipping by 2050, an Environmental Defense Fund white paper published in 2020 estimates.

A plant that produces 700 tonnes daily, costs between $690m and $791m "and is approximately equivalent to the daily consumption of four post-panamax-sized vessels", the paper said.

Despite this, it is likely the first deepsea, zero-emission-ready, ammonia-powered ships will be in the water by 2024, with further government investment needed to support more pilot projects.

"Very near term, you've got to prove the technology from an operational standpoint and get pilots running from deepsea ports… then you can start to think about scale," said Mr Osterkamp.

Zero-emission pilot projects could focus on vessels plying dedicated routes, such as from Asia to the west coast of the US, where necessary port and marine fuel infrastructure exists at both ends, he said.

Shipowners, cargo owners and energy providers all had to invest in any pilot to make it feasible, he said.

Zero-emission vessels need a guaranteed return over a longer period, unlike the shorter-term charters that characterise today's fleet employment and leave most of the risk sitting with the shipowner.

"For the pilots and early-stage work, we can get to there without a carbon levy — but for the full transition, there will obviously need to be some market-based measure to make it viable," Mr Osterkamp added.

"There are issues on bringing institutional investors into shipping's decarbonisation, as transparency needs to be improved, and ESG standards required to attract that kind of industry financing."

Green ammonia is produced using water, air and renewable electricity, as green hydrogen is combined with nitrogen using electrolysis.

So-called brown ammonia is produced using natural gas or coal as feedstock, while blue ammonia refers to natural gas via carbon capture and storage. All use the Haber-Bosch process to produce the ammonia.

About 170m tonnes of ammonia was made in 2018, mostly for the fertiliser industry, with negligible volumes of this classed as 'green' and seaborne trade at some 18m tonnes.

Shipping needs more than three and a half times of the world's current ammonia production — and all of that sourced from clean, renewable electricity — to power the international fleet, the EDF paper concludes.

That fleet of around 70,000 vessels consumed the energy equivalent of 650m tonnes of ammonia in

marine fuel oil based on 2012 figures, according to a paper on the subject produced by class society DNV.

Such volumes require 6,500 TWh of renewable electricity, or the total amount of electricity generated in China today.

"If ammonia were to be produced from wind energy today, a typical capex for an onshore wind farm is $500,000 per GWh annual production capacity, which implies a capex of the electricity needed of $3.2trn," DNV said in a study.

"Assuming at least $2,000 per tonne annual production capacity for the ammonia plant via electrolysis of water, 650m tonnes of ammonia would lead to $1.3trn investments in ammonia plants.

"The total investments for the fuel alone would need to be $4.5trn before taking into account economies of scale, which would reduce investment costs."

The price of ammonia derived using renewable energy like wind or solar power depends not only on the cost of the electricity, but also capital expenditure to build the electrolyser.

The electrolyser accounts for some 65%, with the DNV study calculating that would price green ammonia at between $2,200 and $3,500 per tonne. That compares to when ammonia is produced using natural gas, at $860 per tonne.

So-called brown ammonia at the same energy content corresponds to paying the equivalent of $600 per tonne for low-sulphur fuel oil, according to DNV.

That means ammonia is already unable to compete with VLSFO on financial merits, DNV concludes. The higher cost of green and blue ammonia makes it impossible to calculate payback times for investing in this technology.

Despite this, when it comes to decarbonisation, ammonia has more pros than cons as an alternative fuel.

There is an easy, feasible pathway to ammonia-powered vessels: dual-fuel engines are now widely accepted for liquefied natural gas and fuel oil, offering future flexibility.

And while it is a dangerous chemical that needs careful handling, it is easier to store in tanks than hydrogen, according to DNV.

That is why around 40 LPG carriers already deployed for ammonia transport are seen as natural candidates for the first ammonia-fuelled engines, DNV says. The global ammonia trade shipped in LPG carriers can be refrigerated, semi-refrigerated or under pressure.

Proponents of ammonia point out that bunkering infrastructure is already established at ports served by these gas carriers worldwide, as they already load and discharge at terminals as part of fertiliser trades.

When it comes to engine costs, DNV believes ammonia engines cost the same as an LPG engine, although tanks will need to be about twice the size.

Safety risks can be managed, ships can be built for conversion later, existing engines can be retrofitted, and so-called brown or blue ammonia could be used initially if there are supply issues for green ammonia.

Regulations currently prohibit ammonia's use as a marine fuel, with changes needed at the International Maritime Organization.

The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) does not allow for any toxic cargo like ammonia to be used as a fuel.

"Given the pace of IMO [policy] development and what they have on their agenda now, it's fair to assume that the technical ability will be in place before there are any revisions to the code," said DNV's programme director for maritime fuels research, Hans Anton Tvete.

"We've tried to overcome that barrier by developing our own class rules, so that we are in a position to assist our clients with all the questions that are coming up now.

"Our goal is that our class rules will be accepted as an alternative [while the codes are updated]," he added, something that has been done before.

Nitrogen oxides are emitted when ammonia is used via internal combustion, so selective catalytic reduction equipment is needed.

Ammonia is also difficult to ignite, so engines require diesel or some form of pilot fuel for co-combustion.

"We mustn't forget that technology transitions all happen along an S-curve," said Mr Osterkamp.

"It is very expensive [initially] and that first step is tough — but once you get past that tipping point, that's when things take off."

The first ammonia-fuelled vessels are set to hit the water by 2024, but uptake will not be significant before 2030, according to Marius Leisner from DNV.

"It will easily take a few years before the shipping industry can be convinced that this is a good fuel and this is natural — the industry is quite risk-averse and there are good reasons for that," he said.

"We'll need to see the experience from running these vessels, make sure that they're running without problems and start building trust that this is a good fuel, so those who want to can start building out the bunkering infrastructure.

"We have seen that story with LNG. It takes time to build trust in technology to build the infrastructure before everyone else can follow."

Accounting for carbon consumption

THE decarbonisation of shipping is a matter of interest not just to the shipping industry, but also to its customers.

That is particularly true in container shipping, where the customers include some of the world's most powerful brands, many of which have their own decarbonisation agendas.

There is growing societal pressure on the vendors of goods to account for the carbon emissions of their products. Consumers, the final link in the supply chain, want to know the green credentials of the product they are buying.

Achieving that requires a level of transparency on carbon emissions that the box shipping sector cannot yet deliver, but for which there is increasing pressure to achieve.

"Our customers expect us to help them decarbonise their global supply chains, and we are embracing the challenge, working on solving the practical, technical and safety challenges inherent in the carbon-neutral fuels we need in the future," said Maersk chief executive Søren Skou.

Carriers are aware that both the International Maritime Organization's 2050 ambitions and other commercial and social drivers require solutions to prevent carbon emissions from the sector.

Yet they are also noticing greater customer demand for greener shipping.

"Our major customers in particular are indeed increasing their focus on these issues," said Bud Darr, executive vice-president, maritime policy and government affairs, at MSC Group.

"They generally have their own environmental, social and governance goals to meet, and they expect their supply chain partners to also be decarbonisation partners. We have to be responsive to that need as well as the internal drivers for meeting these objectives."

CMA CGM is also noticing increased interest from its customers.

"So many more customers want to talk to us about sustainability and want to ensure they can address their Scope 3 emissions and have the right visibility," said CMA CGM vice-president for sustainability Patricia Picini.

"If you go to some of the big B2C companies, their consumers ask them for visibility — and they ask us, as their suppliers, for visibility."

One of those companies that is taking those decarbonisation goals seriously throughout its supply chain is L'Oréal, the beauty products brand.

"We work with many suppliers and it is critical that we understand and involve them in any climate change initiatives," said transportation vice-president Adam Hall.

"It is not OK to isolate and disregard the overall supply chain's ability to bring sustainability to the forefront."

L'Oréal is taking what it describes as a series of "small, concise actions" to reduce carbon emissions in its transport by 50% by 2030.

"There is an opportunity for transport leaders to put a stake in the ground and declare our intention to be radical in our thinking," Mr Hall said.

"We will be holding our carrier partners accountable for bringing better solutions to the table. We want to be able to optimise by CO2, and have a carrier partner that is investing to bring equipment that differentiates.

"We need more choices but we need to incentivise and reward good behaviour and move away from those that are not getting on board with sustainability."

Yet even big shippers cannot move the market alone, says Ingrid Irigoyen, associate director for ocean and climate at the Aspen Institute Energy and Environment Program.

"It is going to require working together as a group," Ms Irigoyen said.

"In terms of getting shippers together, it is important to understand their goals and how serious the commitment is.

"In order to get the first-movers together, it is necessary to get them to see how cleaning up their maritime transport fits with their other investments in climate impacts."

However, one of the biggest issues faced by shippers is a lack of transparency from carriers regarding carbon emissions.

"There is a lack of good information. How do carriers compare with each other?" Ms Irigoyen said.

"Pushing towards greater transparency could make a really big difference — having systems in place where shippers are able to make more informed choices. Some of that is starting to come up in other segments, such as the Sea Cargo Charter in the bulk sector."

Doing something similar for the container shipping sector would be "complicated, but possible" and would allow shippers to make better-informed choices.

Ms Picini argues there are moves afoot already among the carrier community, such as the Clean Cargo Working Group, where lines agreed on the way they calculated emissions.

"It is very important, as it is where we are with shippers and some of the carriers — and shippers can express their concerns and what they would like to have," she said.

"We probably need to do more to align on that, but the working group is a good basis for these discussions and normally we have a common definition."

Nevertheless, many shippers still feel they lack the information required.

"For a lot of them, it feels very mysterious and a lot of the information that is out there has been described as garbage," Ms Irigoyen said.

"Is that a fair characterisation? Perhaps. What we will start seeing is the imposition of transparency on companies. There has got to be more transparency so shippers can compare apples to apples."

Some freight forwarders are already stepping forward and are becoming important players in this space.

Kuehne + Nagel's SeaExplorer, for example, gives specific CO2 emissions and ratings per routing on port pairs.

DHL Global Forwarding also provides a carbon dashboard that tracks data from DHL, as well as five other logistics service providers. The resulting transparency allows customers to benchmark and set targets as well as identify carbon contributors and develop reduction strategies.

Yet carriers, too, are starting to come to the party.

"We already feel pressure from large forwarders who have their own sustainability programmes," Mr Darr said.

"Quite honestly it is an enormous effort to keep up with that. Just because they've come up with some metrics, it doesn't mean they are compatible with our own, even if we're trying to do the same thing. There needs to be some standardisation and collaboration.

"The public and non-governmental organisations also want more transparency and we provide a carbon calculator, where our customers can get a calculation of what the estimated carbon emission will be on a particular container on a particular trade route. They can make their own choices based on that."

At CMA CGM, Ms Picini says it is possible to look at emissions from individual port pairings, but the finer granularity is more difficult.

"It is not possible to give calculations on a per-vessel level, but only on port pairings," she said.

The carrier does, however, provide "after the fact" reports to its customers and offers tailor-made reports with real figures.

"There are more and more requests for this," Ms Picini said.

Yet for Mr Hall at L'Oréal, it is no longer an option to simply rely on forwarders or other partners to self-report emissions.

"We have to own the data," he said. "Investment in systems that look at CO2 as being as important as miles, transit and cost, is key."

Pressure will continue to grow in this field, and carriers will need to do more to make visible the changes they are making with their sustainability goals, in the face of increasingly determined customers.

As Mr Hall puts it: "We have a considerable amount of influence and opportunity."

Black carbon offers shipping a chance to clean up the Arctic and its reputation

IN June 2019, Austin Ahmasuk, an indigenous Alaskan hunter, looked across from the shores of his Kawerak community on the Bering Strait and snapped a photo of an oil tanker on the horizon.

He later tracked the plume of smoke emanating from its exhaust for 17 km. He complained to authorities about the air pollution, but there was nothing they could do.

Tribal communities like Mr Ahmasuk's blame soot deposits from ship exhausts for health problems, declining fish and animal populations, and disrupted Arctic ecosystems.

Ships are increasingly common in the region as melting Arctic ice opens sea lanes. Their emissions contain black carbon, tiny unburned particles that can stay airborne for up to two weeks before settling like a grey blanket on the ice, making it warmer and less reflective.

Black carbon is a potent "climate forcer": its global warming potential can be up to 3,200 times as strong as CO2 over 20 years. Green groups say it is responsible for 7% of shipping's climate warming impact over 100 years — and 21% over 20 years.

Shipping emits just 2% of the black carbon in the Arctic, but this share is growing. Emissions from ships rose 85% in the Arctic from 2015 to 2019, according to the International Council on Clean Transportation.

Unlike CO2, it is short-lived in the atmosphere. However, environmentalists worry this means shipping's emissions are more damaging than those from other sources, since they float lower in the atmosphere and so are more likely to land on ice.

"What is emitted from shipping in the Arctic is almost certainly all going to stay in the Arctic, which means at least some of it is going to be deposited locally and then have an impact on warming," said Pam Pearson, a former US diplomat, now director of the International Cryosphere Climate Initiative.

Black carbon's warming effect is stronger in the Arctic than elsewhere, and shipping is emitting more of it, while other man-made sources decrease.

"Ships are really the only source of black carbon that are sometimes literally breaking through the ice and emitting black carbon at the same time," said ICCT marine programme lead Bryan Comer.

Dr Comer said added to this, 72% of the heavy fuel oil burned in the Arctic was from four-stroke engines, which emit more black carbon per unit of energy than the two-stroke engines that power bigger ships.

"The trend is the wrong way, both globally and in the Arctic," he said.

Non-governmental organisations want the International Maritime Organization to make ships in the Arctic switch from using residual fuels (high- and low-sulphur fuel oil) to distillates (marine gasoil and marine diesel oil) to reduce emissions.

Doing so would cut Arctic black carbon emissions by about 44%, they say, and boost confidence in the shipping industry's claim to be serious about its climate responsibilities.

The IMO has hosted talks on black carbon for more than a decade, so far to little result. NGOs say forcing a fuel switch would bypass the need to

develop standard black carbon measurements, potentially avoiding more years of talks.

There are other options to reduce emissions — avoiding using older, mechanical-injection engines in or near the Arctic, or switching to LNG-fuelled ships as Russia's state shipping company Sovcomflot is doing — but these are much costlier.

Environmentalists also dislike LNG engines because they emit unburned methane, a potent greenhouse gas.

Yet IMO regulation of black carbon is unlikely any time soon. Most states say more research is needed before rules can be set — though some, such as the International Bunker Industry Association, support a voluntary switch to distillates.

Clean Arctic Alliance lead adviser Sian Prior said reducing black carbon emissions would make a big and immediate difference to shipping's climate impact — and perhaps to its reputation.

Emissions could be cut further if ships used exhaust treatments such as particulate filters and electrostatic precipitators, she added.

"We could actually achieve something very quickly if we were to switch to lighter or cleaner forms of fuel, or even move away from fossil fuels altogether," she said.

Decarbonisation is shipping's thorniest problem. Shipping must replace the power source of its entire fleet with zero-carbon alternatives, which do not yet exist. The cost will be huge and the future uncertain.

By contrast, helping to fix black carbon in the short term boils down to the price difference between VLSFO and MGO — about $30 a tonne in Rotterdam on March 22.

"It's only really a problem for whoever's footing the fuel bill. And if everybody's playing by the same rules, then you're actually not at a disadvantage anyway," Dr Comer said.

Eventually a global black carbon regulation will be needed, maybe in the form of an engine standard. That means first agreeing on how to sample and measure it — a process that could take years because of the variety of fuels and engines used in the maritime industry.

Black carbon emissions vary widely by engine and fuel types, as well as factors like engine load and condition. Newer engines are much cleaner than older ones, and there are signs that VLSFO emits less black carbon than HSFO because it burns better.

BIMCO, the biggest shipping association, said it supports black carbon reduction, but new measures should be introduced in a "practicable manner".

"At this point, we believe more work is needed before the IMO can make the most practical and fact-based decisions," said deputy secretary-general Lars Robert Pedersen.

He said switching to distillates for all ships operating in the Arctic was not straightforward.

BIMCO and other industry groups have also disputed some IMO black carbon studies, saying they relied on unrepresentative fuel samples and engine types, and so risked overstating emissions.

Mr Pedersen added that the IMO had already agreed a ban on the use of heavy fuel oil in Arctic waters from July 1, 2024. This would force many ships to use distillate fuels.

However, that long-awaited ban was defanged when Russia — by far the biggest HFO user and emitter — won a waiver until 2029 for Arctic-flagged ships and those with protected fuel tanks.

Dr Comer said with its various exemptions, the ban stops only 16% of HFO use and reduces black carbon emissions by 5%.

Russia opposed the ban on economic grounds, arguing it would increase the cost burden for ships serving 35,000 km of its Arctic coastline.

On March 26, Russia told the IMO shipping was responsible for a "very small share" of overall emissions. It said controls should be based on reliable measurements and consider economic costs.

"We do not see the grounds at the moment to develop any mandatory regulatory measures," Russia said.

NGOs' calls for a mandatory switch to distillates got nowhere at the IMO pollution subcommittee meeting on March 26, as countries opted instead for further talks.

Most countries supported a proposal to work on "goal-based guidelines", with France warning "there

are no simple solutions" and "making a choice today may mean we make the wrong decision".

Sweden and the Solomon Islands said mandatory cuts should be discussed as soon as possible, while other countries voiced unease that the IMO had been so slow to discuss the problem. The Clean Arctic Alliance was left "utterly shocked and bitterly disappointed" at the result, Dr Prior said later.

The political discussion continues at the IMO's Marine Environment Protection Committee in June. Until then, NGOs hope ships will make the voluntary switch to distillates.

Mr Ahmasuk said black carbon was a global problem and there were many aspects to be managed.

However, he said cutting emissions could buy more time "to protect Arctic indigenous people... and Arctic ecosystems from the impact of melting".

MARKETS:

CMA CGM close to ordering 12 dual-fuel neo-panamaxes

CMA CGM is believed to be close to finalising orders for 12 dual-fuel neo-panamax containerships as the French carrier plans a continued increase in the proportion of its fleet that is powered by cleaner energy.

The company has signed letters of intent with two Chinese yards, Hudong-Zhonghua-Shipbuilding and Jiangnan Shipyard, according to sources familiar with the matter.

Formal contracts for the deals, which include a trio of firm ship orders plus options for another three for each yard, are expected to be signed in April.

CMA CGM is still weighing options for the size of the vessels that can be fuelled by liquefied natural gas, between 13,000 teu and 15,000 teu — vessels of the smaller size being more flexible for port calls.

A spokesman for the Marseilles-headquartered shipping line said: "We are not commenting on market rumours."

A dual-fuel 15,000 teu ship was now priced in the region of $145m-$150m in China — about $10m-$15m higher than previous levels — due to a ramp-up in shipbuilding costs, including more expensive ship plates, said a shipyard expert.

Braemar said in a recent report that newbuilding prices at yards had been rising on the increased enquiry and steel price rises.

"With forward delivery positions almost three years forward we expected new enquiries coming in mainly from containerships and [liquefied natural gas carriers]," said the broker.

Should the orders be finalised on schedule, delivery time is estimated for the second half of 2023.

The yard expert said there were limited available building slots left at Hudong-Zhonghua and Jiangnan — both of which come under the umbrella of China State Shipbuilding Corp — for large dual-fuel boxships. As a result, capacity will be allocated on a first-come, first-served basis.

CMA CGM is forming a sizeable fleet of LNG-fuelled ships mainly on Asia-Europe and transpacific trades via ordering or chartering in newbuildings.

The company currently has two 15,000 teu ships of such type in service, with 16 more of the same size on order, according to estimates from consultancy Linerlytica.

It has also ordered nine dual-fuel 23,000 teu vessels, of which six have been delivered.

Cosco sees long-term box shipping contract as strategic move

COSCO Shipping Holdings, controller of the world's third-largest boxship fleet, is making "better-than-expected" progress on transpacific contract negotiations as pandemic-led disruption has prompted shippers to demand long-term commitment.

Compared to past trends, agreements have been reached faster in 2021 at more reasonable prices, the company's president Yang Zhijian told investors.

"We are very confident about this year's contract signing [prospects]," Mr Yang said.

The annual negotiations between carriers and shippers on transpacific trade normally start early in the year and progress through to May.

Contract rates for both large and smaller clients have improved "considerably," which will have a large contribution on the revenue side, according to vice-president Chen Shuai.

He declined to elaborate on the level of the mark-ups but said cargo owners were now willing to pay more for a secured shipping service against the backdrop of the coronavirus crisis, which has led to a severe shortage of carrying capacity in the market.

Smaller rival Zim earlier said transpacific contract rates were running 50% higher this time than last year.

Mr Yang also revealed that the state-owned giant had signed long-term contracts of about three years with several Chinese major producers of household appliances, including Midea, Haier and TCL.

"The long-term contracts, not only on transpacific trade but also on other routes, would be a strategic direction for us," he said. "It is a very useful way to stabilise the logistics chain."

Cosco Shipping Holdings, the Shanghai-and Hong Kong-listed containership and port unit of state conglomerate China Cosco Shipping Corp, reported a 47% increase in net profit to Yuan9.9bn ($1.5bn) for 2020 amid a boom in freight markets during the second half.

Rates fell back, albeit mildly, following the Chinese New Year and has stabilised since late March, said Mr Chen, who was "cautiously optimistic" about the markets in the second and third quarters of 2021.

He said it was unlikely there would be another surge in rates as the lockdown-led logistics bottleneck is easing. However, rates are still expected to fluctuate at high levels.

The management also said the company had no plan yet for mergers and acquisitions, despite sitting on more Yuan52bn of cash reserves at end-2020. The investment will focus on the purchase of vessels and containers as well as the development of digital technologies.

CSH is believed to be considering orders for 10 dual-fuel 15,000 teu containerships through its Orient Overseas International unit, although the newbuilding project is pending board approval before it can be finalised.

Green ammonia will be cost effective by 2050: DNV

GREEN ammonia is gaining traction as a next-generation fuel within the shipping community because it is deemed to be another cost-effective alternative in efforts to comply with tightening regulations over greenhouse gas emissions.

Pierre C Sames, senior vice-president at classification society DNV, flagged potential cost savings of above 60% from the marine use of green ammonia over other synthetic liquid fuels.

Green ammonia would cost between $40-$50 for each gigajoule of energy produced by 2025, Mr Sames noted, referencing projections from DNV and the International Energy Agency.

That compares favourably with the projected costs for synthetic methane and other liquefied fuels, which, respectively, came in at over $70 and more than $80 per gigajoule.

Cost differentials will narrow in the longer term but green ammonia will retain the lead through to 2050, DNV and IEA data showed.

Mr Sames told a webinar discussion that marine use of green ammonia could well beat running ships on a cleaner burning fossil fuel once the market at large starts to embrace carbon taxes.

The price of green ammonia is expected to halve to $850 per tonne equivalent to marine gas oil by 2050, benefiting from a reduction in the cost of producing hydrogen from using electricity generated by renewable energy.

On the other hand, the overall per tonne price of marine gas oil with the carbon price built in is projected to exceed $1,000, up from just under $800, in the next five years.

The class society assumed a per tonne carbon price of $100 by 2050, up from $60 by 2025, in arriving at the marine gas oil cost projections.

The data appeared to back the feasibility of building or modifying ships to burn green ammonia, which is also deemed to be relatively less complex to handle and more available than other future fuel alternatives, according to Mr Sames.

Unlike the case for liquefied natural gas or hydrogen, the storage of liquid ammonia onboard vessels does not demand the use of expensive, cryogenic tanks.

Ammonia is also produced from combining hydrogen with nitrogen, which is far more abundant as an atmospheric gas compared to sequestered carbon dioxide needed to pump out green methanol.

OTHER NEWS:

Problem of leaking hatch covers add to cargo loss claims

LEAKING hatch covers have been responsible for an overwhelming number of cargo losses or damage claims from bulkers, according to Brittania P&I.

Other issues include water ingress from the bilge or ballast system, too much ballast remaining on board, and loose rust contaminating the cargo.

Hatch covers should be properly tightened to be able to withstand any type of sea condition.

PIL completes restructuring after Heliconia lifeline

PACIFIC International Lines, the Singapore-based boxship owner-operator, has completed a debt restructuring.

Under the arrangement, the company will get a debt and equity injection amounting to $600m from Temasek-invested Heliconia Capital, which becomes the largest shareholder.

Heliconia has subscribed to $200m of convertible preference shares issued by PIL's holding company, in addition to extending a $200m loan and a revolving credit facility of $200m, according to a statement released by the shipping line.

Grindrod offloads last three spot tankers in pivot to dry bulk

GRINDROD Shipping Holdings, the Nasdaq-listed bulker and tanker operator, has sold three tankers for a total $49.6m as it pivots to dry bulk.

It sold the 2013-built medium range product tankers *Leopard Moon* (IMO:9635755) and *Leopard Sun* (IMO: 9635781) for $21.4m each. They are set for delivery to an unidentified buyer by April 30.

Grindrod also sold the 2009-built, 16,922-dwt small tanker *Breede* (IMO: 9382487) for $6.8m in a separate transaction. It said it would use the proceeds to repay $25.8m in senior secured debt.

Shipping faces queues at Australian port due to bad weather

SHIPPING delays are being reported off the Australian port of Newcastle, with bad weather leading to the longest queues since last November.

Bulk carrier queues increased to 41 vessels in port of Newcastle, up from 40 the week before, according to Lloyd's List Intelligence vessel tracking data.

"In my experience, temporary weather of this nature has its biggest impact in the short term, although it's too soon to say for certain how much damage has been done to the rail and port infrastructure," said Felipe Simian, chief executive of the Chile-based dry bulk operator Nachipa.

Lloyd's predicts continuing hardening for marine after best result in years

MARINE, aviation and transport lines at Lloyd's clocked up their best result in years, with a return to both underwriting profit and a combined ratio below 100%, the insurance market revealed in its annual results.

The outcome is in marked contrast to the numbers for Lloyd's as a whole, which had a pre-tax loss of £900m ($1.24bn) for 2020, down from the £2.5bn profit in 2019, with natural catastrophes, Brexit and the pandemic all contributory factors.

However, it already looks clear that reinsurance will take a sizeable hit from last week's closure of the Suez Canal.

US names Maffei as chairman of FMC

US PRESIDENT Joe Biden has appointed Daniel Maffei as the new chairman of the Federal Maritime Commission, according to a statement.

Mr Maffei's appointment comes just days ahead of the president's

planned unveiling of proposed legislation that would fund a major programme of infrastructure development in the United States.

Mr Maffei, who replaces Michael Khouri, can play a key role in ensuring that the US maritime industry receives its full share of attention in the apportioning of funding in that new programme, estimated at up to $4trn.

Maersk unveils new Asia service via Panama to US east coast

MAERSK North America has announced the start of a new service from May — the TP23 — linking ports in Vietnam and China with the US east coast via the Panama Canal.

"Importers are looking for more US east coast gateways in their Asia-North America supply chains, while exporters are looking for more equipment — especially in the southeast US region," said managing director Narin Phol. "The TP23 service will enable us to address these needs while integrating our warehousing and distribution network."

The TP23 string will include eight Maersk vessels and two from Zim.

Classified notices follow

OIKOS STORAGE LTD

OIKOS MARINE & SOUTH SIDE DEVELOPMENT

SECTION 48 OF THE PLANNING ACT 2008

REGULATION 4 OF THE INFRASTRUCTURE PLANNING (APPLICATIONS: PRESCRIBED FORMS AND PROCEDURE) REGULATIONS 2009

NOTICE PUBLICISING A PROPOSED APPLICATION FOR A DEVELOPMENT CONSENT ORDER

Notice is hereby given that **OIKOS STORAGE LIMITED** ("Oikos") of **HOLE HAVEN WHARF, HAVEN ROAD, CANVEY ISLAND, ESSEX, SS8 ONR** intends to make an application to the Secretary of State for Transport under section 37 of the Planning Act 2008 ("the 2008 Act") for a Development Consent Order ("DCO") to redevelop part of its Canvey Island bulk liquid storage facility. If constructed, the development, known as the Oikos Marine & South Side Development ("OMSSD"), will be located within the administrative boundaries of Castle Point Borough Council and Essex County Council.

The proposed development consists of:

- The installation of additional marine loading and unloading infrastructure on two of the facility's existing jetties;
- The construction of new bulk liquid storage tanks within the southern part of the facility nearest to the river;
- A capital dredge;
- Additional road loading facilities; together with
- Related works including:
  - New operational infrastructure;
  - A new workshop;
  - An office extension;
  - On-site landscaping;
  - Off-site ecological improvements; and
  - Increased parking within the facility.

The OMSSD project constitutes an Environmental Impact Assessment "EIA" development for the purposes of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Oikos is, therefore, required to undertake an Environmental Impact Assessment and will be submitting an Environmental Statement as part of its application for a DCO.

A Preliminary Environmental Information Report ("PEIR") has been prepared on a topic by topic basis which considers the likely impact of the OMSSD project during both construction and operation. The PEIR and related consultation documents will be available to view and download from **Tuesday 6th April 2021** on the OMSSD consultation website at: www.oikos.co.uk/omssd/consultation. It is anticipated that the DCO application will submitted later this year.

In accordance with the 2008 Act, Oikos is running a formal consultation on the OMSSD project between **Tuesday 6th April and 11:59pm on Tuesday 18th May 2021.**

Due to Covid-19 restrictions, the consultation will be held 'virtually' using an online virtual exhibition room which can be accessed from **Tuesday 6th April 2021** via www.consultationspace.com/Oikos-OMSSD. We will also be holding four online webinars including Q&A sessions during the consultation period, as follows:

APRIL	Date	Time
	Monday 26th April	11 am – 2 pm
	Thursday 29th April	9 am – 1 pm

MAY	Date	Time
	Tuesday 4th May	6 pm – 9 pm
	Saturday 8th May	8 am – 11 am

To register to attend any of the above sessions please visit www.oikos.co.uk/omssd/consultation.

If you have questions about the OMSSD including the consultation process or wish to request copies of the consultation documents please contact us by email:oikos@communityrelations.co.uk or by calling us on Freephone: **0800 206 2583.**

All of the consultation documents, plans and maps showing the nature and location of the proposed OMSSD and a feedback questionnaire will be available to view and download free of charge from **Tuesday 6th April 2021** via the OMSSD website at: www.oikos.co.uk/omssd/consultation.

All the documents will be made available for inspection **until 11:59pm on Tuesday 18th May 2021.** Printed copies of all of the documents and consultation materials can be provided on request using the contact details below or by calling us on Freephone: **0800 206 2583**. Please note there may be a reasonable copying charge for certain documents of up to £300.

You can submit your views on the OMSSD project by:

- Completing the online feedback questionnaire at: www.oikos.co.uk/omssd/consultation or www.consultationspace.com/Oikos-OMSSD
- Emailing us at: oikos@communityrelations.co.uk
- Writing to us at the following address: **OIKOS FREEPOST** *(please note this must be written in capitals and no stamp is required)*
- Requesting a hard copy of the feedback questionnaire to be sent to you in the post, and returning it via freepost to: **OIKOS FREEPOST** *(must be written in capitals and no stamp is required)*

All responses must be received by us in writing **before 11.59pm on Tuesday 18th May 2021**. Responses received after that time may not be considered.

More information about the OMSSD project and the consultation can be found at: **www.oikos.co.uk/omssd**

THE KEADBY 3 LOW CARBON GAS POWER STATION PROJECT

The Planning Act 2008 - Section 48 'Duty to publicise'

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 4 (as amended)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 - Regulation 13

Notice of Proposed Application for a Development Consent Order for the Keadby 3 Low Carbon Gas Power Station Project

1. Notice is hereby given that Keadby Generation Limited (the 'Applicant'), whose registered office is Keadby Power Station, Trentside, Keadby, Scunthorpe, United Kingdom, DN17 3EF, intends to submit an application (the 'Proposed Application') to the Secretary of State for Business, Energy and Industrial Strategy (the 'SoS') for a Development Consent Order ('DCO') under Section 37 'Applications for orders granting development consent' of the Planning Act 2008 (the 'PA 2008'), to authorise the construction, operation and maintenance of a low carbon Combined Cycle Gas Turbine (CCGT) power station with a capacity of up to 910 megawatts electrical ('MWe') gross output and associated development (together the 'Keadby 3 Low Carbon Gas Power Station Project' or 'the Project').

2. The land required for the Keadby 3 Low Carbon Gas Power Station Project (the 'Project Site') comprises land at and in the vicinity of the existing Keadby power stations (Keadby 1 and Keadby 2) near Scunthorpe in North Lincolnshire, at grid reference 482351 411796. In total the Project Site extends to approximately 79.7 hectares ('ha').

3. The Project Site also includes space required for water, gas and electrical connection corridors, waterborne transport off-loading area, construction laydown areas and land at Keadby 1 and Keadby 2 to utilise existing connections and other associated infrastructure.

4. The Project will comprise a low carbon gas fired power station with a gross electrical output capacity of up to 910MWe and associated buildings, structures, works and plant, including:

- a carbon capture enabled electricity generating station including a CCGT plant with integrated cooling infrastructure, and carbon dioxide capture plant (CCP) including conditioning compression equipment, carbon dioxide absorption unit(s) and stack(s), and associated utilities, various pipework, water treatment plant, wastewater treatment, firefighting equipment, emergency diesel generator, control room, workshops, stores and gatehouse, chemical storage facilities, other minor infrastructure and auxiliaries/ services, and natural gas receiving facility (all located in the **Proposed Power and Carbon Capture (PCC) Site**);
- natural gas pipeline from the existing National Grid Gas high pressure (HP) gas pipeline within the Proposed Development Site to supply the Proposed PCC Site including an above ground installation (AGI) for both National Grid Gas's apparatus and the Applicant's (**Gas Connection Corridor**);
- electrical connection works to and from the existing National Grid 400kV Substation (**Electrical Connection Area to National Grid 400kV Substation)** for export of electricity;
- electrical connection works to and from the existing Northern Powergrid 132kV Substation (**Potential Electrical Connection to Northern Powergrid 132kV Substation**) for supply of electricity at up to 132kV to the Proposed PCC Site during start-up, and associated plant and equipment;
- Water Connection Corridors to provide cooling and make-up water including:

  - underground and/ or overground water supply pipeline(s) and intake and outfall structures within the Stainforth and Keadby Canal (**Canal Water Abstraction Option)**;
  - In the event that the canal abstraction option is not available, works to the existing Keadby 1 power station cooling water supply pipelines and intake structures within the River Trent, including temporary cofferdam (**River Water Abstraction Option**);
  - Works to and use of an existing outfall and associated pipework for the discharge of return cooling water and treated wastewater to the River Trent (**Water Discharge Corridor**);
- towns water connection pipeline from existing water supply within the Keadby Power Station for potable water;
- Above ground carbon dioxide export infrastructure comprising:
  - compressor station; and
  - National Grid above ground infrastructure compound;
- **New permanent access from A18**, comprising the maintenance and improvement of an existing private access road from the junction with the A18 including the replacement of a private bridge and installation of a layby and gatehouse, and an **emergency vehicle access road** comprising the maintenance and improvement of an existing private track running between the Low Carbon Gas Power Station and Chapel Lane, Keadby and including new private bridge;
- temporary construction and laydown areas including contractor facilities and parking;
- temporary retention, improvement and subsequent removal of an existing **Waterborne Transport Offloading Area** and an **Additional Abnormal Indivisible Load Route**;
- landscaping and biodiversity enhancement measures and security fencing and boundary treatment
- associated development including:
  - surface water drainage systems;
  - pipeline and cable connections between parts of the site;
  - hard standings and hard landscaping;
  - soft landscaping, including bunds and embankments;
  - external lighting, including lighting columns;
  - gatehouses and weighbridges;
  - closed circuit television cameras and columns and other security measures;
  - site preparation works including clearance, earthworks, works to protect buildings and land, and utility connections;
  - accesses, roads, roadways and vehicle and cycle parking;
  - pedestrian and cycle routes; and
  - permanent laydown and turnaround areas for maintenance.

5. The DCO will also seek, if required, the compulsory acquisition of land and/or rights in, on, under or over land required for the Project and the temporary occupation of land for the Project.

6. Other powers that the DCO would seek, if required, include the extinguishment and/or overriding of easements and other rights over or affecting land required for the Project; the application and/or disapplication of legislation relevant to the Project; tree and hedgerow removal; the temporary stopping up or diversion of public rights of way during construction works; the permanent and temporary

alterations to the highway network for and in the vicinity of the Project Site, and such ancillary, incidental and consequential works, provisions, permits, consents, waivers or releases as are necessary and convenient for the successful construction, operation and maintenance of the Project.

7. The Applicant has notified the SoS in writing under Regulation 8(1)(b) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') that it intends to provide an Environmental Statement ('ES') in respect of the Project. The Project is therefore 'EIA development' for the purposes of the EIA Regulations and an ES will form part of the Proposed Application.

8. Documents relating to the Project, including a Preliminary Environmental Information Report (PEIR") and an addendum document describing changes made to the Project since the issue of the PEIR in November 2020 ('Preliminary Information Report Addendum') together with plans and maps showing the nature and location of the Project (together 'the Consultation Documents'), are available to view or download free of charge from https://www.ssethermal.com/keadby3 (the 'Project Website') from Wednesday 24th March 2021 to Saturday 1st May 2021. This comprises a single website page, and the Consultation Documents will be labelled "Publicity of Draft Application".

9. Alternatively please telephone: Freephone 0800 211 8194 (24hr voicemail service) or email: consultation@keadby3.co.uk. Any details you provide to us will be subject to our Privacy Notice at the Project Website. You will be offered a paper copy of the Consultation Documents free of charge (with the exception of the full PEIR which will be charged at a maximum of £200) or a USB stick containing the Consultation Documents which will be supplied and posted to you free of charge; please allow a week for receipt of documents via this method.

10. Due to the ongoing national restrictions to limit the spread of coronavirus we are not depositing copies of the Consultation Documents at any local public venues (such as libraries and community centres) and this approach is consistent with recent modifications made to Regulation 4 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.

11. Since the Section 48 notice in November 2020 SSE plc as the parent company of the then applicant, SSE Generation Limited, has carried out an internal restructuring and the application will be made by Keadby Generation Limited a wholly owned subsidiary of SSE plc.

Responding to this notice

12. If you wish to respond to this notice or make comments or representations in respect of the Project, these should be sent to the Applicant. Please include your name and an address where any correspondence relating to the Project can be sent. Comments and representations may be submitted in the following ways:

Email: **consultation@keadby3.co.uk**

Post: **FREEPOST KEADBY 3 (Please include your name and a postal or e-mail address)**

Telephone: **Freephone 0800 211 8194. This is a voicemail based service and can be called 24hrs. Please leave your name and a telephone number.**

13. It is not necessary to re-submit comments previously submitted to SSE Generation Limited in response to the Section 48 Notices published in November 2020 in relation to the Project, since these have been and will be considered by the Applicant. Any comments received will be analysed by the Applicant and any appointed agent of the Applicant, and copies may be made available in due course to the SoS, the Planning Inspectorate and other relevant statutory authorities so that regard can be had to your comments. For certain parties, those who own an interest in land or are affected by the Project, the Applicant is under a statutory duty to publish names and addresses as part of its DCO application. In respect of other people we will request that your personal details are not placed on public record and

these will be held securely by the Applicant in accordance with the Data Protection Act 1998 and the General Data Protection Regulation and used solely in connection with the consultation process and subsequent DCO application and, except as noted above, will not be passed to third parties. Please refer to our Privacy Notice at the Project Website.

14. Please note that all comments and representations must be received by the Applicant **no later than Saturday 1 May 2021.**

15. If you would like any further information in respect of this notice or the Project, please contact the Applicant using one of the contact methods set out above.

Keadby Generation Limited

March 2021