

Newsletter

May 31st 2019

Link road, rail, sea!

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The content of the C.I.S.Co. Newsletter is also published in the newspaper "Informare" accessible on the Internet site <http://www.informare.it>

PORTS AND TERMINALS

GLOOMIER PICTURE FOR GLOBAL CONTAINER PORT THROUGHPUT AS TARIFF WARS BEGIN TO BITE

Alphaliner has slashed its global container throughput growth estimate for this year to just 2.5% from 3.6%.

A weak first quarter and expected headwinds from the US-China trade war are taking their toll, said the consultant.

The downgraded growth prediction is edging closer to the negative view of expansion expressed by Maersk Line, which shocked investors with its downbeat forecast in February of just 1-3% growth this year.

According to data from over 250 global ports surveyed by the consultant, the average growth in the first three months of the year reached only 2.8%, compared with the same period last year.

Alphaliner also noted that the rate of growth was "unevenly spread between regions".

"Several emerging markets have posted negative cargo volume growth and thus pulled down the global growth rate," it said.

Middle East ports performed the worst, with their volumes shrinking by a substantial 10.1% versus Q1 2018.

African and Oceania volumes fell by 4.4% and 1.1% respectively, with the former being dragged down by a sharp 16% drop in volume at South African ports.

Oceania throughput was impacted by negative volume growth at the Australian ports of Melbourne, Sydney, Brisbane and Fremantle.

However, the two biggest trades, Asia-North Europe and the transpacific, reported more robust growth of 3.5% and 4.8%, respectively.

In regard to the trade war between the US and China, which has seen tariffs on a range of Chinese imports raised from 10% to 25% on 15 May, followed by a 'tweeted' threat of tariffs on some \$325bn of additional goods on 1 June, Alphaliner expects throughput volumes to be further hit.

It said: "The escalation of the trade war between China and the US is expected to bring down container volume growth rates in both countries over the coming quarters."

The consultant noted that transpacific spot rates between Asia and the US west



coast had fallen by 15% in the last two weeks and that the Ocean Alliance group of carriers had announced two blank sailings next month in an anticipation of a decline in volumes.

Nevertheless, April US box terminal throughput data compiled by New York City-based consultant Blue Alpha

Capital suggests the impact of the tariff hike, and the potential new duty on other Chinese imports, has been slow to deflate imports.

It reported a 6.6% year-on-year growth in imports during April, up from the 4.7% gain in the previous month.

This was supported by Japanese merged ocean carrier ONE, which published its April liftings today, recording a healthy transpacific headhaul volume of 211,000 teu and a load factor of 86%.

A year ago, after the botched merger on 1 April of the container businesses of K Line, MOL and NYK, ONE's liftings on the same route for the month came in at a disastrous 94,000 teu, and a lowly utilisation level of 70%.

The numbers suggest that the carrier has been successful in recovering much of its customer base over the past year.

(from: theloadstar.com, March 22nd 2019)

MARITIME TRANSPORT

FIVE MORE LINES JOIN DIGITAL CONTAINER SHIPPING ASSOCIATION

Momentum is building for digitalization and standardization within the container shipping industry, with five more major box lines announcing their intention to join the Digital Container Shipping Association (DCSA).

CMA CGM confirmed its status as a “founding member” of DCSA, hence gaining a seat on the Supervisory Board of the non-profit association, which was established April 2019 in Amsterdam, The Netherlands.

Evergreen Line, Hyundai Merchant Marine, Yang Ming Marine Transport Corporation and ZIM Integrated Shipping Services announced that they are to join DCSA as members, pending regulatory approval.

The five carriers join the association’s initial members A.P. Moller-Maersk, Hapag-Lloyd, MSC and ONE.

Once regulatory approval has been gained, the members will represent 70% of the market, DCSA said, adding: “With nine of the largest container shipping lines in the world, both from Asia and EMEA, the Digital Container Shipping Association represents a substantial part of the industry.”

The association, which says its purpose is “to pave the way for digitalization and standardization in the container shipping industry”, stressed that all ocean carriers are invited to join, “and close collaboration with the entire industry is expected”.

Thomas Bagge, CEO of DCSA, commented: “We are thrilled to have additional members joining the DCSA on our journey to drive standardization and interoperability in the industry, with CMA CGM joining as a founding member.

It is critical for our success that the standards developed will be implemented, and the commitment and engagement of many container shipping lines is therefore crucial.”

Rajesh Krishnamurthy, Executive Vice President IT & Transformations at CMA CGM, commented: “CMA CGM is always looking for best practices and standards to support the innovation and digital strategy of the company.

Being a founding member will enable us to work together on setting the standards for digitization of the entire industry.”

Kay Fang, Executive Vice President of International Customer Service of Evergreen Line, said: “In keeping up with industry trend toward digitalization, Evergreen has been pursuing to offer customers ever-productive and ever-efficient service.

In a more and more connected shipping supply chain, we are convinced that standardization is the prerequisite for all associated stakeholders to realizing effective digitalization and interoperability, which are urgently needed not only by us but the whole industry to help carry out the joint pursuit.”



Kyungin Jung, Senior Vice President, CIO of Hyundai Merchant Marine, said: “Digitization is not only right but also the only path to follow for all of the stakeholders in the shipping industry.

Hyundai Merchant Marine will cooperate with colleague liners very closely to find out the best route for greeting the upcoming digital era.

We strongly believe in that the collective intelligence makes the better outcomes.”

Steven Tsao, CIO of Yang Ming Marine Transport Corporation, commented: “As we can see, digitalization driven by innovation and technology is one of the main future trends in the shipping industry, with many major parties involved in the process.

We are glad to become a member of DCSA, as it is important for us to develop the relevant standards, processes and data flow for digital transformations.

We believe this will significantly improve the efficiency of the transportation process and increase customer satisfaction.”

Eyal Ben-Amram, Executive Vice President, CIO of ZIM Integrated Shipping Services, said: “We are excited to join DCSA and to contribute to the digital transformation.

We firmly believe that digital innovation will shape the future of the shipping industry, and our multiservice approach embodies this belief.

Standardization is the right way to improve the eco-system of all stakeholders.”

DCSA also announced that Henning Schleyerbach will become COO as of 1 July.

Schleyerbach comes from a position as Senior Director Customer Relationship Management at Hapag-Lloyd, "and will together with CEO Thomas Bagge form the leadership team of DCSA, working on the development of standards for the industry".

André Simha, chairman of the Supervisory Board, said: "We are pleased to announce, that in Henning Schleyerbach we have won another strong industry profile, who as COO will drive DCSA's operational activities.

With Henning Schleyerbach and Thomas Bagge, DCSA has a strong leadership team in place which is supported by all founding members and represents container shipping at its best across all aspects."

(from: lloydsloadinglist.com, May 20th 2019)

RAIL TRANSPORT

SBB CARGO PIONEERS AUTOMATIC COUPLERS

Swiss rail freight company SBB Cargo has initiated a pilot automatic coupling process for locomotives and rolling stock, which the company says is potentially the first step towards automation of last mile operation.

The company has equipped around 100 freight wagons and 25 locomotives with automatic couplers over the past year.

The fleet entered regular service at the beginning of May on combined transport routes carrying containers between the hub at Dottikon and terminals in Dietikon, Oensingen, Renens, Cadenazzo and Lugano Vedeggio as well as to Biasca and Mendrisio.

The new automatic couplers installed for the pilot are helping to accelerate and improve the safety of shunting.



Wagons and locomotives are automatically coupled together without risk of injury to shunting workers, and to separate the wagons, only a single operation is needed, eliminating time-consuming, labour and cost-intensive work.

The cost of converting the rolling stock is around SFr 15m (\$US 14.9m), with the Swiss federal government contributing about SFr 9m.

This subsidy is granted under the Goods Carriage Act for giving financial support for innovations in rail freight traffic to promote sustainable development.

Mr Peter Füglistaler, director of the Federal Office of Transport (FOT), praised SBB Cargo's pioneering spirit at a press conference on May 14, but pointed out that this innovation drive can only achieve its full effect if other stakeholders such as private wagon owners also take part.

"This is essential if rail freight traffic is to be able to meet the increasing requirements of the freight industry and logistics," Füglistaler says.

Automatic braking

SBB Cargo is also working to develop automatic braking technology, which has been installed on the wagons fitted with the automatic coupler.

Partners here include Voith, PJM and VTG and two rail freight operators, Rail Cargo Austria and Mercitalia.

The manual brake test takes a 500-metre-long train up to 40 minutes today, while the automated test takes just 10 minutes.

Intensive testing will take place over the next year and the technology is expected to enter operation in spring 2020.

SBB Cargo is also testing a collision warning system on shunting locomotives using a remote-control system with visual and acoustic signals.

Mr Nicholas Perrin, CEO of SBB Cargo, emphasised that the company is looking to find solutions not only in Switzerland but on a European scale in order to meet the demands of the changing logistics market.

He says SBB Cargo is aiming to play a pioneering role in modernisation, which is urgently needed in the face of the competition from road transport.

Automatic coupling can also tackle upcoming problems with a shortage of skilled shunting staff – just one staff member is required instead of two – with many workers due to retire in the next few years and few candidates to fill vacancies.

(from: railjournal.com, May 16th 2019)

ROAD TRANSPORT

EUROPEAN ROAD FREIGHT FACING 'STRUCTURAL' DRIVER AND EMISSIONS CHALLENGES

The European truck driver shortage is prompting one leading operator to trial new personnel recruitment and retention methods.

However, with driver shortages set to worsen in the years ahead due to European demographics, Uwe Brinks, CEO of DHL Freight, told Lloyd's Loading List the only long-term answers to the continent's road freight structural challenge lie in technological innovation.

According to Brinks, the road freight business in Europe is currently facing two major challenges that will shape the sector in the coming years.

"First, we are experiencing a significant driver shortage in Germany and other European countries," he said.

"Second, the transport sector is facing ever stricter regulations on emissions at the national and European levels.

Thus, the industry has to find answers to two crucial questions: who is going to drive the trucks in the future, and what kind of trucks will be driven?"

DHL mainly suffers driver shortages on the first-mile and last-mile delivery legs, so this is where recruitment innovation efforts have so far been focused.

Last summer, trials in Germany to make driving more appealing were started which, if successful, will lead to 500 new jobs across Europe.

"We at DHL Freight have developed a modified job profile offering more varied work," said Brinks.

"The new employees take on driving duties to complement existing transport capacities and, if necessary, also take on other tasks at the branches.

Particularly during the peak season, they will be out on the road covering the first-mile and last-mile legs of deliveries for their particular branches.

During quieter periods, they will be employed in the transshipment warehouse."

DHL hopes the modified job profile will help address the image problem driver recruiters face, while also making the position more attractive by enabling the driver to return home to his or her family every night.

"This model is primarily designed for short distances, where we mostly experience the driver shortage," he said.

"We must make the profession more attractive and respected again for young people."

Brinks said DHL is also striving to attract more women to the profession and admitted that better pay industry-wide would also help.

"In the end, only the entire industry can solve this situation," he said.

"That's why I said from the start that DHL Freight is open for any kind of industry cooperation."



DHL is also investing in alternative haulage options for short- and long-distance transportation as part of Deutsche Post DHL Group's target to reduce all logistics-related emissions to net zero by 2050.

"We have recently deployed one of the very first liquefied natural gas or LNG-powered Iveco Stralis long-haul trucks capable of towing a mega trailer," said Brinks.

"During a year-long trial period, the truck will operate as a daily shuttle between DHL's logistics centre and a BMW Group production plant in southern Germany.

We have already gained initial experience with LNG trucks in Belgium.

Since summer 2018, four of these heavy-duty, long-haul trucks have been part of a sustainable transport solution for one of the world's largest developers and sellers of athletic footwear and sportswear."

Brinks also said that autonomous driving as a supportive add-on for drivers would help ease their daily routines.

"Autonomous driving will not displace the driver — at least not in the road freight sector," he added.

“The job is still very manual and what is even more important, our drivers are the face of our company for our customers.

Any company considering replacing a driver with an autonomous truck should also realize that this means giving up a very important part of the customer relationship.”

Instead, he said there were now many assistive technologies for modern trucks available which would help improve the job’s attractiveness and improve overall capacity.

“But the deployment of new and innovative technologies comes always along with additional costs,” he added.

“This is sometimes contradicted by the price customers are willing to pay for logistics and transport solutions.”

(from: lloydsloadinglist.com, May 17th 2019)

INTERMODAL TRANSPORT

UIRR: 2018 -A DECISIVE YEAR FOR COMBINED TRANSPORT

The intermodal performance statistics collected by UIRR, from 39 members across 18 European countries, reflect a decisive performance in terms of number of consignments transported using Combined Transport.

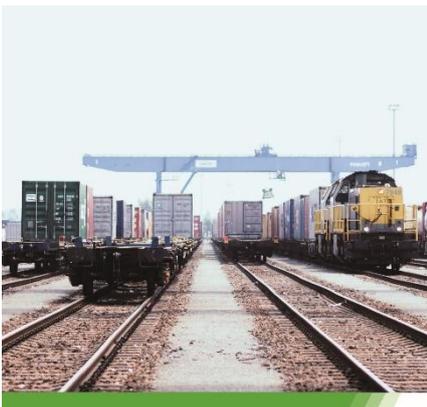
They reached a historic high of 8.6 million TEU (or 4.3 million UIRR consignments) in 2018.

This constituted almost a 5% increase compared to the year before.

The growth was partly attributable to one-off sectoral consolidation and partly to organic growth of the members.

The UIRR Report 2018-19, adopted during the General Assembly of 16 May 2019, provides the details of how European Combined Transport performed in 2018, of what the challenges have been, as well as what the factors that will determine the coming years are.

Combined Transport is best positioned to fill environmentally sustainable (electric-powered) freight trains by shifting to the rail the cargo presently carried in long-distance trucks.



However, this potential will not be achieved without the progressive amendment of the Combined Transport Directive, which should provide an enhanced harmonized European regulatory framework for operating this typically border-crossing transport service – crucial if Europe is to achieve its COP21 climate targets.

UIRR Report
EUROPEAN ROAD-RAIL COMBINED TRANSPORT
2018-19



The day before the General Assembly UIRR members held an extensive workshop with European Commission officials from DG MOVE to discuss the challenges that lie ahead and to consider the measures needed to improve the quality performance of rail freight, to create a fair, mode-neutral regulatory environment and to support the enhancement of Combined Transport during the coming 2019-2024 legislative period.

DG MOVE Deputy Director General Maja Bakran Marcich, Land Transport Director Elisabeth Werner and Head of Unit for the Single European Railway Area, Maurizio Castelletti have offered their visions and solutions, while also listening to the participating sector representatives.

UIRR, as the association of European intermodal transport, developed its membership by adding three new members - Metrans, VIIA and WienCont, four new technology partners - Combipass, GATX Europe, Railwatch and Wielton, and signing MoUs with two national peer associations - the Rail Freight Group of the UK and USER of Romania, during 2018.

UIRR remains committed to its mission of 'Growing the market for Combined Transport based on technical merit and management excellence'.

(from: uirr.com, May 21st 2019)

TRANSPORT & ENVIRONMENT

GLOBAL SHIPPER BODY CALLS FOR DECARBONISATION DIALOGUE WITH POLICYMAKERS

Sustainable solutions to the environmental challenges faced by global shippers need to be found without stifling economic growth, according to the Global Shippers' Forum (GSF), as it reacted to the launch of the International Transport Forum (ITF) Transport Outlook 2019 report.

James Hookham, GSF secretary general, said: "GSF is calling for an open dialogue between the shipping industry and government to ensure policy measures remain practical and supportive of growth and jobs, while addressing the need to radically decarbonise transport; these issues cannot be addressed by policy makers in isolation.

"Freight transport must be considered as a means to an end rather than an end in itself; this perspective should be at the centre of a dialogue between industry and policy makers."

Hookham continued: "ITF Transport Outlook 2019 focuses heavily on the need to decarbonise transport, placing almost every disruptor or trend affecting logistics within this context.

This challenge is particularly immense for maritime transport, which, as the dominant mode of transport for inter-continental trade, also carries the largest volume of goods globally.

The report lists various solutions, most notably slow steaming, but in the view of GSF, this would have very negative consequences for the buyers of maritime transport: the shippers.

It would increase crossing times even further; therefore, it is not a sustainable solution."

According to GSF, the International Maritime Organisation (IMO) should retain responsibility for this issue, but it said more progress is needed on appropriate market-based measures (MBM), adding that the failure to reach a decision at the 'IMO MEPC 74' meeting last week - Marine Environment Protection Committee (MEPC), 74th session - "was disappointing for shippers".

Hookham added: "It is crucial to select a measure that will incentivise technical and operational measures to reduce CO2 and not simply pass on additional costs to shippers or significantly increase transit times.

The Ship Efficiency Credit Trading (SECT) proposed by the United States comes closest to meeting the principles for a good MBM set out by GSF."

Continuing, Hookham said the report also "highlights that although alternative transport modes are likely to increase in volumes – not least air freight connections, and to a lower extent, rail connections between Asia and Europe – maritime deep-sea shipping will continue to dominate in the movement of global trade", highlighting a prediction in the report that more than three quarters of all freight will continue to be carried by ships in 2050, "practically unchanged from 2015".



Hookham added: "The report points towards a greater concentration of a limited number of ports and routes by the shipping industry, as a result of pressure to cut costs and maintain profitability.

The risk for shippers is to end up with an even more dominant and concentrated shipping offer, less choice, and potentially less quality too, because of decreasing competition."

The Global Shippers' Forum was created in 2006 as the successor to the Tripartite Shippers' Group, first organised in 1994, aiming to be "the global voice for shippers".

Like the Tripartite Shippers' Group, the GSF represents the interests of various national and regional shippers' organisations in Asia, Europe, North and South America and Africa.

The GSF is focused on the impact of commercial developments in the international freight transportation industry and the policy decisions of governments and international organisations that affect shippers and receivers of freight.

(from: lloydsloadinglist.com, May 24th 2019)

LOGISTICS

DB SCHENKER COMPLETES SUCCESSFUL PLATOONING TRIALS

Global logistics company DB Schenker has completed the world's first field test using truck platoons in real logistics operations, concluding that "operating electronically linked trucks on German motorways is safe, technically reliable and easily applicable in the routine of a logistics company".

The successful completion of the pilot project run by DB Schenker, MAN Truck & Bus and Fresenius University of Applied Sciences is part of a research project sponsored by Germany's Federal Ministry of Transport and Digital Infrastructure (BMVI).

It used professional drivers to drive two electronically linked vehicles on the Autobahn 9 between the Nuremberg and Munich branches of DB Schenker over the course of seven months.

Having covered some 35,000 test kilometres, the truck drivers, who drove at a distance of only 15 to 21 metres, "praised the driving comfort and the general sense of safety", DB Schenker said, noting that the field test also demonstrated savings in fuel consumption.

Germany's Federal Ministry of Transport and Digital Infrastructure (BMVI) contributed funding of approx. €1.86 million to the research project.

The project partners DB Schenker, MAN Truck & Bus and the Fresenius University of Applied Sciences presented the results at the Ministry.

According to the project partners, the use of truck platoons could ensure more efficient use of space on motorways, less congestion and increased road safety.

Andreas Scheuer, Federal Minister for Transport and Digital Infrastructure said: "The mobility of the future will be automated and networked.

Of course, this is also true for logistics.

I therefore fully support the industry in bringing technologies such as platooning to market maturity.

We want to make the processes even safer, more efficient and more environmentally friendly, all along the value chain.

The drivers have a key role to play here.

In a digital truck they will be modern logistics specialists.

This will open up new prospects for the profession."

According to DB Schenker's research, platooning can be used extensively in the logistics network.

Alexander Doll, finance director for Freight Transport and Logistics at Deutsche Bahn AG said: "We have analyzed our European transport network and it is safe to say that around 40% of the kilometres travelled could be carried out in platoons."



For this, however, further tests and ensuring the regulatory framework would be necessary, Doll said, highlighting that customers would also benefit: "With platooning we can offer even more reliable transports."

According to DB Schenker, the platooning system installed in the MAN trucks operated smoothly 98% of the time.

Active interventions by the driver were necessary only once every 2,000 kilometres, "which is much less than expected", it noted.

In addition, the pilot project demonstrated a 3 to 4 percent reduction in fuel consumption.

Joachim Drees, chairman of the management board of MAN Truck & Bus SE, said: "We were able to show that platooning has the potential to contribute to the reduction of fuel consumption and CO2 emissions.

First and foremost, we are pleased that the system works reliably and can increase safety on the motorway.

Accordingly, platooning is an important step for us on the way to automation."

Scientists from the Fresenius University of Applied Sciences investigated the psychosocial and neurophysiological effects on the drivers, noting that having experienced the actual field test brought about a significant change in the previously sceptical attitude of the drivers.

Professor Sabine Hammer from the Institute for the Science of Complex Systems (Institut für komplexe Systemforschung, IKS) at the Fresenius University of Applied Sciences, commented: "A general sense of safety and trust in the technology is echoed in the drivers' assessment of specific driving situations.

None of these were described as uncontrollable."

The drivers experienced vehicles of other road users cutting in from adjacent lanes or cutting across multiple lanes as "disagreeable", but not critical.

"Due to the fast response times of the system, drivers would now prefer a distance of 10-15 metres," said Hammer.

Professor Christian Haas, director of the IKS, noted: "The EEG measurements show no systematic differences between platoon runs and normal runs when it comes to the neurophysiological stress placed on drivers, i.e. in terms of concentration or fatigue."

For international use, the scientists recommend further research with longer periods in platooning mode.

But the project partners said they "are convinced that the potential of truck platooning can be further increased by future developments.

In addition, new digital business models in logistics are conceivable."

The term 'platooning' refers to a system that vehicles use on the road in which at least two trucks drive in a tight convoy on a motorway, supported by technical driving assistance and control systems.

All vehicles driving in the platoon are electronically linked to each other.

The truck in front sets the speed and direction, and the others follow.

(from: lloydsloadinglist.com, May 15th 2019)

PROGRESS & TECHNOLOGY

IS TECHNOLOGY ABOUT TO OVERCOME THE 'TOO HEAVY TO ELECTRIFY' OBSTACLE?

The scientific literature remains sceptical about trucks becoming battery-operated due to the cost and weight of large battery packs.

But that could change soon as costs of battery packs continues to fall, writes Björn Nykvist.

Björn Nykvist is a Research Fellow at the Stockholm Environment Institute.

"The prospects for electrifying heavy vehicles are uncertain and the subject of fierce debate.

On the one hand, battery-powered electric cars with long-range capacity are on the roads, and battery electric buses are already cost competitive in markets with high diesel prices, according to the International Energy Agency.

Yet, on the other hand, the scientific literature remains sceptical about trucks becoming battery operated due to the cost and weight of the large battery packs.

My recent research for the Stockholm Environment Institute (SEI) offers new insights that can inform this debate.

The positive trends on battery technology and cost continue to increase the competitiveness for electric vehicles.

Electrification now also hold promise in the pursuit of so-called "deep decarbonisation pathways" for heavy trucks.

A recent analysis of energy use and cost, and scenarios jointly developed with key freight transport stakeholders shows:

- Light trucks and a growing share of heavy but shorter-range trucks can be electrified with batteries across a broad range of scenarios.
- Beyond 2030, a range of electrification technologies is emerging and could contribute to cutting emissions; options include battery electric trucks, electric road systems, and hydrogen trucks.

- Though Swedish stakeholders expect biofuels to remain critical through 2030, the role of electrification in 2045 is now about twice as significant as was thought to be the case in forecasts undertaken just five years ago.

As electrification gains momentum, and the power sector becomes increasingly renewable, electrification of freight transport can start to play a very important role in reducing greenhouse gas emissions to help reach the goals of the Paris Agreement.

Indeed, the IPCC Special Report on Global Warming of 1.5 °C show that rapid electrification of energy use is needed across sectors to achieve deep decarbonisation goals.

This provides fuel – or should we say electric current? – for arguments suggesting that we should “electrify everything”.

And, it means that the electrification of transport should intensify.

Decarbonisation through electrification – a case for optimism

The question according to our stakeholders (vehicle manufacturers, fuel providers, logistics companies, and policy-makers) is thus not whether electrification will play a central role in transport systems of the future, but how.

We find that both battery electric trucks and the electric road systems (using overhead catenary wires as shown in the accompanying image) now spearheaded by Sweden and Germany, can be competitive with diesel trucks in the coming decade.



Hydrogen fuel cell-powered electric trucks are more expensive, but it is worth noting that the technology is now being pursued by

American newcomer Nikola Motors, with Norwegian partner NEL on hydrogen production and refuelling technologies.

Moreover, hydrogen is emerging as a critical solution to decarbonise steel making.

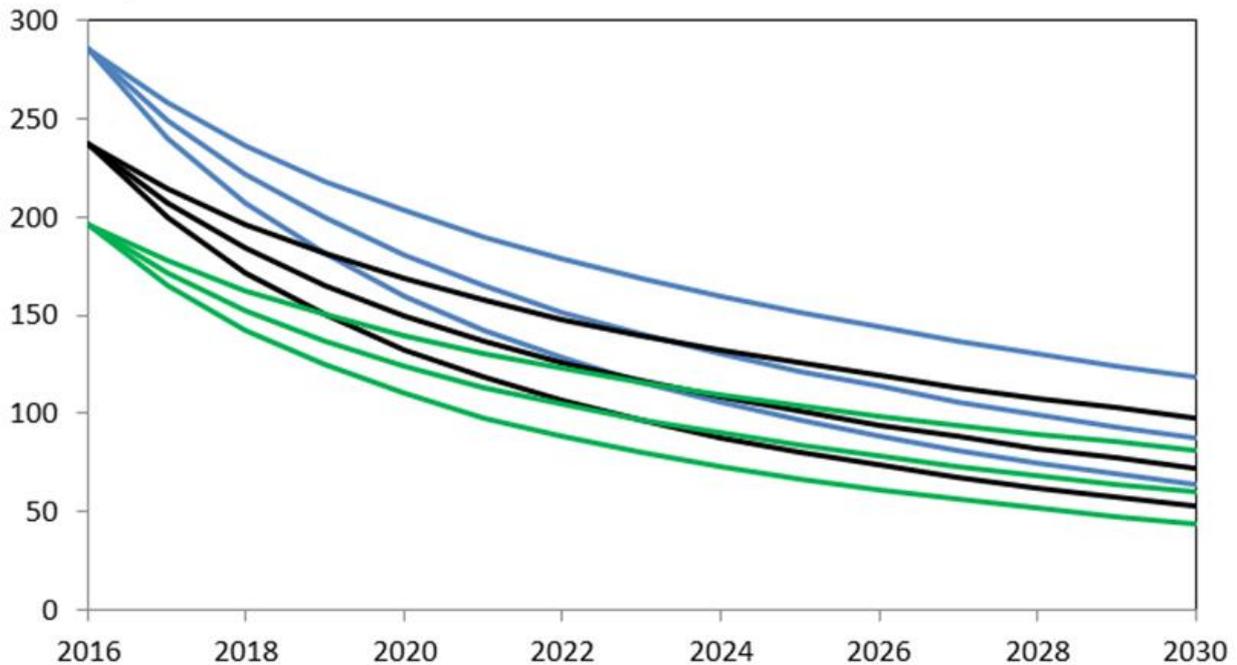
The situation ask for more analysis of synergies and dependencies across the individual parts of the new fossil-free energy and transport systems.

In this new fossil-free energy landscape, battery technology plays the central role.

While the verdict is still out on the role of pure battery trucks, batteries will still be an enabling technology.

Whether as a means to increase efficiency in hybrid electric vehicles, as part of a electric road systems or as a component of hydrogen fuel cell vehicles to manage peak power.

2016 US\$ per kWh



The figure shows forecasts of battery pack costs accounting for the uncertainty in both current costs and learning rates. The three groups of coloured lines account for the uncertainty in current costs starting in 2016. Going forward through 2030 each set of coloured lines reflects uncertainty in learning rates. Detailed descriptions are available in the research paper: <https://www.sei.org/publications/assessing-progress-lower-priced-long-range-battery-electric-vehicles/>.

In 2015, I showed that a rapid reduction in cost of battery packs used in electric vehicles had taken place.

My latest research shows that the positive trends continue for complete battery packs capable of reaching a level of slightly above 200 USD per kilowatt hour (kWh) in 2017.

Can this trend continue?

Looking forward

Niels Bohr, a leading scientist of modern physics in the early 20th century, famously said "prediction is very difficult, especially if it's about the future".

Nevertheless, with the right tools, some near-term developments can be characterised.

My research finds a learning rate in battery pack cost of around 18% – meaning that each time the total produced historical volume of batteries (in kWh) doubles, another 18% drop in cost occurs.

Currently we see such a decline in costs almost annually.

With modest assumptions on continued growth of electric vehicle sales (reaching 60 million electric vehicles sold by 2030), the cost of battery packs can be expected to approach 100 USD/kWh within a decade.

But uncertainty is high, and progress can be both slower and faster.

The analysis, for example, does not take into account any additional positive synergies that will surface as batteries penetrate applications such as stationary storage, electric buses, and electric trucks.

But all in all, the outlook is now strong enough to argue that battery electric vehicles, from light cars to heavy trucks, have a pivotal role to play in reaching climate goals.”

(from: euractiv.com, May 7th 2019)

STUDIES & RESEARCH

STUDY CONCLUDES IMO 2020 PROMOTES U.S. ENERGY SECURITY, TRADE, AND THE ENVIRONMENT

EERA (Energy and Environmental Research Associates) released a white paper co-authored by Drs. James J. Corbett and Edward W. Carr of the University of Delaware on the economic effects of the International Maritime Organization's (IMO) 2020 standards to cap sulfur emissions from shipping fuels.

According to the paper, IMO 2020 "is good policy for the United States, for energy security, the economy, and the environment."

Here below, the executive summary of the paper.

* * *

In 2020, global ship fuel will become cleaner for the first time in history.

Initial standards agreed to under IMO policy required only that most of the fuel supplied to ships stay below limits (4.5% sulfur and later 3.5% sulfur); IMO 2020 is the first to require clean fuels globally.

For the past 5 to 7 decades, most of the world's ships burned heavy fuel oil, also known as residual fuel oil, or bunker oil.

Prior to 2020, the world's bunker fuels may contain up to 3.5% sulfur by mass (3.5% S), contributing ~13% of total sulfur oxides (SO_x) emissions from all human-related sources.

The International Maritime Organization's (IMO) required reduction in the sulfur content of marine fuels used in international shipping¹, known as IMO 2020, is good policy for the United States (U.S.), for energy security, the economy, and the environment.

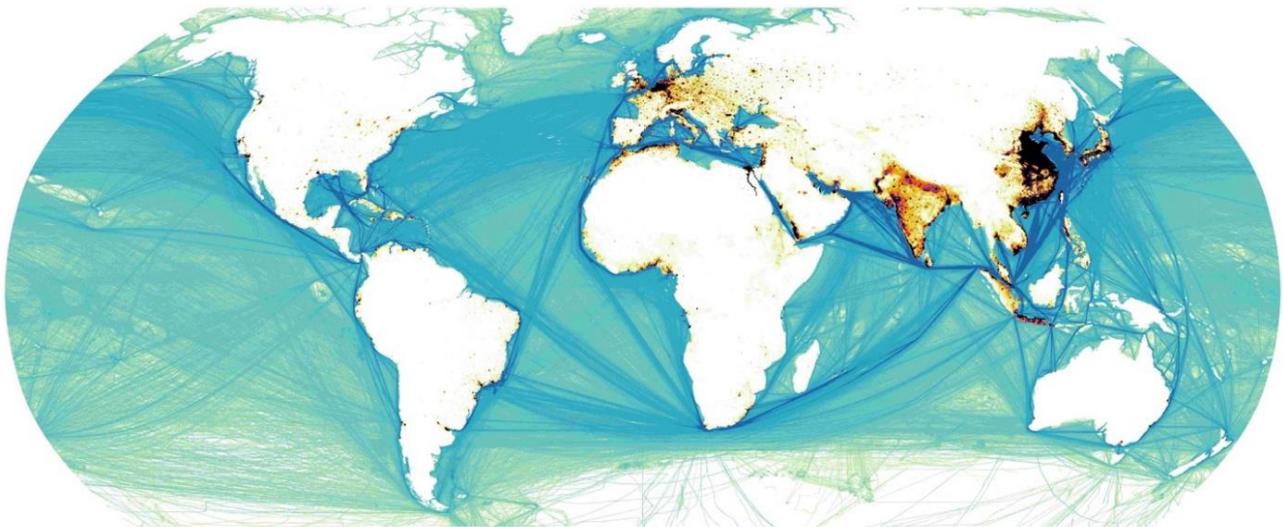
Here is why:

1. The global shift to cleaner fuels serves U.S. interests, both economic and environmental.

¹ The global average marine fuel sulfur content is currently around 27,000 ppm S (2.7% S). With IMO 2020 the global marine fuel sulfur limit will become 5,000 ppm S (0.5% S). In emission control areas the fuel sulfur content will remain 1,000 ppm S (0.1% S).

U.S. industry is prepared to provide advanced fuels and technologies to achieve IMO 2020 standards, at a competitive advantage.

The U.S. refining industry invested more than \$100 billion over the past decade to meet growing demand for middle distillates used by freight transportation and to provide cleaner fuels, including ultra-low sulfur diesel and IMO 2020 compliant marine fuels.



Global distribution of ship emissions and health impacts

The transition to IMO 2020 fuel will also include ships that install scrubber technologies, aftertreatment systems that achieve emissions control while continuing to use higher-sulfur fuels.

The U.S. operates some 22% of global refineries, and many of these are among the most technologically advanced.

According to the IMO Fuel Availability Study in 2016, the U.S. is best prepared to adjust to IMO 2020 specifications and requirements.

The International Energy Agency (IEA) echoes these expectations in its 2018 and 2019 reports.

IEA expects that U.S. refining will “see a boost from the International Maritime Organization’s (IMO) marine bunker specification change in 2020, which will drive refinery appetite for low sulfur crudes.

The IEA expects that the U.S. will become a “major part” of the global effort to meet IMO 2020 fuel supply.”

The global average marine fuel sulfur content is currently around 27,000 ppm S (2.7% S).

With IMO 2020 the global marine fuel sulfur limit will become 5,000 ppm S (0.5% S).

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2. Fuel price estimates fall within historic ranges and additional refining capacity allows for increased fuel supply that will moderate fuel price effects.

In February 2019, Goldman Sachs (Courvalin et al. 2019) issued an updated report that estimated the future difference between gasoil and high-sulfur fuel oil (HSFO).

Price differences in this report derive from those projected by the February 2019 Goldman Sachs and are consistent with EIA-reported data since 2014 for the domestic wholesale price differences between No. 2 diesel and residual fuel oil (reported by EIA for lower sulfur residual products).

Goldman Sachs concludes that the updated "2020 equilibrium points to slightly smaller dislocations than previously" expected and that "the industry [is] increasingly well-equipped and prepared to meet the IMO challenges."

We find that price projections and demand impacts estimated by both Goldman Sachs and EIA analyses fall within historic ranges.

We consider as a strength that these studies are independent, use different fuel data sets, and make price comparisons across different fuel pairs.

EIA projects a greater change in diesel wholesale margins relative to crude oil than that suggested by Goldman Sachs across nearly all sensitivity scenarios.

Similarly, expected price changes appear to fall within past ranges, and EIA suggests that price effects will be reduced with recent additions to refining capacity.

Goldman Sachs' independent analyses find similar but smaller expected price effects than that reported by EIA in its January 2019 Short Term Energy Outlook, and Goldman Sachs adjusted expectations downward in its 2019 update to its 2018 analyses.

3. Increased distillate fuel demand due to IMO 2020 can be met by the robust supply of U.S. resources and the ability to expand refining capacity, and can be tempered by continued gains in shipping energy efficiency.

Marine fuels have typically been residual fuel oil blends tailored to meet shippers' demand.

In 2020, ships will require cleaner marine fuels and fuel-blends that include distillate fuel products.

Distillate fuel supply is around six times greater than residual supply, while net exports have increased significantly.

This indicates that domestic needs for shippers and other distillate users are being met and excess production is exported for use elsewhere.

The U.S. refining sector has invested in technology that affords flexibility to adjust to IMO 2020 shifts in distillate demand.

Potential concerns about temporary shortages are also mitigated by ongoing reductions in fleet fuel consumption rates, resulting from new vessel designs, and other energy saving changes in fuel supply chain fundamentals.

4. The U.S. is a powerful port state protecting its maritime interests through established federal law.

Port state authority for IMO standards depends upon enabling legislation within that nation and may involve cooperation among national agencies.

Current U.S. law requires all ships loading or discharging international and domestic cargoes to meet global fuel standards, regional clean fuel standards established in 2015 by U.S. and Canada for North American shipping routes, along with other environmental and safety requirements.

Potential efforts to suspend international agreements are encumbered by federal law.

U.S. Coast Guard enforcement requirements will continue to require that fleets comply with U.S. laws, regulations and standards, including low-sulfur fuel standards.

Abandoning international marine fuel standards may put U.S. maritime interests at competitive disadvantage.

Moreover, domestic law implements the international agreement.

Overtaking established federal and state regulations presents policy and legal challenges for executive branch agencies and U.S. maritime interests.

5. IMO 2020 reduces fuel cost differences between global shipping fuel and stricter regional fuel standards in North America.

The U.S. and Canada currently implement, enforce, and benefit from stricter sulfur standards.

The North American Emission Control Area (ECA), a special area that requires cleaner marine fuel than IMO 2020, entered into force in March 2010.

The North American ECA is the largest designated ECA to date.

Global shifts to marine fuels compliant with IMO 2020 will afford additional benefits to human health and environment.

As ships transition to cleaner global fuels, the fuel price increase for ECA fuels will become smaller; in other words, all international ships will face fuel prices more similar to ships transporting cargoes to and from US ports.

(from: hellenicshippingnews.com/americanenergysecurity.com, May 17th 2019)

INFORMATION TECHNOLOGY

THE DIGITAL AGE OF SHIPPING IS HERE — THE IMO MANDATORY ELECTRONIC INFORMATION EXCHANGE IS NOW IN EFFECT

The International Maritime Organization (“IMO”) Convention on Facilitation of International Maritime Traffic (the “FAL Convention”) was adopted in 1965 for the purpose of implementing a more streamlined logistics process for the transport of passengers, ships, and cargo in international trade.

The FAL Convention has 121 Contracting Governments.

The FAL Convention was adopted by maritime Contracting Governments, in part, as a response to increasing local requirements of maritime nations that created a burden on the shipping industry.

The IMO’s stated objective underlying the FAL Convention’s was to avoid marine traffic delays, stimulate intergovernmental cooperation, and increase uniformity in the international maritime industry to the extent practicable.

The convention contains standards and recommended practices to create efficiency in documentary requirements for ships.

The 2016 Amendments to revised Annex of the FAL Convention entered into force on January 1, 2019.



The Amendments include new requirements for the digital exchange of shipping information.

Effective April 8, 2019, the FAL Convention now requires Contracting Governments to establish a protocol for an electronic information exchange between ships and ports.

The IMO Secretary-General Kitack Lim announced: “The new FAL Convention requirement for all Public Authorities to establish systems for the electronic exchange of information related to maritime transport marks a significant move in the maritime industry and ports toward a digital maritime world, reducing the administrative burden and increasing the efficiency of the maritime trade and transport.”

The grace period for governmental compliance with the digital exchange requirements is a minimum of 12 months.

In addition, the Amendments introduce three additional documents that shore authorities may require of arriving vessels.

These documents include (1) security-related information pursuant to SOLAS regulation XI-2/9.2.2; (2) advance cargo information for customs review; and (3) Advanced Notification Forms for Waste Delivery to Port Reception Facilities.

The IMO, through the FAL Committee, has developed standardized documents that are recommended for use by all Contracting Governments.

The FAL Convention in Standard 2.1 contains a list of documents that public port authorities and governments of member states will demand from ships.

To that end, the IMO has developed standardized forms for certain categories of documents including (1) IMO General Declaration; (2) Cargo Declaration; (3) Ship's Stores Declaration; (4) Crew's Effects Declaration; (5) Crew List — Passenger List; and (6) Dangerous Goods.

All Contracting Governments are encouraged to adjust their local laws to comply with the FAL Convention requirements for sharing electronic information.

According to the IMO, the FAL Convention "encourages the use of a Single Window for data" to be provided by ships to local governments.

The primary purpose underlying the new protocol is to funnel all critical information that is required by public authorities relating to the arrival, berthing, and departures of ships, as well as all data required to carry cargo and allow the entry and departure of passengers through a single portal.

The Single Window requirement is intended to house all necessary information for the international carriage of goods and passengers into one spot, thus avoiding duplication.

The Single Window requirement to provide electronic information is an important international step toward simplifying international voyages for the maritime trade.

The FAL Committee of the IMO is continuing to study potential harmonization of electronic messages.

Phase one of the IMO Compendium on Facilitation and Electronic business should be completed soon.

Moreover, the revised Guidelines for setting up a single window system in maritime transport are expected to be approved soon.

Ultimately, the new FAL Convention electronic requirements are expected to improve uniformity for marine transportation.

(from: hellenicshippingnews.com, May 23rd 2019)

ON THE CALENDAR

- 30-31/05/19 Ancona Adriatic Sea Forum
- 04-07/06/19 Oslo Nor-Shipping 2019
- 04-07/06/19 Monaco B. Transport Logistic 2019
- 05-06/06/19 Lisbona DELIVER, the European Rendezvous for E-Logistics
- 14-14/06/19 Collecchio Logisticamente Out
- 20-21/06/19 Pireo 7th Global Symposium of Maritime Executives PIREAS 2019
- 24-30/06/19 Genova Genoa Shipping Week
- 25-26/06/19 Dar Es Salaam 3rd Edition of the African Ports Expansion Summit
- 28-28/06/19 Genova Shipbrokers and Shipagents Dinner 2019
- 28-30/08/19 Jakarta Inamarine 2019
- 10-10/09/19 Londra 12th Annual Shipping & Marine Services Forum
- 11-13/09/19 Amburgo Seatrade Europe Cruise & River Cruise Convention
- 11-13/09/19 Amburgo MARINE INTERIORS Cruise & Ferry Global Expo
- 19-24/09/19 Genova 59° Salone Nautico
- 23-25/09/19 Doha Ports & Maritime Evolution, Rail & Logistics Evolution, Road & Logistics Evolution Qatar Assembly & Expo
- 23-24/09/19 Roma AIIT 2nd International Congress on transport infrastructure and systems in a changing world
- 03-05/10/19 Piacenza GIS 2019 - Giornate italiane del sollevamento dei trasporti eccezionali
- 06-09/10/19 Limassol 16th "Maritime Cyprus 2019" Conference
- 15-18/10/19 Oslo 15th GreenPort Congress and Cruise 2019
- 15-15/10/19 New York 11th Annual New York Maritime Forum
- 21-21/10/19 Atlantis The Maritime Standard Awards 2019

- 22-22/10/19 Atlantis The Maritime Standard Tanker Conference 2019
- 23-23/10/19 Parma Logisticamente On Food
- 06-06/11/19 Abu Dhabi The Maritime Standard Ship Finance and Trade Conference 2019
- 27-28/11/19 Madrid International Cruise Summit 2019
- 03-05/12/19 Pordenone Navaltech 2019 - Marine Technologies Expo
- 04-05/12/19 Barcellona Cruise Ship Interiors Expo

The Secretariat of C.I.S.Co. is able to communicate detailed information on the programs of all the events and how to participate.