Greater Houston Port Bureau

Port Bureau News

Port Call Efficiency

Also in this Issue: Captain's Corner | Port Watch | Port Bureau Scholarship | Port Bureau Updates | EIA Short-Term Energy Outlook | Commerce Club |



About the Cover

Port Call Efficiency and Port Call Optimization are concepts that are talked about in the shipping industry. These concepts are now being intensively revised due to the urgent need to significantly reduce emissions in shipping and improve efficiency. Photo courtesy of Enterprise Products.



The August Short-Term Energy Outlook (STEO) remains subject to heightened levels of uncertainty related to the ongoing recovery from the COVID-19 pandemic. U.S. economic activity continues to rise after reaching multiyear lows in the second quarter of 2020 (2Q20). Read more on page 19.

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Port Bureau News

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Delivering an exceptional customer experience is the mainstay of any successful venture. It doesn't matter what the goal may be - a school fundraiser, opening a franchise, or moving the goods through our ports customer satisfaction will be the largest factor in determining the future of our endeavors. A satisfied customer will return; an unhappy one will go elsewhere.

Customer satisfaction is so imperative that it begs the question: how far will we go to ensure customer need is met? In 1935, the Works Progress Administration (WPA) initiated the Pack Horse Library Project, which delivered books to remote regions in the Appalachian Mountains. Carried out predominantly by women, the program delivered books to homes and small schoolhouses in rural Kentucky.

The "book women" received \$28 a month from the WPA and had to provide their own animal. Often, they were the only wage-earner in the family. Routes covered 100 to 120 miles per week across rugged terrain. They distributed books, provided reading lessons, and frequently brought new ideas into isolated areas. With patience, the persevering librarians managed to conquer the suspicions many locals harbored toward newcomers and establish a close rapport with residents. Their dedication to meeting the needs of their assigned communities won over families so much that some people would not consider living anywhere that lacked a pack horse library.

Such a reaction shows the pack horse librarians met the need and served the customer. Those valiant librarians were determined to find a way to make reading accessible to the remotest areas. In winter their feet would sometimes freeze in the stirrups, but they pushed on despite the hardships. They were willing to go the distance to deliver their customers an exceptional experience.

That kind of dedication and visionary attitude in serving customers is one we want to keep embracing in the port region. The history of building commerce along our waterway is filled with stories of remarkable people who went the extra mile to meet customer needs. It has kept customers coming back to a port 50 miles inland for more than 100 years.

Through the fall, the Port Bureau will be working on a strategic plan. One of our core drivers is to ensure that we are providing the right services to our membership. Whether it's hosting networking opportunities or providing quality data for your business decisions, we want to deliver an exceptional member experience.

Our goal is to set priorities, focus energy and resources, strengthen operations, and ensure the direction of the Port Bureau is responding to member priorities in a changing world. Part of this effort will include hearing from you. We are sending out a survey to get your feedback on how you'd like to see the Port Bureau align resources and actions in serving the maritime community for the next three to ten years. We are eager for your input and look forward to what you have to say.



Contents

Captain's Corner

Customer Satisfaction



The pack horses are long gone, but Kentucky's public libraries now have the largest bookmobile service in the nation serving their rural customers. When needed, the bookmobile librarians connect residents in remote areas to broadband through the bookmobile's hotspot. They are still delivering an exceptional customer experience - hopefully minus the frozen feet! That's

exactly how we view serving you. Methodologies may change, but we plan for our service to you to be better than ever in the years to come.



CAPT Bill Diehl USCG (Ret.), P.E. **GHPB** President

Port Watch

The Third Law



$F_{\rm A} = -F_{\rm B}$

posits, "Whenever one object exerts a force on another object, the second object exerts an equal and opposite force on the first." Every hour of the day one can witness this physics lesson unfold on the Houston Ship Channel as nimble harbor tugs exert a force on a variety of deepdraft vessels calling upon the port. The same is true for the thousands of pushboats that overcome the inertia of fleeted 30,000-barrel tank barges, resulting in the momentum that initiates the movement of bulk commodities throughout the inland waterway system. As many a mariner will attest to, once the inertia is overcome you can't ignore the momentum.

Speaking of momentum, there was plenty to be found in the ports of Texas during July. The gains of June blossomed into further gains last month. Tow movements across the Houston Ship Channel climbed another 3% as this denizen of the inland waterways registered its fifth consecutive monthly uptick. More is certainly afoot for the brownwater brethren; albeit, the numbers still remain roughly 7% below last year's bounty.

Sir Isaac Newton's Third Law of Physics On the blue water front, aggregate vessel completely out of the ordinary since July arrivals nailed a threepeat with its highest arrival count for the year. While the year-todate numbers still trail the previous period by 1%, there are several ports that have joined the "Freeport Club." That is, they are outpacing 2020's arrival numbers. Freeport as expected – chalked up another triple digit month in July and nearly matched January's peak. It's most recent 12% monthly increase placed the port squarely in first place with respect to year-over-year percentage rise which currently stands at 10%. Nearby, the Port of Galveston welcomed one less arrival than the previous month. Yet, despite that meager deficit of 1%, it has rebounded further into positive territory. Galveston's current 6-plus percentage improvement over 2020's arrival count has pushed the port into second place in terms of outpacing last year.

> Corpus Christi is not far behind Galveston vis-à-vis year-over-year performance which currently stands at 4.3%. However, July was the first month since February where the port failed to attain at least 200 arrivals. It's most recent 8.5% monthly wane is not

tends to be a lean month on the maritime commerce front. The final port that has managed to have a rosier 2021 than 2020 is Sabine. July's arrival tally matched January's peak. The 2.6% monthly count pulled Sabine solidly into positive territory for the year by well over 3%. The momentum that was in play prior to the economic malaise wrought by a gain-of-function virus has returned as chemical tankers, LPG vessels and tankers ladened with refined petroleum products ply its waterways in ever greater numbers.

On the opposite end of the constellation of Lone Star State ports, Brownsville has lost the bulk of its forward movement from last year. The 20 vessel arrivals in July was a mere one greater than that of June. Perhaps that is nothing to worry about. That is, until one realizes that the year-over-year numbers lag 2020 by over 25%. Texas City is also well behind last year's arrival count, to the tune of 16%. July saw a significant dip in vessels calls; however, given that June chalked up the highest vessel count for the year, the near-18% nosedive was somewhat distorted.

It has been quite some time since Houston has seen over 700 deepdraft vessel arrivals over the course of the month. July's count of 710 eclipsed the previous high set the month before. Thus, after three straight monthly increases, Houston is creeping ever closer to catching 2020's arrival figures. Not surprisingly, half of the vessel categories that plied the waters of Buffalo Bayou set a new monthly count high. On the BTU front, tankers, chemical tankers, and LPG vessel outdistanced June by 2.7%, 4.1% and 4.3% respectively. Unfortunately, for 2 of the 3 categories, only chemical tankers remain ahead of last year's count. Bulkers had a rather impressive month with a 23% jump, pulling the category ever-so-slightly into positive territory for the year (i.e., 0.5%).

General cargo took it on the chin during July as 17% fewer vessels moored at Houston's terminals. This paltry showing pulled the category further into the red for the year. Car carriers held their own for the month by matching June's activity. Container vessels were off by one arrival for the month and 3%

for the year but, as they say, "don't judge a book by its cover." Indeed, 15% more TEUs have crossed the docks at Houston's container terminals in 2021.

In the end, July – a month that typically experiences a trade lull - posted rather robust numbers from Sabine to Freeport. A stark contrast to the previous year when the effects of shuttered economies were being felt across the globe. Ultimately, the force of government mandates sapped the momentum from a booming trade environment. Yet, as Aristotle opined, nature abhors a vacuum. Inexorably, forces will emerge that set the machinery or the "system of things" into motion. Sometimes, it's simply a matter of reaching stasis while, in other instances, the force takes on a life of its own yielding ever-greater momentum until new forces are brought to bear to curb it. At this juncture, what matters most, is that the traction gained is not suddenly lost. Of course, Newton would be the first to recognize that physics is far more predictable than economics.





Source: Greater Houston Port Bureau Marine Exchange of Texas



Source: Greater Houston Port Bureau Marine Exchange of Texas

Tom Marian Buffalo Marine Service buffalomarine.com



Port Call Efficiency

The research to help drive actual improvements during a port call



Photo courtesy of Enterprise Products

Port Call Efficiency is like Port Call Optimization, a concept that is much talked about in the shipping industry and, depending on who you speak to, is interpreted differently. That is because a great deal of thought and work is being devoted to this from different perspectives. These concepts are now being intensively revised due to the urgent need to significantly reduce emissions in shipping and improve efficiency.

Managing Port Calls

A port call is a joint process in which many different parties work together to get vessels into the port, operate them and get them out of the port, safely and efficiently. In this process, there is great improvement potential that may result in:

- Emission reduction of CO2 and NOx Lower bunker costs
- Better utilization of assets and port & terminal infrastructure
- Less waiting time

To improve the port call process, it is not only important that all parties involved work together, but also that they look at a single point of truth regarding, for example, estimated times of arrival, start of cargo operations, departure, etc. A third - vital - enabler for improvement is to have a joint goal rather than each party focusing on their individual key performance indicators, which may even be in conflict with each other. For example, the terminal has been working very hard to optimize the vessel rotation time, but the nautical services are not available for the vessel's departure. In this case, the terminal's efforts to make the quay available for the next vessel as soon as possible are in vain.

Improving port call efficiency is not just the responsibility of the port. To achieve improvement, all parties involved in a port call, including the shipping line, port authority, terminal, agent, and service providers, must collaborate

What is Port Call Efficiency?

Efficiency is the degree to which an activity is executed according where the process went wrong. to plan. For example, if you buy a flight ticket and your ticket states boarding starts at 14.00, the idea is to arrive as close to 14.00 as possible. The steps in the port call efficiency metric are: Step 1: Just in time arrival – from the previous port to the pilot boarding place Step 2: Arrival to berth – from the pilot boarding place to the berth Step 3: Berth visit - from arrival to the berth to departure from the berth Step 4: Berth shift – if applicable, the shift to a next berth, which then leads back to step 3 Step 5: Departure – from the departure from the berth to the pilot boarding place on exiting the port What makes this metric valuable is that most companies look at their

Not too early and not too late. Being early is not optimal, as this would unnecessarily overload the airport with passengers if everybody did that. Being late would result in you missing or delaying the flight. This obviously applies to an even greater extent for big vessels. If vessels arrive at the port early, they need to wait and anchor or maneuver. This produces unnecessary emissions and bunker consumption. Being late results in waiting time or re-planning of all other parties in the port such as the terminal, port authority and service providers. Port call efficiency measures and drives the scheduled execution during the port call, starting with the departure from the previous port to the departure from the current port and taking a holistic perspective.

own internal data when they evaluate performance. In this KPI, we use This is unlike the most common ways that are used in the industry to look information from all parties involved in the port call, planning and actual, at port call efficiency from each party's individual perspective. looking at the most reliable source for each milestone. This gives a very realistic overview of what happened during a port call, independent of perspective. By only looking at the information from one party, you miss The One Metric That Matters the bigger picture.

To enable structural improvements in port call processes worldwide, This makes the metric a very holistic one and relevant to all parties PortXchange has developed the Port Call Efficiency metric: one single involved, covering the entire port call process. Key Performance Indicator (KPI) that measures the performance of each port call. The advantages of having such a metric are:

- Everybody works towards the same goal, no conflicting KPIs.
- It is possible to benchmark your performance against the industry average to drive internal performance. This applies to ports, shipping lines, terminals, etc.

To improve the daily operational process, you can act on various levels.

With PortXchange, we address three levels:

- · Predict when certain things are going to happen upfront, enabling action to be taken before the event. We use machine learning for this and inform users pro-actively if they have set their warnings and notifications.
 - Provide real-time information about the port and vessels to enable decision- making based on actual information.
 - Provide information about how a port call was performed to enable historic performance management.

Historic performance management is based on the right data. It is key to being able to perform root cause problem solving and come up with structural process improvement to prevent events from being repeated in the future. This is precisely the goal of the port call efficiency metric: having the right data at hand about what happened during your port calls so that you can structurally improve how port calls are handled in the future.

Holistic Approach Including All Steps of the Port Call

The port call efficiency concept breaks the process down into five steps, measuring the performance for each of these steps at a port call and consolidated level. The score for each step then adds up to a total port call performance score. This makes it easy to see which port calls were efficient and which ones were inefficient. This concept also allows for an in-depth investigation into those inefficient port calls and discovering

What Does Success Look Like?

With accurate performance data, you can set targets for yourself. Every port and company operating in it is very different from you.

Only you can tell what your success looks like and define your goal

accordingly. You can see on a scale from 0% to 100% how you are For measuring and optimizing Port Call Efficiency, besides standard performing and set your target to improve compared to your historic performance.

You can also benchmark yourself against other industry players. In the port call efficiency metric, we (anonymously) indicate the performance of other similar companies, giving you an idea of where you stand.

Get Rid of the Buffers

Being able to execute properly in the mid to long term also helps improve the planning because fewer buffers need to be built in. This is something you tend to see a lot in logistics planning: just to be safe, an extra 10 minutes or half an hour is added to ensure there is enough time in the planning. All these buffers add up to a lot of time, which can all be classified as waste. In fact, in many of our discussions with customers, we noticed that different parties in the port were not even aware of each other's buffers and sometimes a buffer was built in from two sides for the same step in the process. If you start collaborating in the joint process, you will look at the same information together and work towards port call efficiency as a community rather than suboptimizing through individual KPIs.

Once you begin to work with real-time accurate information, it starts to feel safe to reduce or even remove these buffers.



PortXchange map view provides real-time vessel movement.

Port Calls and Standardization

Efficiency improvement in the supply chain starts with communication. Everyone in the chain must be speaking the same language. In a complex environment like a port, miscommunication can have significant consequences.

Ports, terminals, services providers, and shipping lines each look at productivity from their own perspective and have their own milestones. This can create confusion and conflicting goals. From a terminal perspective, a port call ends when the cargo operations have finished and the vessel has left the berth. From a pilot's perspective, a port call only ends when the pilot has completed his work and left the vessel. This may sound logical, but in practice it can lead to confusion and problems.

In this paper, a port call is defined as: "the time frame between which a vessel has departed from the previous port and the moment the vessel arrives at the pilot boarding place for departure from the current port." All activities within that time frame, such as bunkering, pilotage, cargo operations, linesmen, are part of the port call.

milestones, we need IT definitions of the milestones. This enables all parties involved to share their planning and actual information in real time. With this goal in mind, the International Taskforce Port Call Optimization has done a great deal of work in this field, resulting in industry standards for communication. PortXchange uses these communication standards in the platform. Some ports are already using (some of) the industry standards while others are not. If necessary, PortXchange therefore helps parties translate their information into the industry standards, making the solution available to every port in the world.

Achieving Process Improvements

There is no silver bullet, platform or digital solution that will automatically improve the highly complex port call process for all parties. It is a matter of sitting down with everyone involved, mapping the current process, looking at pain points and agreeing on the next steps. Together with the standardization and digitalization of this new process, major improvements have been achieved in ports working with PortXchange. Nevertheless, improving the port call process is hard work. Once improvements are achieved, however, the impact is sustainable and significant.

Efficiency per step

By comparing planning and actual times, PortXchange calculates the efficiency at each step. In other words, inefficiency is the difference between the planned and actual times. If a step is completed sooner than planned, no extra efficiency points are added because deviating from the plan means other parties have to reorganize themselves. No plus or minus points are currently awarded in such a situation. For the planning information, the planning at the moment the vessel enters the port and arrives at the pilot boarding place is used. The planning is then frozen for the calculation.

Examples of sub-KPIs are:

Step 1: Just in time arrival

Anchor time, bunker consumption, CO2 emission, NOx emission, actual sailing speed deviation from optimal sailing speed

Step 2: Arrival to berth

Vessel time waiting for nautical service providers, waiting time for vessel by nautical service providers, vessel exchange time

Step 3: Berth visit

Idle time on arrival or departure, delays caused by bunker services, delays caused by other services

Step 4: Berth shift

Berth exchange time

Step 5: Departure

Vessel time waiting for nautical service providers, waiting time or vessel by nautical service providers

At the end of the port call, every step is given a score and the total port call score is the weighted average of all steps combined. Only Step 1 - Just in Time Arrival - is an exception to this logic because the ocean journey generally takes much longer than the process in the port. In the most optimal case, the efficiency score is 100%, and in the worst case, 0%.

Sub-KPIs for driving efficiency

It is hard to influence these steps in one go. For example, we want to improve our berth visit efficiency. To do so, it is useful to define sub-KPIs per step. These sub-KPIs can vary for each port or terminal because



PortXchange's service view provides an actual timeline of port call activities for a vessel.

everyone has their own strengths and weaknesses in managing port calls, so this differs per location.

By driving the performance on one of the sub-KPIs, you will influence the step score and thus the total Port Call Efficiency.

Visualization of Port Call Efficiency

Users currently receive their performance information during the onboarding projects. In these projects, we focus on improving performance in particular areas agreed at the beginning of the project. Together with the users, we select which steps can be improved and we set the correct sub-KPIs to drive these positive changes.



Brendan's expertise results from a unique

range of experiences including: operating as n-house demurrage consultant to both BP

Shipping in Chicago and STUSCO in Houston,

operating as account manager for numerous

cornerstone clients, and continuously

developing and presenting HC's training

courses worldwide. Brendan launched the

HC Houston office in 2005. In 2012. Brendan

transitioned to Shell to help manage its

Demurrage Americas department where

amongst other accomplishments he further

increased his global awareness by working

in Shell's Houston, Barbados, London, and

Rotterdam offices before ultimately returning

to HC in 2015.



To register and submit payment for the class, go to https://lnkd.in/eduJvax3. Class size is limited and for Port Bureau members only.



and bunker in another port.

PortXchange is working on making a dashboard accessible to users with the performance information compared to the industry benchmark. The platform is an excellent basis for continuous improvements based on real data, not just internal data but also data from different companies in the port. This new performance dashboard gives users a very powerful tool to independently drive these improvement projects.

All improvements start with accurate and complete data. With your performance to hand, based on all the available sources that were involved in your port call, you can structurally improve your way of working

Port Call Efficiency: Who Benefits?

Each step of the port call has a primary supplier, customer, and process owner. The customer is usually the one benefiting most from improved efficiency in the step. However, there are benefits for most parties in every step. These benefits are not always obvious. For example, if the terminal has an active role in managing port calls through PortXchange, the shipping line calling on their berths may experience significant lower emissions on their port calls. This is not something the terminal does deliberately, or experiences and knows right away, because it is a result of the attention and improved communication between the parties. And the impact on the whole ecosystem is enormous. In other cases, the benefits are more obvious, informing the shipping line that the bunker vessel will probably not finish on time for the vessel's planned departure time. This information allows the shipping line to take a calculated decision on whether to continue the bunker operation as planned, move it or cancel it,

Demurrage Mitigation, Profit, & Loss Training-September 29th



Join Brendan Hoffman, CEO of Haugen Consulting, on September 29th at the Greater Houston Port Bureau training room, as he discusses demurrage, and explores how to mitigate or profit from demurrage, and how exposures may be unwittingly created. Cost of training per person is \$100 to cover materials and lunch for Port Bureau members only.

Haugen Consulting LLC was established in 1995 and provides companies with training and services for demurrage for vessels, rail, and truck logistics. Since 2003, Haugen has been successfully conducting training programs worldwide and educating participants about the intricacies of tanker operations, laytime and demurrage. Their courses cover common demurrage pitfalls, best business practices, and cost-effective solutions to minimize disputes.



The key benefits of having a high port call efficiency per party are as follows:

Ports

Optimize use of their infrastructure, optimize throughput, reduce NOx emissions (less anchorage) and, in case of congestion, more vessels can be handled. Also, a high Port Call Efficiency reduces waiting times for the nautical service providers.

Terminals

Optimize use of their quays and cranes by reducing idle time. By having more reliable and real-time information on arrival of vessels, terminals can improve their berth planning. Also, working more efficiently results in happier customers for the terminal.

Shipping Lines

Reduce emissions and bunker consumption with Just in Time Arrivals. Also, by doing port calls faster, they can use their vessel and container fleet more efficiently.

Agents

Handle more operations by having better visibility and higher predictability about what is happening in the port. Being an enabler in reducing emissions and improving efficiencies boosts the competitive position of agencies.

From Validating to Real Time Optimization

Port Call Efficiency is available in ports working with PortXchange because planning and actual data is needed from parties in the port. It is also most valuable in combination with the tooling in the platform to actually make an impact on the overall Port Call Efficiency. You can start working with PortXchange on a small scale in the port with a 'coalition of the willing'. From there, the platform can expand to more users and parties, which will also improve the visibility and impact because every port is an ecosystem with many interdependencies.

Furthermore, optimization between ports can be achieved if both ports are connected and benchmarking between ports can be done to drive up your own performance. With the Port Call Efficiency metric, we want to take another step in standardizing the shipping industry and improving the collaboration between shipping companies, terminals, agents, and ports so that we can make an impact on emission reduction.

For more information about PortXchange visit: www.port-xchange.com.

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MSC and Shell Sign Decarbonizing Shipping **Collaboration Agreement**



Left to right: Carlos Maurer, EVP, sectors & decarbonization Shell: Bud Darr, EVP maritime policy and gov. affairs MSC Group; Soren Toft, CEO MSC; Melissa Williams, VP marine sectors & decarbonization Shell Marine; Huibert Vigeveno, Royal Dutch Shell downstream director. Photo courtesy of MSC

MSC Mediterranean Shipping Company ("MSC") and Shell International Petroleum Company Limited ("Shell") have agreed to work together to help accelerate the decarbonization of the global shipping sector. The long-term memorandum of understanding will help MSC and Shell to play enhanced roles in the energy transformation of shipping, as developers and early adopters of innovative technologies and fuel solutions.

Rodger Rees, Galveston Wharves port director and CEO, emphasized the economic growth opportunities that this terminal and its partners bring to The companies plan to develop a range of safe, sustainable and the region as he addressed elected officials, port partners and community competitive technologies that can reduce emissions from existing assets and help to enable a net-zero emissions future for shipping. members

"This new cruise terminal is a game-changer. This much-anticipated "MSC's efforts to decarbonize include strong partnerships with a range project will bring 800 new jobs, \$1.4 billion in local business services of companies across the industry. This partnership with Shell is a great revenue, \$5.6 million in state and local taxes, and incredible business example of the type of commitment that is needed to catalyze low-carbon development opportunities." solutions for the shipping sector," said Bud Darr, EVP maritime policy and government affairs, MSC Group.

"To reach that ultimate goal of complete decarbonization, we must look at a set of solutions. We need significant advances in research and development and fuel development. MSC welcomes partnerships like this with Shell that are designed to facilitate cross-sector information sharing and prove how collaboration is key in defining the best pathway to a netzero future," Darr added.

Melissa Williams, president, Shell Marine, said: "Shell wants to play a central role in the transition to net zero. Partnering with our customers to develop new technologies and fuels will help accelerate progress. Combining MSC's experience as one of the world's largest shipping companies with Shell's expertise as a global energy supplier will help bring about effective solutions for this vital part of the world economy."

MSC and Shell technical and commercial teams will collaborate to The construction project will generate an estimated 400 Texas develop and deploy net-zero solutions such as zero-emission fuels of the construction jobs and 400 local operations jobs. The 161,300-square-foot future and the technologies that will enable them, including fuel cells, terminal will cover 10 acres at Pier 10 in the easternmost area of the port with the ambition of contributing towards a zero-carbon flexi-fuel concept on Galveston Island. The port will build and operate a 1,800-space cruise vessel. They will also work together on energy efficiency technologies, parking lot at the terminal. including digital services and platforms.

Port Bureau Updates



Galveston Wharves, Royal Caribbean International Break Ground on New \$125 Million Cruise Terminal



Federal, State, and Local officials join Galveston Wharves port director/CEO Rodger Rees, Galveston Wharves chairman Albert Shannon, Royal Caribbean International V.P. of destination development Joshua Carroll, and other industry leaders.

The Port of Galveston, the fourth most popular cruise port in North America, hosted a groundbreaking ceremony on Saturday, August 14, to mark the start of construction on Royal Caribbean International's new \$125 million cruise terminal.

To be completed in fall 2022, the port's third cruise terminal is being built by Royal Caribbean to homeport its award-winning Oasis Class ship, Allure of the Seas. One of the world's largest, most innovative cruise ships and the first of its kind to call Galveston home, Allure will sail 7-night Western Caribbean itineraries starting November 2022. Both the young and young at heart will soon have their choice from an array of signature adventures and experiences on board, including a zip line that flies across the ship ten decks high, a pair of Royal Caribbean's heartpumping FlowRider surf simulators, dedicated spaces for kids and teens, and unparalleled entertainment across four stages - air, ice, water and stage – including the unique open-air AquaTheater.

Currently, the port is home to Royal Caribbean's Independence and Liberty of the Seas, the largest cruise ships homeported in Galveston today, the only cruise port in Texas.

Rice Business Executive Professional Development Scholarships to be Awarded by Port Bureau

Apply by September 24



The Greater Houston Port Bureau will award two scholarships to our membership for professional leadership development at Rice Business Executive Education's new Corporate Innovation program October 11-13. Each scholarship is valued at \$3,650 and includes full tuition, class materials, and daily

breakfast, lunch, and refreshments.

Innovation has become a mandate to ensure competitive advantage and profitability in today's complex business environment. The Corporate Innovation program equips participants with a comprehensive framework to successfully manage innovation at all levels. The highly interactive learning environment combines scientifically proven approaches to innovation with actionable tools to accelerate the application of corporate innovation practices for participants and their respective organizations. The program is led by Dr. Jing Zhou, the Mary Gibbs Jones Professor of Management at the Jones Graduate School of Business at Rice University.

Professionals employed by Port Bureau member companies can apply or nominate a candidate from their company. Program participants should be

leaders in their companies who can leverage proven corporate innovation models, develop strategies for creating and sustaining an innovation culture, and create new or improve existing products and services. For more on the program visit, https://business.rice.edu/executive-education/ open-enrollment-programs/corporate-innovation.

Port Bureau members may apply online. All applications or nominations must be received by the Port Bureau by September 24, 2021. Scholarship awards will be announced on September 30, 2021. For more information visit: www.txgulf.org/page/scholarship or call (713) 678-4300.

Executive professional scholarships have been generously underwritten by Rice Business Executive Education, Rice University.





Port of Houston Authority and U.S. Army **Corps of Engineers Formalize Project Partnership Agreement for Project 11**



From left: Port Houston Executive Director Roger Guenther; USACE Galveston District Col. Timothy Vail; Port Houston Commissioner Clyde Fitzgerald; Congressman Brian Babin; USACE Galv. District Deputy District Engineer Byron Williams; Congressman Jodey Arrington; Congressman Kevin Brady; Congressman AI Green; Port Houston Commissioner Roy Mease. Photo courtesy of Port Houston.

On August 19 the Port of Houston Authority (Port Houston) and U.S. Army Corps of Engineers (USACE) formalized the Project Partnership Agreement (PPA) for the channel's billion-dollar widening and deepening program, Project 11.

The PPA is the official document committing Port Houston to the responsibilities of the project as the local non-federal sponsor. It details the terms of the channel infrastructure expansion, and most significantly, permits the start of dredging the federal waterway. Project 11 is the 11th major improvement of the channel in its more than 100-year history.

"Our port serves as the anchor for our Texas region," said Port Houston Executive Director Roger Guenther. "It is a critical step to provide a wider, deeper channel that maintains two-way vessel traffic to more safely and efficiently deliver everyday goods and petrochemical products to and from the region. This expansion project will help us continue to lead as the top port in the nation, supporting over 3.2 million U.S. jobs including more than 1.35 million Texas jobs – and bringing \$802 billion in economic value to the nation."

U.S. House Representatives Congressmen Kevin Brady, Brian Babin, Al Green, and Jodey Arrington provided remarks illuminating this milestone's importance at the historic event.

The offices of U.S. House Representatives Congresswomen Sheila Jackson Lee, Sylvia Garcia, Lizzie Fletcher, and Congressman Dan Crenshaw were present along with USACE and Port Houston staff.

The 52-mile-long Houston Ship Channel is a vital economic engine for the Houston region, the state of Texas, and the U.S. Last year, the USACE ranked it as the busiest port in the nation – the channel handles as much vessel traffic as the three largest U.S. ports combined. Once widened and deepened, the waterway will continue to help support and benefit more than 200 private and public facilities alongside it.

Project 11's first dredge contract is expected to be awarded as early as this October.

For more information and details for Project 11 visit: txgulf.org/page/ Project11.

Join us at the Hybrid Commerce Club September 9, 2021



Join us for an informative presentation by David W. Tauber, Sr., Co-Chairman, Tauber Oil Company. The September Commerce Club is a hybrid event. As one of two Principals of The Tauber Companies, David actively directs the Carbon Black Feedstocks Division for all domestic and international market development.

Network with 240+ professionals from maritime, transportation, energy companies, and organizations in the port region. We hope you'll join us!

Location

Houston Marriott South at Hobby Airport

9100 Gulf Freeway Houston, TX 77017 11:15 AM - 1:00 PM

Information and RSVP

txgulf.org/commerce-club P (713) 678-4300

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AECOM Appoints Shailen P. Bhatt to its Global Enterprise Names Weaver Commercial Lead **Transportation Business**



AECOM, announced the appointment of Shailen P. Bhatt, a visionary transportation leader and policymaker, to its industry-leading global Transportation business.

Bhatt joins AECOM after serving as president and chief executive officer of the Intelligent Transportation Society of America (ITS America), a

Washington, D.C.-based association whose business, government and academic members are advancing the deployment of new transportation technologies, including connected and automated vehicles.

Over 15 years, Bhatt also served in senior government leadership roles as executive director for the Colorado Department of Transportation, cabinet secretary for the Delaware Department of Transportation, and as a presidential appointee at the U.S. Department of Transportation.

"Shailen is an influential voice in our industry, and AECOM's clients will benefit from his pioneering spirit, innovation, and long experience delivering transformational projects and technologies that improve mobility, access, safety and sustainability," said Jennifer Aument, chief executive of AECOM's global Transportation business. "He joins an amazing AECOM team delivering the future of transportation."



Enterprise Products Partners L.P. (Enterprise) announced that Carrie L. Weaver has been named vice president, Commercial, Evolutionary Technology, and will report to Co-Chief Executive Officer for Enterprise's general partner A.J. "Jim" Teague. The Evolutionary Technology team, which was formed in May 2021, consists of a dedicated technical team focused on identifying, evaluating and developing

opportunities related to the energy evolution, including carbon capture and storage, hydrogen, and low-carbon fuels. Weaver joins the team to develop commercial strategies to progress emerging ideas into profitable and sustainable market solutions and to advance discussions with external parties to develop projects leveraging Enterprise's midstream network and technical capabilities to support the evolving energy industry.

for Evolutionary Technology Group

"Enterprise is committed to being a leader in this changing energy landscape by providing new services that utilize our integrated asset footprint, expansive industry connectivity, reputation for reliability and ability to deliver dependable results for our customers," said Teague. "The addition of Carrie to our recently formed Evolutionary Technology team gives us an experienced and accomplished presence as we move forward with commercializing projects that are profitable and complement our business model, while advancing a low-carbon economy."

Weaver joined Enterprise in 2013 from Exxon Mobil Corporation and most recently served as vice president. Commercial. Regulated Pipelines for the eastern region. She holds a Bachelor of Science degree in Chemical Engineering from Virginia Tech.



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Event Information

Date: Friday, November 5, 2021 Time: 5:30 p.m. Location: Bayou City Event Center Company name listed in all press releases Houston, Texas Dress: Black-Tie Optional QUEEN OF THE FI

About the Annual Maritime Dinner

The Annual Maritime Dinner is one of the largest maritime formal business events in the U.S. with over 750 attendees, bringing together maritime, transportation, and industry professionals and their guests to recognize the Maritime Leader of the Year.

Attendees are treated to an elegant night filled with complimentary perks, including free valet or self-parking, open bar during the cocktail reception, professional photography, and wine service during the gourmet dinner. The cocktail reception features a silent auction.

The Greater Houston Port Bureau is a 501(c)6 non-profit trade association. Dinner proceeds benefit in part the Port Bureau's regional maritime advocacy efforts.

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As of August 12, 2021

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Callan Marine Announces New Director of Engineering



As part of ongoing growth and expansion, Callan Marine announced Chris Dearing as the new Director of Engineering.

Dearing brings extensive experience in the development and management of production and field engineering programs at some of the leading dredging companies in the nation. In his new role at Callan Marine, he will lead the development and training of

engineering personnel assigned to field-based and office-based roles.

"We are thrilled to add someone with Chris' experience and dedication to our team," said Maxie McGuire, president of Callan Marine. "Chris will drive the development of production estimating tools, production analysis tools, and survey and production field deliverables as we continue to expand and grow Callan in the competitive national market."

Dearing is a graduate of Texas A&M University in College Station, Texas, with a Bachelor of Science in Ocean Engineering.

Kirby Corporation Announces New Director of the Board Shawn D. Williams



Kirby Corporation ("Kirby") has announced the appointment of Shawn D. Williams as a new independent member of the Kirby Board of Directors effective July 27, 2021. Williams has an extensive background in the chemicals industry with professional and board experience.

Since June 2021, Williams has served as the chairman of the board of managers and acting chief executive officer of Covia Holdings LLC, a provider of minerals-based solutions serving the industrial and energy markets. Prior to his appointment as acting chief executive officer, Williams was chairman of the board of managers and also a member of the audit committee and compensation committee. Prior to joining Covia Holdings, he served as the chief executive officer of Nexeo Plastics Holdings, Inc., a global plastics distributor, from 2019 to 2020. Williams also served as the executive vice president of Nexeo Solutions, Inc. from 2012 to 2019.

Prior to joining Nexeo Solutions, from 2007 to 2012, Williams served as president of Momentive Global Sealants, a global specialty sealants business, and president of Momentive Performance Materials, a silicone specialty materials business. Earlier in his career, he spent 22 years working in leadership roles at General Electric Company leading a variety of industrial and material businesses globally. Since March 2021, Williams has served as a member of the board of directors at TETRA Technologies, Inc., an oil and gas services company specializing in completion fluids and water management solutions, and as a member of its audit committee and human capital management and compensation committee. He earned his MBA from the Haas School of Business at the University of California, Berkeley, and a B.S. in Electrical Engineering from Purdue University.



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August Short-Term Energy Outlook

The August Short-Term Energy Outlook (STEO) remains subject to heightened levels of uncertainty related to the ongoing recovery from the COVID-19 pandemic. U.S. economic activity continues to rise after reaching multiyear lows in the second quarter of 2020 (2Q20). U.S. gross domestic product (GDP) declined by 3.5% in 2020 from 2019 levels. This STEO assumes U.S. GDP will grow by 6.6% in 2021 and by 5.0% in 2022. The U.S. macroeconomic assumptions in this outlook are based on forecasts by IHS Markit. Our forecast assumes continuing economic growth and increasing mobility. Any developments that would cause deviations from these assumptions would likely cause energy consumption and prices to deviate from our forecast.

Global Liquid Fuel



- Brent crude oil spot prices averaged \$75 per barrel (b) in July, up \$2/b from June and up \$25/b from the end of 2020. Brent prices have been rising this year as result of steady draws on global oil inventories, which averaged 1.8 million barrels per day (b/d) during the first half of 2021 (1H21) and remained at almost 1.4 million b/d in July. We expect Brent prices will remain near current levels for the remainder of 2021, averaging \$72/b from August through November. However, in 2022, we expect that continuing growth in production from OPEC+ and accelerating growth in U.S. tight oil production-along with other supply growth-will outpace decelerating growth in global oil consumption and contribute to Brent prices declining to an average of \$66/b in 2022.
- We estimate that 98.8 million b/d of petroleum and liquid fuels will raise production through the end of 2021 in line with targets it were consumed globally in July, an increase of 6.0 million b/d from announced on July 18. We expect OPEC crude oil production will July 2020 but 3.4 million b/d less than in July 2019. We forecast rise to an average of 28.7 million b/d in 2022. that global consumption of petroleum and liquid fuels will average 97.6 million b/d for all of 2021, which is a 5.3 million b/d increase EIA's most recent monthly data show U.S. crude oil production was from 2020. We forecast that global consumption of petroleum and 11.2 million b/d in May. We expect production to be relatively flat liquid fuels will increase by 3.6 million b/d in 2022 to average 101.2 through October before it starts rising in November and December million b/d. and throughout 2022. Forecast U.S. crude oil production for 2022 averages 11.8 million b/d, up from 11.1 million b/d in 2021.

Port Bureau News

• U.S. gasoline consumption averaged 8.6 million b/d in 1H21, up from 8.3 million b/d in 2H20 but below the 9.3 million b/d in 2H19. Our latest estimates show that gasoline consumption in May through July was higher than we had previously expected. Growth in employment and increasing mobility have led to rising gasoline consumption so far in 2021. In this STEO, forecast U.S. gasoline consumption averages 8.8 million b/d in 2021, up from 8.0 million b/d in 2020. We expect the trend of rising employment and mobility to continue into next year, and as a result, we forecast gasoline consumption to average almost 9.0 million b/d in 2022. However, our assumption that a relatively high share of the workforce will continue working from home next year compared with before the pandemic keeps our forecast gasoline consumption below the 2019 level of 9.3 million b/d.

• U.S. regular gasoline retail prices averaged \$3.14 per gallon (gal) in July, the highest monthly average price since October 2014. Recent gasoline price increases reflect rising crude oil prices and rising wholesale gasoline margins, amid relatively low gasoline inventories. We expect that prices will average \$3.12/gal in August before falling to \$2.82/gal, on average, in 4Q21. The expected drop in retail gasoline prices reflects our forecast that gasoline margins will decline from elevated levels, as is typical in the United States during the second half of the year. We forecast OPEC crude oil production will average 26.5 million

b/d in 2021, up from 25.6 million b/d in 2020. OPEC crude oil production in the forecast rises from 25.0 million b/d in April to an average of 27.1 million b/d in 3Q21. Our expectation of rising OPEC production is primarily based on our assumption that OPEC



- In July, the natural gas spot price at Henry Hub averaged \$3.84 per million British thermal units (MMBtu), which is up from the June average of \$3.26/MMBtu. We expect the Henry Hub spot price will average \$3.71/MMBtu in 3Q21 and \$3.42/MMBtu for all of 2021, which is up from the 2020 average of \$2.03/MMBtu. Higher natural gas prices this year primarily reflect two factors: growth in liquefied natural gas (LNG) exports and rising domestic natural gas consumption for sectors other than electric power. In 2022, we expect the Henry Hub price will average \$3.08/MMBtu amid rising U.S. natural gas production.
- We expect that U.S. consumption of natural gas will average 82.5 billion cubic feet per day (Bcf/d) in 2021, down 1.0% from 2020. U.S. natural gas consumption declines in the forecast, in part, because electric power generators switch to coal from natural gas as a result of rising natural gas prices. In 2021, we expect residential and commercial natural gas consumption combined will rise by 1.2 Bcf/d from 2020 and industrial consumption will rise by 0.2 Bcf/d from 2020. Rising natural gas consumption in sectors other than the electric power results from expanding economic activity and colder

winter temperatures in 2021 compared with 2020. We expect U.S. natural gas consumption will average 83.8 Bcf/d in 2022.

- We estimate that U.S. natural gas inventories ended July 2021 at almost 2.8 trillion cubic feet (Tcf), which is 6% lower than the five-year (2016-20) average for this time of year. More natural gas was withdrawn from storage during the winter of 2020-21 than the previous five-year average, largely as a result of the colder-than-average February temperatures that constrained natural gas production while it increased consumption. We forecast that inventories will end the 2021 injection season (end of October) at 3.6 Tcf, which would be 4% below the five-year average.
- We expect dry natural gas production will average 92.9 Bcf/d in the United States during 2H21—up from 91.4 Bcf/d in 1H21—and then rise to 94.9 Bcf/d in 2022, driven by natural gas and crude oil prices, which we expect to remain at levels that will support enough drilling to sustain production growth.





- We forecast that U.S. retail sales of electricity will increase by 2. in 2021 after falling by 3.9% in 2020. The largest forecast increase in electricity consumption occurs in the industrial sector, dri by rising levels of economic output. We forecast U.S. retail s of electricity to the industrial sector will grow by 5.3% this y Retail sales of electricity to the commercial sector also grow in forecast, but they grow at the slightly slower pace of 2.2% in 2 because some workers will continue working from home instead in office buildings. We forecast U.S. residential electricity sales grow by 1.5% in 2021 as a result of colder temperatures in 1 compared with 1Q20 and because of hot temperatures in June.
- We expect the share of electric power generation produced natural gas in the United States will average 36% in 2021 and 3 in 2022, down from 39% in 2020. The forecast share for nat gas as a generation fuel declines in response to our expectation a higher delivered natural gas price for electricity generators, wh we forecast will average \$4.46/MMBtu in 2021 compared with average of \$2.39/MMBtu in 2020. As a result of the higher exped natural gas prices, the forecast share of generation from coal r from 20% in 2020 to 23% this year but falls to 21% next year. N additions of solar and wind generating capacity are offset somew by reduced generation from hydropower this year, resulting in forecast share of all renewables in U.S. generation to average 2 in 2021, about the same as last year, before rising to nearly 2 in 2022. The nuclear share of U.S. electricity generation decli from 21% in 2020 to 20% in 2021 and to 19% in 2022 as a result retiring capacity at some nuclear power plants.
- We forecast that planned additions to U.S. wind and solar general capacity in 2021 and 2022 will increase electricity generation fi those sources. We estimate that the U.S. electric power sector ad

.7% ease iven ales vear. the 021 d of will		14.7 gigawatts (GW) of new wind capacity in 2020. We expect 17.6 GW of new wind capacity will come online in 2021 and 6.3 GW in 2022. Utility-scale solar capacity rose by an estimated 10.6 GW in 2020. Our forecast for added utility-scale solar capacity is 16.2 GW in 2021 and 16.6 GW for 2022. We expect significant solar capacity additions in Texas during the forecast period. In addition, about 5 GW of small-scale solar capacity (systems less than 1 megawatt) will come online each year during 2021–22 in the STEO forecast.
Q21 by 37% ural	•	Coal production in our forecast totals 607 million short tons (MMst) in 2021, an increase of 13% over 2020. We expect electric sector consumption of coal to be 33 MMst greater than supply in 2021, contributing to significant inventory draws. In 2022, we expect coal production to decline by 7 MMst (1%).
n of hich n an cted ises New vhat the 20%	•	We expect coal consumption for electricity generation to grow by 75 MMst (17%) in 2021 as a result of relatively high natural gas prices that make coal more competitive for dispatch in the electric power sector. Forecast electric power sector demand for coal then falls by 47 MMst (9%) in 2022. We expect demand for coal for other uses to rise by 5 MMst (13%) in 2021 and by 3 MMst (7%) in 2022. This increase is mostly for coking coal, which is used in steelmaking.
23% ines It of ting from Ided	•	We expect coal exports to total 90 MMst in 2021, a 21 MMst (30%) increase from 2020. In 2022, forecast coal exports rise an additional 16 MMst to 106 MMst. High global steel prices are driving these increases in coal exports, and trade tensions between China and Australia continue to support U.S. thermal coal exports.

The comprehensive report is available at www.eia.gov/outlooks/steo.

July Commerce Club





Photos courtesy of ILA

July 2021 Commerce Club Featuring Alan Robb, President, South Atlantic and Gulf Coast District-ILA

Evolution of Maritime Labor



President

Coast District - ILA

Gulf Coast District-ILA, highlighted the value of the role maritime labor in his talk at the Port Bureau's Commerce Club on July 8. The event was hosted at the Houston Marriott South.

Alan A. Robb, president of the South Atlantic and

Robb became acquainted with longshoreman work

at the docks from an early age, accompanying his father on trips to the port as a child. He began his career as a longshoreman in 1979, cleaning forklifts as a member of ILA Local 1273, and later started his own company in 1989. "It's let me see things South Atlantic and Gulf from both sides of how this business works," Robb said. "There's never a time I can't put myself in somebody else's situation."

The work of the U.S. longshoreman - "men along the shore" - has changed dramatically from its earliest days in colonial America, with the number of ILA workers reaching its heyday during the Great Depression in the 1940s. Most workers were hired right on the pier and all cargo was break bulk. In the 1950s, containerization began changing shipping, impacting how work was done along the shore. The Ideal X, loaded with 58 containers, first called on the Port of Houston in 1956. Robb noted its cargo included 15,000 tons of petroleum. Just two decades later, Barbours Cut container terminal opened in 1977.

As shipping methodologies changed, so did ILA processes. Traditional hiring procedures once took hours. Technology now allows them to hire 30-plus gangs (approximately 600 jobs) in less than 20 minutes. Most workers no longer make daily trips to the union hall; they utilize various technologies, including an ILA app on smart phones.

"We've just gotten smarter," observed Robb. "Our business is four times what is used to be. We recognize that we can't keep hiring jobs the same wav we did."

Dockside labor, said Robb, was once renown for physical strength, but port operations today rely on flexible, trained workers that are certified to operate million-dollar equipment such as Gantry and RTG cranes. "We've really changed the way we hire," he said. "We track all the data on who's got the qualifications and who doesn't. If a worker is not qualified, we don't dispatch."

ILA workers do everything from loading ships to maintenance and repair to warehousing or tank cleaning. Robb stressed the skill and the value to employers of an ILA worker, describing how employers can utilize 200 workers one day, then 16 the next day, if that is what a job requires. "They are highly skilled, drug-free professionals. You can get incredible production," emphasized Robb. "We have the ability to give you a fulltime work force at a part-time cost."

The future of maritime labor will continue to rely on technology, particularly the technology that allows interaction with management for labor forecasts, vessel arrival forecasts, and scheduling. "We can be proactive. Now we know on any given day how many longshoremen we



will need in Freeport, Corpus Christi or Beaumont," said Robb. "We can even bring some guys in, if help is needed with the labor force. It really has evolved."

Wrapping up his presentation, Robb noted that utilizing technology had made the ILA increasingly more efficient and effective. "The ILA really is the best choice for your maritime labor needs," he concluded.

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