

Greater Houston Port Bureau

Port Bureau News

Quarter Four / 2023



2023 Maritime Leader
of the Year
David Grzebinski

Also in this Issue: Captain's Corner | Project 11 Update | Port Watch | Women in Maritime Happy Hour
The Worldwide Sustainability of Maritime Education and Training |
Decision Making in Energy Operations | 2023 Maritime Leader of the Year |
Q&A with Maarten Poort, Shell | EIA Winter Fuels Outlook 2023-2024 |
Commerce Clubs |

Contents



About the Cover

David Grzebinski, president and CEO of Kirby Corporation, was honored by the Greater Houston Port Bureau for his steadfast commitment to improving the greater Houston port region at our 94th Annual Maritime Dinner on August 26. Read more on page 16.

Captain's Corner

Celebrating Our Port Achievements



Project 11-Accelerating the Houston Ship Channel expansion for the economic and environmental benefit for the region. Port Houston and private industry are working together for today and future needs. To read more on Project 11 and updates, see page 4.

Feature Articles



Connect with us on:



Captain's Corner:
 Celebrating Our Port Achievements.....3
Project 11-Accelerating Houston Ship Channel Expansion for the Economic and Environmental Benefit for the Region.....4
Port Watch: Fact or Fiction.....6
The Worldwide Sustainability of Maritime Education and Training (MET).....8
Women in Maritime Happy Hour:
 Captain Nicole Rodriguez, MPE & VTS Tour.....11
Decision Making in Energy Operations:
 A Review of the Operations Literature on How Decisions Could be Made in the Energy Industry.....12
Jim Black Leaves Legacy as Dedicated Leader in Houston Port Region.....15
2023 Maritime Leader of the Year:
 David Grzebinski, President & CEO of Kirby Corporation.....16
 Shell: Q&A with Maarten Poort.....20
EIA Winter Fuels Outlook 2023-2024.....26
CommerceClubs.....29
Events/News/Contact Us.....31
Executive Partners.....32

Advertising Index

Buffalo Marine Service, Inc.....11
 Cooper/Ports America.....23
 Houston Pilots.....10
 Neeley Equipment.....28
 Rice Business Executive Education.....14
 Suderman & Young Towing.....31

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Captain Eric Carrero at the 94th Annual Port Bureau Maritime Dinner

Last month we had our 94th Annual Maritime Dinner, and it was a wonderful gathering of many friends of the Greater Houston Port Bureau. We had a record-breaking 86 tables sold, with over 800 people in attendance to recognize our 2023 Maritime Leader of the Year, David Grzebinski. Everything was perfect and a big THANKS to the Dinner Committee for their dedication and attention to detail to ensure the evening was memorable for our honoree and for all of us. Also - and very important to me - thanks to all for making me feel so welcome. I was able to spend quality time with so many of our members and their guests, and it was definitely a good way to meet everyone in my second month with the Port Bureau.

A big highlight of the evening was our lounge set up after the program ended. We had about 550 guests in that area enjoying an amazing networking time, and the hors d'oeuvres, gourmet coffee bar, jazz band, and caricaturist were splendid. If you missed it, I promise you it will be even better next year, so you must join us.

The contributions of our honoree to our port community were acknowledged with so many city, county, and state proclamations. As keynote speaker Karrie Trauth stated, David is leading Kirby in many safety and environmental initiatives and his commitment is inspirational. I urge you to take a quick glance at Kirby's website to learn more about their goals and ongoing efforts towards decarbonization. I also invite you to learn about the Blue Sky Maritime Coalition (David is a founding member and director), as it will give you a good perspective of his ideas and projects to support the transition to net-zero emissions. I recently had the honor of attending the christening of the first U.S. hybrid electric towboat, Kirby's *M/V Green Diamond*, and I can't wait to see what else the future holds for Kirby under his leadership.

The topic of decarbonization is growing worldwide, and we are doing our part at the Port Bureau to facilitate discussion and collaboration in our area. At our last Commerce Club luncheon, we had board members Geoff Gauthier and Vincent DiCosimo, addressing decarbonization in

the maritime sector. There are different ways to achieve decarbonization goals, such as switching to low-carbon or zero-carbon fuels for ships and vehicles, implementing hybridization and electrification of port equipment and infrastructure (cranes, trains, trucks, and shore power systems), and optimizing port operations and logistics through digitalization, automation, and data analytics to reduce energy consumption and emissions.

The Port Bureau is taking the lead in local port operations optimization with our PilotTracker and Synchronizer applications by PortXchange. We offer these tools to our members to keep track of vessels and accurately know real-time terminal arrivals. By knowing this, the terminals can optimize vessel speed, thus eliminating idle time on arrival. Companies can reduce fuel consumption, emission footprint, and consequently cost savings. The ultimate goal is to create more sustainable and resilient port communities that contribute to global efforts. Decarbonization efforts can also lead to improved air quality in our ports and surrounding areas, and a more competitive and attractive business environment.

As you can see, our 2023 honoree, our board members, and the Port Bureau are working together towards near-term reductions in emissions. I'm very proud to say that, once again, we are leading the nation in this effort — and I know we'll be very successful in our collaborations. Why do I know that? It is simple: we have the best people in our ports! #myportcommunityisbetterthanyours.



CAPT Eric Carrero, USCG (Ret.)
 GHPB President

Project 11

Accelerating Houston Ship Channel Expansion for the Economic and Environmental Benefit of the Region



Photo courtesy of Port Houston.

The Houston Ship Channel is a federally authorized deep draft navigation channel that serves the greater Houston region. It is the busiest waterway in the U.S., with more than 9,000 deep draft vessels and 200,000 barge transits per year. The eight public terminals and more than 200 private facilities along the 52-mile ship channel collectively are recognized as the nation’s number one port for waterborne tonnage, support more than three million United States jobs, and generate \$906 billion in national economic benefits.

As the local advocate of the Houston Ship Channel, Port Houston is working now for the future needs of vessels and businesses served by the channel. Along with the U.S. Army Corps of Engineers-Galveston District, Port Houston is carrying out the Houston Ship Channel Expansion, also known as Project 11, at an unprecedented pace.

Project 11, the 11th major improvement project in Houston Ship Channel history, includes six segments, twelve major construction packages, and a focus on beneficial use of the new work dredged material. Major project features include widening the channel by 170 feet (from 530 to 700 feet) along its Galveston Bay reach, widening the Bayport and Barbours Cut Channels to 455 feet, deepening some upstream segments up to 46.5 feet, making other safety and efficiency improvements (i.e., bend easings), and constructing new environmental features.

On the environmental front, Port Houston and the U.S. Army Corps of Engineers ("USACE") have committed nearly 100% of the non-silt material dredged — equating to more than 15 million cubic yards— from the Galveston Bay portion of Project 11 to create approximately 10 acres of bird islands, 800 acres of marsh, and 324 acres of oyster reefs. In addition, Project 11 is expected to improve regional air quality by between 3% and 7% by increasing the efficiency of vessel movements and reducing congestion in the channel.

Under Port Houston’s accelerated plan, upland site preparation commenced in 2021, dredging began in April 2022, and Project 11 is

currently on track for completion at the end of 2026, subject to additional federal funding.

The chart below provides a high-level summary of the completed and upcoming Project 11 construction packages.

As of September 2023, 83 percent of the total project is funded. Port Houston contributions and federal appropriations for the project total \$772.7 million to date — \$600 million advanced by Port Houston, \$19.5 million in federal funds for the “new start” designation in 2021, \$142.5 million of 2022 Infrastructure Investment and Jobs Act funding, and \$10.7 million included in the 2023 USACE-Galveston District Work Plan. An additional \$178 million or more of federal funding is still needed by our Galveston District partners to design and construct the upstream segments 4 to 6.

Simply put, the improvements being designed and constructed by Port Houston and USACE should help ensure that the Houston Ship Channel continues to safely provide for the continued growth of our maritime commerce, benefiting the many users of the channel, the facilities alongside it, and the local, state, and national economy.

For more information, please visit: <https://www.expandthehoustonshipchannel.com>, email the project team at project11@porthouston.com, or call the community information line at (713) 670-1000.

Project 11 Tentative Procurement and Construction Timeline

	Package	Segment	Description	Advertise		Construction
Completed	1	1A	Dollar Reef Oyster Mitigation	Aug 2021	USACE	Jan - Oct 2022
	2	4	Bellway II Site Clearing, Grubbing, and Concrete Demolition	Feb 2021	Port	Jun 2021 - Jan 2022
	Abandoned Pipeline Removal	1B, 1C, 2	Abandoned Pipeline Removal	Aug 2021	Port	Jan - Jul 2022
Ongoing	3-4A	1A	Bolivar Roads to Redfish	Jul 2021	Port	Feb 2022 - Mar 2023*
	4B-5	1B, 1C, 2	Redfish to Bayport Ship Channel	Nov 2021	Port	Oct 2022 - Sept 2024
Funded	6	1C	Bayport Ship Channel to Barbours Cut	Oct 2023	Port	Expected to commence February 2024
	7	3	Barbours Cut	Sept 2023	USACE	Expected to commence March 2024
	8 - E2C	4	East 2 Clinton Dredged Material Placement Area Construction	Oct 2023	USACE	Expected to commence April 2024

*Construction of Long Bird Island mitigation feature remains ongoing.



EXTRA! EXTRA!! EXTRA!!
ILLUSTRATING THE AWFUL CALAMITY
DESCRIBED IN THE
NEW YORK HERALD.
THE WILD ANIMALS BROKEN LOOSE FROM CENTRAL PARK !!
Terrible Scenes of Mutilation !!
SAVAGE BRUTES AT LARGE!!!

Monday, Nov. 9, 1874, portended to be a morning like no other for the residents of Gotham, for a day of horror was unfolding throughout Central Park and the surrounding streets of Manhattan. The *New York Herald's* front page was emblazoned with the headline banner that wild animals had escaped from the Central Park Zoo. It was a rampage precipitated by an enraged rhinoceros that had crashed through its cage and numerous others, which quickly cascaded into a parade of horrors: a panther mauling panicked citizens on 59th street; a Bengal tiger shot on Madison Avenue; intrepid citizens armed with rifles stalking a lioness on Broadway; and worshippers within the confines of a church on West 53rd Street terrorized by a maniacal panther racing about the pews.

According to the *Herald*, 49 had been killed and two hundred injured by the rampaging beasts. Quite naturally, great trepidation ensued. Mothers dashed to nearby schools to rescue their children from the chaos; armed men rushed towards Central Park to eradicate the predatory beasts; scores of police officers sallied forth to protect the masses from the unleashed beasts roaming about the periphery of Central Park; and intrepid reporters were unleashed upon the city in search of the carnage.

The situation was incomprehensible. Readers of one of the nation's largest newspapers were transfixed by tales of an anaconda devouring a giraffe and a tiger leaping onto a departing ferry and preying upon trapped passengers. That is, until the article's last sentence stating, "the entire article given above is a pure fabrication." Rest assured, the news you are about to read in this brief report is not of that ilk.

Central Park is certainly far afield from Hermann Park and located in a region with far fewer people; however, the port several miles east of its location welcomes nearly twice the number of ships as the port of New York. Why is that? Simply head east on 225 and try to count the number of storage tanks and flare stacks. There is no end to it as reinforced by the armada of chemical tankers that descend upon the scores of docks and gorge themselves with

tons of hydrocarbon constituents. In September alone, nearly 200 chemical tankers moored along the upper Houston Ship Channel – 8% more than the previous month. Thus far, 2023's chemical tanker count exceeds last year by 8% for Houston. LPG vessels are also in positive territory for both the year and the month by 8% and 2% respectively. Container vessel calls trumped the aforementioned categories with a 12% year-to-date rise. Unfortunately, 2% fewer ships of this category arrived over the last month.

Overall, Houston's vessel arrival picture trails 2022 by 2%, primarily due to a 6% decline in tanker arrivals; a 21% drop in vessels devoted to bulk cargoes; a 13% fall in general cargo vessel calls; and a 32% plunge in ocean-going barge traffic. This could be a taste of a more significant trade tapering associated with the ever-looming recession or a mere adjustment after the record post-COVID rebound of 2022. Whatever explanation one chooses, the picture will certainly be much clearer in a few months.

Sailing south, the Port of Texas City tallied its best arrival count for the year netting a 23% monthly jump. Like Houston, chemical tankers dominated the trade landscape with a 13% count climb in the last month and 7% increase over 2022. While 66% of the port's trade portfolio is dominated by those vessels that carry chemicals, tankers logged a very robust 33% monthly gain. On a less sanguine note, tankers are down for the year by an unsightly 18% despite September's bounty. If not for the year-over-year tanker arrival deficit, Texas City most likely would not be lagging last year's vessel arrivals by 4%.

Nestled near the entrance of Galveston Bay, lies the port that bears its name. Galveston's monthly percentage tally was nearly the polar opposite of nearby Texas City as evidenced by 13% fewer arrivals. One third of the fall was due to a 16% drop in chemical tankers – the port's second biggest customer. Nonetheless, this is nothing to fret about since the cruise ship business continues to grow as reflected by an 18% higher count over the previous year. All told, Galveston currently outpaces last year's arrival by 7%.

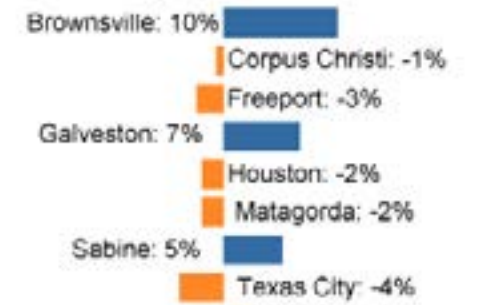
If one alters course to starboard upon entering the waters of the Gulf, the Freeport entrance channel would quickly appear on the radar. Freeport's string of 100-plus arrivals per month has abated somewhat over the last year. It trails 2022's wake by 3% after the recent monthly wane of the same. While the port is quietly luring evermore business to its docks, LNG, LPG and container vessels have been this year's darlings with current year-to-date gains of 41%, 5% and 42% respectively. The primary reason for 2023's lackluster number is . . . chemical tankers! Thus far, 8% fewer of these ships graced the docks of the port in 2023.

What Freeport lacked in the chemical tanker category, Corpus Christi gained. This vessel contingent is the 2nd largest vessel type that calls upon Corpus Christi. In spite of last month's 8% dip, it remains 19% ahead of last year's count. In total, the port lags last year's record pace by a mere 1%; all of which is due to 3% fewer tanker arrivals. Tankers comprise nearly 50% of the total vessel arrival portfolio. This could not be further from the picture from the Port of Brownsville, an international maritime gateway that relies heavily on bulk vessel calls. Albeit, Brownsville's arrival counts are a mere 10% of that of Corpus Christi. Be that as it may, Brownsville's 2023 figures lead that of last year by 10% - in no small part due to the impressive 33% year-over-year gain in bulk arrivals.

On the opposite end of the Lone Star State's border, the port of Sabine continues to attract a record number of ships to its waterways. Its arrival ledger is dominated by four vessel categories: tankers, chemical tankers, LPG and LNG. All of which – save tankers – are handsomely ahead of last year's arrival tallies. Chemicals dominated the year-to-date gains by an impressive 32% followed by LPG at 13% and LNG at 8%. Tankers, on the other hand, despite a 9% monthly rally, remain 8% in the red for the year. No matter, Sabine continues to out distance last year's arrival count by a comfortable 5%.

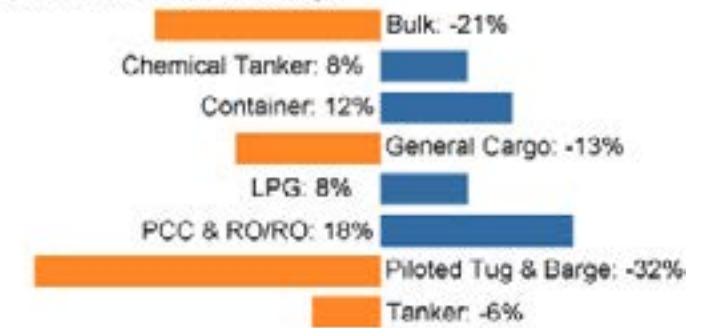
The color red also reared its head on the brownwater front given that 1% fewer tows sailed across the waters of Galveston Bay vis-à-vis

Deepdraft Vessel Arrivals by Port Q3 Year-to-Date Percent Change



Source: Greater Houston Port Bureau's Marine Exchange of Texas

Houston Deepdraft Arrivals by Type Q3 Year-to-Date Percent Change



Source: Greater Houston Port Bureau's Marine Exchange of Texas

2022's tow traffic. On a positive note, August posted the highest tow count for the year – a month that is typically tepid. Hopefully, the brownwater transits will rebound robustly during the final quarter of the year. Thus, eliminating the red.

Many a newspaper editor saw red after the *Herald's* fabulist sensationalism of Nov. 9, 1874. James Bennett, Jr., the *Herald's* owner, relished the outcry, noting that all publicity benefited the paper's circulation regardless of the story's conjuring. In fact, he opined, his article had accomplished an invaluable service by making the public aware of the deplorable conditions at the Central Park Zoo. Thus, if action was not taken, his tale of horror could become a reality. No doubt, a splendid piece of rationalization that failed to acknowledge the impact the media could have on the masses. Thankfully, we live in more responsible times where editors and newscasters would not permit H.G. Wells to broadcast an alien invasion or print the likes of the Great Moon Hoax of 1835. Certainly, the CIA's Operation Mockingbird in the 1950s to test the manipulation of the public via television reinforced that all which is reported must indeed be true. Of course, in the event it isn't, it must be for the good of the public!



Tom Marian
Buffalo Marine Service
buffalomarine.com

The Worldwide Sustainability of Maritime Education and Training (MET)



Photo courtesy of Jessica Perez.

“Sustainability regarding Maritime Education and Training is a challenge that is global in scope and need. In the greater Houston area, we are fortunate to have many stakeholders taking an active part in furthering maritime education workforce pathways from the junior high level up through area universities. With multiple maritime programs in place at area high schools as its base, the Houston area is led by the Port Houston Partners in Maritime Education non-profit organization. Stakeholders from the port, area industry organizations, public schools, colleges, universities, and employers work together through the program to establish and maintain pathways to bring young people into the industry. Academia’s seat at the table allows them to keep their programs up to date with the needs of employers and the fast-moving technological changes and requirements of the industry. This program is replicable around the country and globally”

John Hark

Adjunct Professor at Texas A&M Galveston
Regional Director for Bertling Logistics



Photo courtesy of Jessica Perez.

The maritime industry significantly contributes to our local economy. This was particularly highlighted during the pandemic when consumers faced a shortage of their preferred goods in stores. The situation also emphasized that we no longer operate within an American, German, or Asian market but rather in a global market. The more interconnected and interdependent world economy, or globalization, is gradually replacing isolated national economies. To maintain the sustainability of globalization, it is important to consider the sustainability of maritime education and training as well as invest in its future.

The International Association of Maritime Universities (“IAMU”) hosted their 2023 Student Forum at the International Maritime Organization (“IMO”) headquarters in London, England, last July. The IAMU is a global network of leading maritime universities providing Maritime Education and Training (“MET”) for seafarers in the global shipping industry. The Student Forum consisted of 44 maritime universities and provides a valuable platform for maritime student leaders to connect and collaborate. Students identify and discuss important issues related to specific topics, develop ideas, strategies, and solutions that deal with those issues, and give presentations outlining their group’s work.

Representing Texas A&M University at Galveston (“TAMUG”), I participated in a student group focused on the “Sustainability of Maritime Education and Training” (or “MET”). Led by Professor Jeric Bacasdoon from the World Maritime University and Arvind Natrajan, an industry advisor from India representing the International Chamber of Shipping, our group engaged in various discussions on the factors that impact the

Without properly equipping maritime educational institutions, the industry faces a serious sustainability of manpower. We are in very serious times.

Dr. Mawuli Afenyo
PhD, Assistant Professor Maritime Business Administration
Texas A & M University

The sustainability of maritime education is strongly reliant on the maritime industry as it pushes to maintain competitive wages, work-life balance, and opportunities for growth within the industry. Additionally, Maritime should no longer be the best kept secret, so in order for maritime educational systems to thrive; we have to continue making it attractive, affordable and accessible to all.”

Jonathan Rucker Sr
Senior Level Masters of BA & Logistics w/ License Option Texas A & M
University Galveston

sustainability of MET. These included maritime university curriculums, manufacturers, shipowners, and knowledge of Marpol An. VI. Throughout the sessions, emphasis was placed on the importance of collaboration.

As the participants worked together, they identified several challenges that need to be addressed to ensure the sustainability of MET. The first challenge discussed was the scarcity of maritime instructors with proficiency in the maritime industry. While our Student Forum participants agreed that maritime education could be elevated if universities hired more professors involved in the maritime industry, there

is a limited pool of professors with maritime experience available. In addition, professors and universities must also balance teaching and research publication demands, which can limit industry involvement.

To tackle this predicament, the Student Forum proposed an “Exchange Teaching” program as a viable option. This would work in a similar fashion as a Foreign Exchange student program. By having professors exchange institutions, a more sustained curriculum within MET all around the world could be maintained.

The Student Forum also discussed the shortage of seafarers. They expressed their concern regarding the main challenges of the seafarer profession, which includes maintaining a work-life balance, dealing with excessive workload, and fulfilling job duties. Since many seafarers have traditionally come from maritime families and are familiar with the industry from a young age, we proposed that maritime education be introduced to children early on, preferably at an elementary school level.

We recommended that maritime museums be given more attention and support from industry to further this goal. The maritime profession should also be included in the list of job opportunities taught at interactive museums. Another important factor the Student Forum suggested is that maritime schools should offer more scholarships to maritime students to help address the problem of high tuition fees.

The last challenge the Student Forum recently discussed was staying current with rapidly advancing technology. It is widely acknowledged that technology is evolving quickly, making training difficult. To overcome this challenge, the Student Forum proposed upgrading campus facilities and resources to incorporate modern training methods. Though we recognized that not all schools have equal funding to tackle this challenge, we emphasized the importance of industry engagement in facilitating technology-related training.

Locally, we have many resources to enhance the sustainability of MET. Many area stakeholders are actively engaged in schools throughout the region, and progress could be furthered by involving parents and school board members in maritime education. TAMUG boasts exceptional professors who actively seek collaboration with industry professionals and even participate with students by sailing with us aboard the Kennedy training ship during the summer break.

What we do in our area can be more widely shared and help meet the goals of the sustainability of MET worldwide. The importance of MET sustainability as well as the other topics examined at the 2023 IAMU Student Forum will be published on the IAMU website at <https://iamu-edu.org/>.



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About the Author

Jessica Perez is pursuing her master's degree in Maritime Business Administration and Logistics through the 3+2 degree program at Texas A&M University - Galveston Campus with expected graduation in December 2023. Her academic excellence and leadership qualities have earned her recipient of many scholarships. She has been a volunteer and networking coordinator for the Student Association of Maritime Administrators ("SAMA") since 2021. Perez is currently employed at Chevron in Houston in commercial shipping as a demurrage specialist.



Women in Maritime Happy Hour: Captain Nicole Rodriguez, MPE & VTS Tour

The 52-mile Houston Ship Channel ("HSC") has more than 272 public and private facilities, housing chemical plants, refineries, petroleum storage facilities, container facilities, and other industrial facilities. It is also a vital economic engine bringing \$440 billion in economic value to the state of Texas, \$906 Billion in U.S. economic impact nationwide and creates nearly 1.3 million jobs in Texas. It is the largest port in Texas and the busiest U.S. deep-draft international trade waterway, accounting for nearly 60 percent of deep-draft vessel arrivals in Texas.

Who manages and monitors the HSC to keep the waterway and community safe from groundings, allisions, collisions and attacks? Guest speaker Captain Nicole Rodriguez, Deputy Commander, Sector Houston-Galveston and past Chief of Prevention, will provide an overview how the Coast Guard operates the HSC. A tour of the Vessel Traffic Services ("VTS") will also be provided. VTS Houston-Galveston includes Coast Guard and county and city personnel working to facilitate safe, efficient waterborne commerce. They help prevent groundings, allisions, and collisions by sharing information and implementing appropriate traffic management measures.

We encourage our women membership to attend and bring early and mid-career women from their organization as their guests. This is a free event and includes food and drink. You must register and provide your driver's license number or ID when checking in for the event at the gate. **No walk-ins will be accepted.**

For details, sponsorships, or to register, go to:
<https://www.txgulf.org/events/women-in-maritime-happy-hour-2023-november>

Decision Making in Energy Operations

A Review of the Operations Literature on How Decisions Could be Made in the Energy Industry



Photo courtesy of Rice University

- Research into energy operations looks at different methods for making the best decisions at each stage of energy value chains.
- While crude oil and natural gas have had a head start in the operations literature, the amount of research into electricity and clean energy is catching up.
- Future research may benefit from both analyzing and improving current decision making processes.

Real options represent the decisions companies can make in the face of evolving risk. In the energy and commodity industries, real options are ubiquitous, including the extraction, processing and refinement, storage, and transportation of natural resources. These choices are influenced by ever-changing market and environmental conditions.

Because of these uncertainties, the energy industry has been a key focus of the operations literature on real options. Rice Business professor Nicola Secomandi, along with University of Illinois at Chicago College of Business Administration professor Selvaprabu Nadajarah, were recently invited by the European Journal of Operational Research to conduct a review of the operations literature on real options in energy. Their review included 80 papers across 10 journals active in the field. The research was mostly conducted during Secomandi's time at the Tepper School of Business at Carnegie Mellon University.

The review examined how often different types of energy and methods of studying related business processes appeared in the operations literature. Nearly a quarter of the papers considered natural gas, more often than any other energy type. Natural gas storage was the most studied process, while the transport and sale of natural gas were less discussed.

While only 10 percent of the papers focused on electricity by itself, mostly in the context of battery management, electricity was discussed alongside emissions and the environment in 22.5 percent of the papers—almost as often as natural gas. About 11 percent of the papers examined both electricity and natural gas.

Roughly 21 percent of the papers focused on crude oil and refined products. Exploration, development, and abandonment of crude oil fields were common topics, while work on crude oil refining and gasoline logistics was rarer.

The review looked at the frequency of use of five categories: real option types, valuation methodologies, model formulations, price risk dynamics, and optimization schemes. Timing options, which irreversibly change the status of an asset when exercised, and switching options, which involve reversible changes, appeared with about equal frequency. Of the valuation methodologies, risk neutral valuation was employed the most often, appearing in nearly 78 percent of the papers. Model formulations were divided mainly between Markov decision processes, which assume that decisions are made at set times, and stochastic optimal control models, which assume that decisions are made continuously. About 63 percent of the papers discussed Markov decision processes, but at nearly 34 percent, stochastic optimal control models haven't been entirely left out of the literature. Almost 75 percent of the papers formulated models based on spot prices as opposed to futures prices, and over 80 percent adopted normal distribution models, either alone or in combination with other models. Approximate solution approaches dominated within optimization schemes, appearing in 71 percent of the papers.

While several energy sources and analysis tools have been discussed in the literature, the possibilities for future research remain broad. The transition to clean energy sources may increase the complexity of already intricate operations. Its modeling and analysis may require more advanced models than existing ones.

Nicola Secomandi

Houston Endowment Professor of Management –
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Congratulations to the Rice Business Executive Professional Development Scholarship Winners!

The Greater Houston Port Bureau awarded two scholarships to our membership for professional development at Rice Business Executive Education's program. Each scholarship is valued at \$4,350, and includes full tuition, class materials, and daily breakfast, lunch, and refreshments.

The winners were:



Quyen Lam
Moran Shipping
Agencies, Inc.



Imtiaz Mohammed Saboor
Interoceanic Corporation
/PCI Nitrogen



Nationally and globally, the Rice Business MBA program is recognized for excellence by major media and has risen over the last decade, listing it in the nation's most distinguished business schools.

The Greater Houston Port Bureau would like to thank Rice Business Executive Education, Rice University for their generous underwriting of these scholarships.

For more information and details about Rice Business Executive Education programs, contact Zoran Perunovic at Zoran.Perunovic@rice.edu.

FINANCE & ACCOUNTING FOR NON-FINANCIAL MANAGERS

DECEMBER 12-15, 2023



[BUSINESS.RICE.EDU/EE](https://business.rice.edu/ee)



Jim Black Leaves Legacy as Dedicated Leader in Houston Port Region

James “Jim” Black, longtime CEO and president of Moran Shipping Agencies, Inc. (“Moran”) and member of the Port Bureau’s board of directors, passed away after a brief illness in July. He was an advocate for the shipping industry and the port region and a mentor to many in the industry.

While born in Fall River, Massachusetts, Jim had made his home in Texas for nearly five decades. He began his career with an eye toward restaurant management, but his brother, Robert “Bob” Black, soon ushered him into the shipping industry.

“Bob introduced me to the shipping agency at the Moran organization in 1974, and I was hooked in a month! I did agency work in New England ports, mostly in the Providence area where I provided service to both the vessel and crew members,” Jim shared in a 2019 *Port Bureau News* interview. Bob Black had purchased the company in 1970.

Bob soon sent Jim to the J.F. Moran office at Logan Airport in Boston where he became the export manager, quickly working his way up to custom house broker. Six months later, Bob was ready to open a Houston office, but no one from the office wanted to move to Texas. Consequently, Jim packed up his car, drove to Texas in June of 1975, and opened the first Houston office.

This became the key to opening new offices in strategic ports in the Southeast over the next 15 years. In 1986, his brother turned over the company to Jim and another brother, Mike. It has continued to operate as a closely held family corporation, maintaining the highest quality standards, and Jim led it to become the largest independent steamship agency in North America. He was known for his “unyielding commitment” to both the success of the company and the well-being of its employees.

Jim loved sports, especially baseball, while growing up. A physical condition with his foot required several surgeries during

his childhood, putting him on crutches while recuperating. Jim had such enthusiasm for baseball that he would hit the ball with one of his crutches, and a teammate would then run the bases for him.

“I loved baseball so much I would walk miles on my crutches to go to my team’s games. My favorite player was Ted Williams. He was arguably the greatest hitter of all time and the last player to hit .400,” Jim recalled in the 2019 interview. “I went to his baseball camp when I was a Little League All Star. I hit three homeruns in front of Williams. When I crossed home plate after my last one, he congratulated me. It was the greatest thrill of my childhood.”

Family was a high priority for Jim. He married “the love of his life” – Beth – in 1986, and the couple moved to The Woodlands, Texas, to make their home. With his wife and sons, he made regular trips to Massachusetts to spend time with childhood friends and relatives.

Jim also took an active leadership role in local port communities, industry organizations, and non-profits. He served on the boards of St. Pius X High School, the West Gulf Maritime Association, the Association of Ship Brokers and Agents, the Greater Houston Port Bureau, and many others.

His longtime commitment to the Houston maritime industry and community was recognized by the Port Bureau board of directors in 2019 when they named him as the Maritime Leader of the Year. Over 700 colleagues, friends, and public officials turned out to honor Jim as he was recognized at the Port Bureau’s 90th Annual Maritime Dinner.

Jim is already greatly missed, but his legacy of leadership, commitment, and passion for the maritime community will always be remembered.

Dave Grzebinski Honored for Commitment to Port Region Improvement at 94th Annual Maritime Dinner

2023 MARITIME LEADER OF THE YEAR



The Greater Houston Port Bureau welcomed more than 800 guests at the Bayou Center Event Center as Houston's maritime community gathered to honor Dave Grzebinski, president and CEO of Kirby Corporation, at our 94th Annual Maritime Dinner on Aug. 26. Grzebinski was recognized as the 2023 Maritime Leader of the Year at the event for his steadfast commitment to improving the greater Houston port region.

Title sponsor Kirby Corporation and Queen of the Fleet sponsors Callan Marine, Enterprise Products Partners, Kinder Morgan, Port Houston, and Shell helped make it an unparalleled evening of celebration.

The evening kicked off with a cocktail reception and silent auction. As guests enjoyed the "meet and greet", the convivial atmosphere was enhanced by music from the Mercury Chamber Orchestra. Many guests shared pictures from the photo booth and added their congratulations to the event's "social wall", adding to the celebratory atmosphere of the Annual Dinner. Greg and Mona DeLong won the raffle sponsored by John Bludworth Shipyard – a pair of 5 cwt Badgley Mischka diamond stud earrings!

Following the fine dinner featuring a dual entrée of beef tenderloin with chimichurri sauce paired with an herb crusted salmon pinwheel, the recognition program highlighted accolades from industry leaders and public officials. Houston Mayor Pro Tem Dave Martin presented Grzebinski with a proclamation from the City of Houston, naming Aug. 26 as "Dave Grzebinski Day". He also received a proclamation from Harris County and was named an "Admiral in the Texas Navy".

Keynote speaker Karrie Trauth, senior vice president of Shipping & Maritime, Shell, lauded Grzebinski's leadership in safety and environmental goals. She referenced Shell's

involvement with Kirby in plans to charter and supply power to Kirby's new *Green Diamond*, the nation's first plug-in hybrid electric inland towing vessel, on the Houston Ship Channel. Trauth's remarks were followed by a specially prepared recognition video highlighting Grzebinski's commitment and accomplishments.

Grzebinski expressed his appreciation to everyone and particularly noted the people of Kirby for their commitment to Kirby's guiding principle for safety: "No Harm to People, the Environment, and Equipment". He was presented with a replica of the *U.S.S. Constitution* by Rachel Tolar, customer service representative for Suderman & Young Towing Co. and chair of the Port Bureau's dinner committee. The presentation of the ship to each honoree has been a Port Bureau tradition for many years.

The celebrations were topped off by an "After Party" in the lounge area that featured jazz by Kevin Charles Music, caricature portraits by a local artist, a dessert station, and coffee bar. The After Party was a new feature at this year's Annual Maritime Dinner, and it proved popular with guests. More than 500 attendees stayed to enjoy the music, conversation, and the party amenities.

During the After Party, an impromptu presentation was made by Rep. Sheila Jackson Lee. She recognized Grzebinski for his leadership and to Port Bureau President Eric Carrero for promoting cooperation and efficiency in the port region with Congressional Proclamations.

The Port Bureau is privileged to serve the port region and to honor leaders and companies offering outstanding commitment to Houston's maritime community.





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SILENT AUCTION



Q&A With Maarten Poort



Photo courtesy of Shell.

We had a chance recently to sit down with Maarten Poort, Shell's General Manager of Shipping & Maritime in the Americas, to discuss a range of topics that are facing the industry. His thoughts, coming from a company that is itself on a journey to decarbonize while also providing the fuels and solutions to help broader industry and society do the same, offer insights and challenges in a fast-moving and sometimes contradictory world.

Maarten, thanks for taking some time with us. How about we start off with a little bit of background on who you are and what you're up to these days?

Certainly – and it's a pleasure. As the General Manager of Shipping & Maritime for the Americas, I lead an inclusive community who help provide the safest, cleanest, most efficient maritime solutions across Shell's businesses in North and South America. My organization is responsible for a safety, operational and project management across a wide range Shell's maritime activities such as chartering of ships and barges, the waterfront at terminals and refineries, floating production storage and offloading units ("FPSOs") and decarbonization of ports and vessels.

Beyond our safety journey, over the last few years my team has leaned into leading industry-wide shipping decarbonization efforts in North America and to be part of a broader team which is becoming the world leader in delivering more and cleaner energy solutions to society.

I've been with Shell since 2005, beginning as a petroleum engineer, and I've had a broad, international career focused on deepwater. I have a passion for safe operations, learning, innovation and transformative leadership.

Most important though, I'm a husband to my wife, Ali, and a dad to my three young daughters. I want to leave the world a better place for them.

You mentioned maritime decarbonization and the role you and your team play. Can you tell us a bit more about that? Obviously, it's a big theme in the industry and is something that virtually everyone is engaged in some form or fashion. What is your role?

Well, I'll be frank here: there is a lot happening in our industry to address the need to decarbonize. But right now it's not enough if we, as society, want to reach net zero by 2050. The maritime industry, according to the International Chamber of Shipping, is responsible for transporting some 11 billion tons each year, representing an impressive 1.5 tons per person based on the current global population. That's basically 80% of the world's trade volume. Shipping is the glue that holds the world economy together. Shipping's capacity to transfer goods and materials from where they are produced to where they will be ultimately consumed underpins modern life.

The shipping sector has a unique role to play: as the backbone of global trade and by far the most efficient mode of freight transport, it is not only a sector that must decarbonize, but also an enabler of global and local decarbonization. Of course, making this happen requires collaboration within the shipping industry itself, across the broader shipping ecosystem and with other sectors.

And that is what I and my team do. As I mentioned, we've been very active in decarbonization over the last few years. We're not only demonstrating concrete steps to decarbonize our own operations through actions like testing the efficacy of bio and renewable diesel in our chartered fleet, but also by helping to drive innovation in the broader ecosystem. You might have recently seen the christening of Kirby's *M/V Green Diamond* in Houston, the first hybrid-electric inland tow boat. That vessel will be



Photo courtesy of Shell.

chartered by Shell but also supplied with Shell-supplied 100% renewable power backed by renewable energy credits, delivered through a shore-side charger also owned by Shell. This is a great example not only of our own commitment to decarbonize, but also of the power of working together to move the needle.

Wow – that's a pretty impressive project, and it leads me to another question: as an industry of long-lived assets, decarbonization is changing the language and the activities within shipping with terms like CO2 emissions and ton-mile. Are emissions reductions becoming table stakes for those involved in the maritime sector? What is driving the shift to lower emissions, and why do public and private entities need to take steps to implement changes now?

The world today is going through extraordinary change, and many factors are influencing the move to lower emissions. Whether it's regulations from the International Maritime Organization, country or state-specific legislation or regulation, or expectations from customers and broader society.

Shipping emissions are expected to continue to grow, increasing the importance of addressing barriers to innovation and progress. If the world is going to reach the goals of the Paris Agreement it's going to take all parties working together to make that happen, and sectors such as shipping need to cut their carbon emissions and do so fast.

Society is facing a dual challenge with the energy transformation — moving to a low-carbon energy future while simultaneously meeting the energy needs of the world today. And I fully recognize that for companies looking at this, decarbonizing profitably is a crucial element in the eventual success of the endeavor. Solutions we pursue must be economically viable, socially acceptable and environmentally sustainable.

Ok, so what are some of the implications for local and regional stakeholders when we consider implementing decarbonization solutions?

Beyond just the industry, vulnerable and underserved communities must have access to affordable and reliable energy and benefit equally

from climate mitigation and adaptation opportunities presented by the transformation of our energy system.

Achieving an inclusive transition to a net-zero emissions energy system means engaging deeply with disadvantaged communities and enabling them to shape their own energy future. More and more we're also seeing requirements from government for environmental and social justice elements to be part of requests for government grants – take for instance the Port Infrastructure Development Program ("PIDP"). It's important particularly for ports and their stakeholders and partners to consider what the impacts and benefits to their communities will be as they decarbonize.

And truly, pathways to decarbonization really require a total value chain perspective. While that can be daunting, it's not insurmountable – especially if we work together.

As you'd referenced in an earlier question, ships have decades-long lives, and infrastructure changes not only take a long time to implement but are around for a very long time. So, making choices to adopt a particular vessel or fuel are certainly not to be taken lightly.

There are also issues around clear and consistent regulation, both on the water and shore side of the equation depending on what perspective you're looking at things. But as I said, none of these are insurmountable. Challenges, yes, but we can figure it out. And the nice thing is that there are many solutions, not just one, and that allows for innovation and fit-for-purpose results.

Let's shift to talking about paths to meeting the challenge of cleaner ports. When you start working on decarbonization, you begin to realize the scale of the challenge. Is there a framework for how ports and the maritime community can think through how to accelerate change?

Well, there isn't a one-size fits all prescription, that's certain. Every port is going to have different challenges, different opportunities, different stakeholders and, in many instances, different regulatory regimes. Also, for ports, I think it helps to ask ourselves: is it economically viable, socially acceptable and environmentally sustainable?

But there are some fairly consistent themes and considerations. Electrification is a huge opportunity, not only for port infrastructure



Photo courtesy of Shell.

but also for those vessels that call there. At Shell, we're working with ports and ship owners/operators along the Gulf Coast and beyond – looking at a variety of ways to support them in their sustainability and decarbonization journeys; with options like shoreside charging and cold ironing of ocean-going trade as part of the solution for both vessels and the port.

Choosing the right vessels for the right purposes also matters – and how those vessels are used, including when and where. I mentioned the work we recently announced with Kirby – that's just one example of how ports and those that operate in that ecosystem can take concrete steps now, while continuing to accelerate and scale our impact.

Of course, we also need clear and consistent regulatory direction. The more we can advocate for that in all respects, at all governmental levels, the better able we'll be to plan and develop for the future. For instance, we would like to see more incentive programs dedicated to decarbonization of port infrastructure, and specifically for funding dedicated to shoreside electricity and other electrification solutions. We see these as important elements to sectoral decarbonization and beneficial to surrounding communities.

In terms of helping projects be economically viable and environmentally sustainable Shell also supports the creation and use and use of voluntary carbon credits for the maritime industry. We would like to see market mechanisms to enable the development and use of carbon credits to incentivize acceleration of cleaner energy solutions. The maritime industry and its financial partners should continue to work together with corporate, financial market participants and governmental entities to support a more liquid market with high quality and trust.

Alternative fuels get much of the attention in this discussion. What's the place of lower emissions fuels in the journey to decarbonization?

Well, as you know, we supply a portfolio of marine fuels all over the world, with many decades in the marine fuel market.

When it comes to alternative fuels, I'll point to the role of LNG as the only lower-emissions available at scale – and while I also recognize that there are challenges there – methane slip and otherwise – it is still a fuel

that has shown up to a 23% reduction of CO2 and reduced SOx, NOx, and Particulate Matter; and the industry is making strides in methane slip and instituting additional technologies.

But there is definitely a role for other fuels in the mix as well, whether that's renewable or biodiesel, methanol/bio-methanol, ammonia, synthetic hydrogen-based fuels or others. I'd say that what's important overall is to firstly ensure these solutions are safe, and secondly that we think end-to-end so that for instance available feedstocks that don't compete unnecessarily with other uses, and we have the ability to scale and innovate with engine technologies of the future.

In the U.S. domestic market, for instance, due to a variety of factors that include, among others, feedstock availability, technology limitations and the diversity of the global and local shipping fleets, a single fuel type is actually pretty unlikely to be adopted and/or even become available at the scale needed to fuel the domestic fleet – and much less international vessels calling at U.S. ports. As a result, multiple lower carbon fuels will be needed to achieve rapid decarbonization. So, we'd like to see the incentivization of lower-carbon fuel options, while recognizing that full engine/fuel transitions will take time and a range of fuels will be necessary for the maritime sector for the short/medium term.

And in fact, we've recently been advocating for more parity in treatment of marine fuels in our tax code. For instance, a broader application of renewable identification number ("RIN") credits as a transportation fuel within the Renewable Fuel Standard without creating obligations under the program, which would allow for the ability to generate RINs without changing the definition of transportation fuel which would create deficits or obligation.

But more broadly, everyone, including ports, need to be part of the discussion – especially when it comes to building out the appropriate infrastructure to support the fuels of the future.

Can you also talk about the potential impact of technological and operational changes the industry can make to improve energy efficiency and reduce emissions? Many believe these changes can provide substantial emissions reductions even before alternative fuel and electrification options can be implemented.

I think we could probably talk about this for hours but let me point to a few things that have the potential to move us in the right direction even, as you say, before we start talking about fuels and other activities.

Operational efficiency has the potential to reduce emissions by up to 20% alone, but it will require us to think different about energy efficient technology and how to work together operationally as well. There is significant potential in partnering differently, sharing data and scheduling for collective gains. There are a lot of opportunities here and they should be a part of the broader consideration for how to decarbonize – whether that's at a port, with a single asset, or from a more macro-viewpoint of the maritime sector overall.

From your perspective, beyond individual solutions, what are the actions the community can take to move the needle on maritime decarbonization?

When I think of "community", I think about all of those that are part of the maritime ecosystem. And the bottom line: this is going to take working together differently. No one is going to do this alone and communities are integral to the success of the industry in decarbonizing.

Greater Houston Port Bureau's leadership in the Texas Gulf Coast region, for instance, along with all of the other groups driving for change, are critical to success by bringing together all of the relevant stakeholders from industry to government to financial and communities.

And as we've touched on, government plays a big role through incentives; and carrot vs. stick is proving to be a better way to proceed in that respect.

Any last thoughts?

I'll be blunt: I believe the most critical element to solving the challenges we have discussed boils down to one word: collaboration. No one

company, government, NGO or individual is going to be able to solve the challenge of getting to Net Zero. Solutions must be economically viable, socially acceptable and environmentally sustainable. I mentioned my daughters earlier; I want to be able to tell my children and their children that I did something to make difference. We owe it to them, and we all have to do it together. I know we can do it – we have the people, we have the technology and innovative mindset; it just takes a first few steps, and then to keep on moving.



Maarten Poort
General Manager, Shipping and Maritime, Americas

As the General Manager of Shipping and Maritime for the Americas, Maarten leads a community of experts who help provide the safest, cleanest, most efficient solutions across Shell's businesses in North and South America. His organization is responsible for a wide range of maritime-related activities including port and vessel decarbonization, chartering of ships and barges, providing operational support for FPSO offloads, terminals and refineries, project delivery, maritime integrity, emergency response services, and operational and behavioral safety. He also leads industry-wide shipping decarbonization efforts in North America and is part of a broader team which is becoming the world leader in delivering more and cleaner energy solutions to society.

Poort graduated with a bachelors degree from Michigan State University and received his master's degree in mechanical engineering from the University of Illinois before he joined Shell in 2005 as a petroleum engineer.

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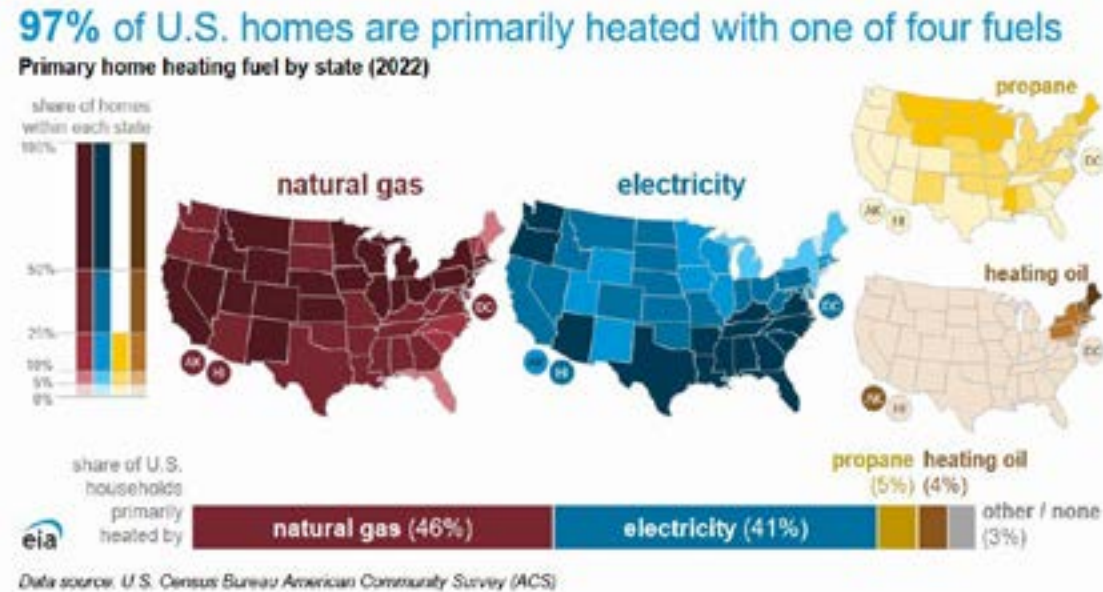


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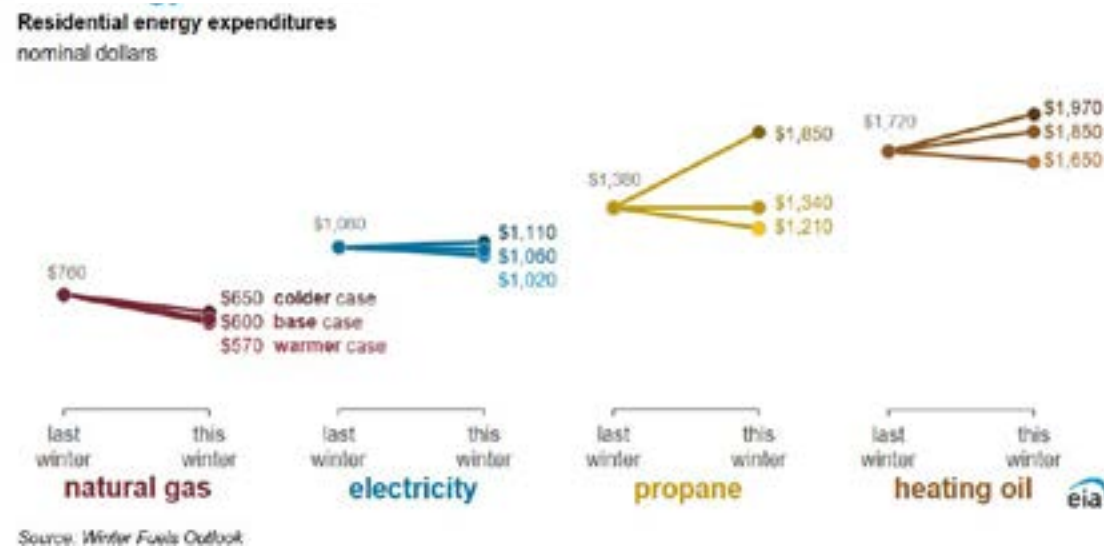
EIA Winter Fuels Outlook 2023–2024



The U.S. Energy Information Administration (“EIA”) has published their Winter Fuels Outlook (“WFO”), discussing their expectations of household energy consumption and expenditures for the upcoming 2023–24 winter season. EIA expects U.S. households that use natural gas, electricity, or propane as their main heating fuel to spend less on heating this winter compared with last winter. Households that use heating oil are expected to spend slightly more.

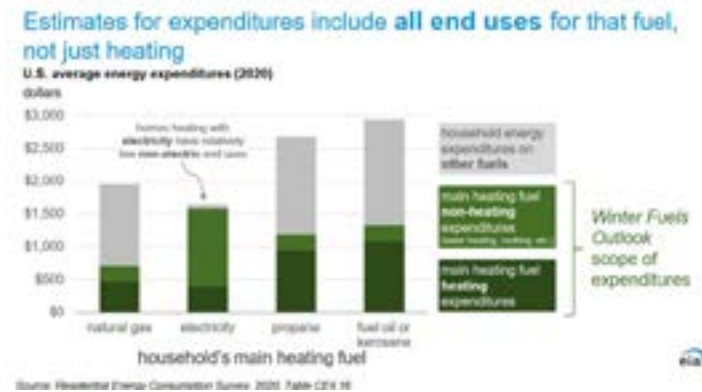
Because average demand for heating fuels in the winter exceeds production in the United States, inventories are an important source of winter supply. U.S. natural gas and propane inventories are above the five-year (2018–2022) average going into this winter heating season because of natural gas production growth and because a mild winter in the eastern part of the country last year left inventories for natural gas and propane high. These relatively high inventories have helped keep prices for those fuels below year-ago levels. However, distillate fuel inventories, a category which includes heating oil, are well below the five-year average.

EIA expects the majority of households will spend less on energy this winter



Energy Expenditures

Three main factors determine spending on space heating fuel: household characteristics, weather, and energy prices. The forecast price and winter energy spending presented in this report are mostly in nominal (i.e., not inflation-adjusted) terms. EIA assumes inflation will average 3% this winter. Given that rate of inflation, increases in expenses and prices adjusted for inflation would need to be about 3% higher than the values reported to indicate increases beyond inflation.

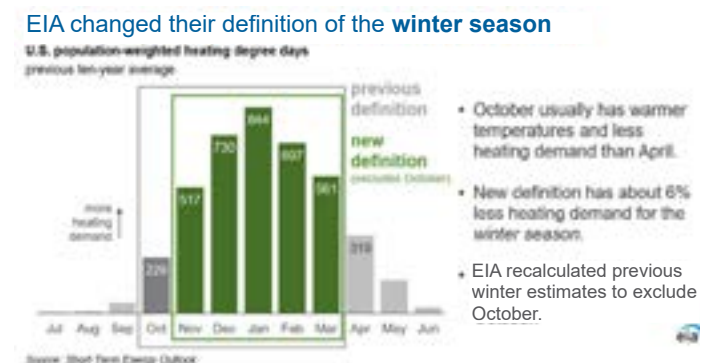


Household Characteristics

The average household expenses discussed in the WFO are broad measures for comparing recent winters. Fuel expenditures depend on the size and energy efficiency of individual homes, their heating equipment and thermostat settings, and the weather conditions. Each fuel also has its own market structure, physical infrastructure, regulations, and limitations that can affect how retail prices move in relationship to wholesale prices.

Weather Assumptions

Weather assumptions in the WFO include a combination of data from the National Oceanic and Atmospheric Administration and the previous 30-year trend. EIA uses heating degree days as a measure of how cold temperatures are compared with a base temperature. EIA has also eliminated October as a winter month as it has only accounted for 6% of winter heating demand over the past 10 years and adjusted data comparisons accordingly.



Wholesale Market Conditions and Prices.

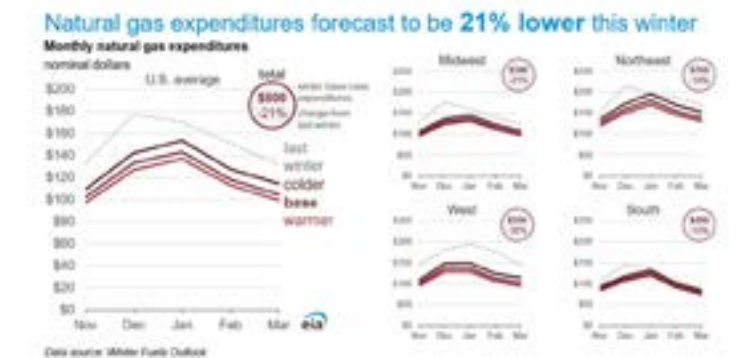
In general, EIA expects the prices U.S. residential consumers pay for fuels will be lower this winter than last winter. The lower prices are most notable for natural gas. EIA also forecasts that retail prices for heating oil and propane will be lower this winter than last. Propane prices have decreased because of rising natural gas production. Heating oil prices have decreased because of lower refining margins for distillate fuel, which includes heating oil and diesel.

EIA expects U.S. average retail electricity prices will be slightly lower than last year as wholesale changes slowly pass through to retail rates. Wholesale price changes for heating oil and propane are passed to consumers quickly because rates in those markets are not regulated as they are for natural gas and electricity.

Natural Gas

This winter EIA expects a decrease in spending on natural gas compared with last winter, driven by a more than 20% decline in natural gas prices in its base case. Because EIA expects consumption to be about the same as last winter, EIA expects the lower price will drive a more than 20% decrease in expenditures.

Compared with a year ago, U.S. natural gas production growth this year has not kept pace with growth in LNG exports and record consumption in the electric power sector this summer, leading to lower-than-average storage injections in July, August, and September. Despite this, natural gas inventories remain above the five-year average, and EIA expects natural gas supplies will be sufficient to meet winter demand in the base case. U.S. working natural gas inventories in all five regions of the country are above the five-year average heading into the winter heating season.



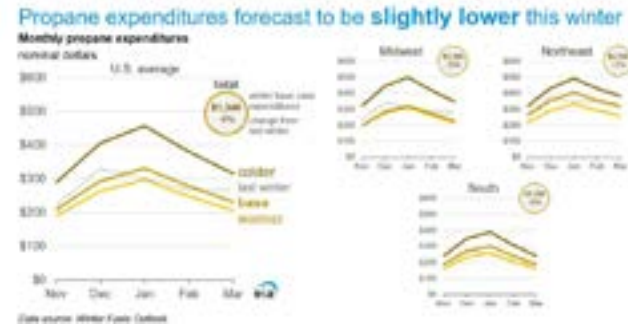
Propane

Propane is used as a winter heating fuel in 5% of U.S. households, mostly in rural areas in the Midwest, Northeast, and South. Propane is also used in commercial grain dryers and in industry as a petrochemical feedstock. EIA expects households heating with propane in the Northeast will spend an average of \$1,700 per household, which is slightly higher than last winter. The EIA forecasts an increase in Northeast expenditures for propane-fueled heating based on their forecast that the region's propane prices will be 5% lower and there will be 6% more household propane consumption, on average.

EIA expects households in the Midwest to spend about \$1,300, 11% less than last winter, reflecting a forecast for a 13% drop in propane prices and slightly higher propane consumption. In the South, EIA expects households to spend about \$1,180, 6% more than last winter, reflecting a 9% increase in consumption and a 3% decline in propane prices.

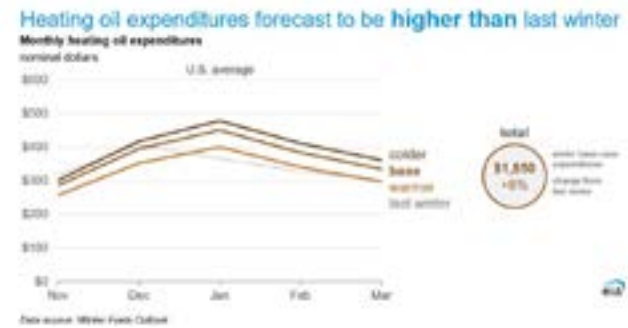
EIA forecasts U.S. propane plant and refinery production to increase by about 6% this winter compared with last winter. EIA expects U.S. propane consumption across all sectors to be up about 4% this winter compared to last winter, because of increased propane use for space heating and for petrochemical production.

The United States exports more propane than it consumes, and EIA forecasts 12% more net exports of U.S. propane this winter than last winter. Higher propane exports reflect elevated global demand for propane as a petrochemical feedstock, especially in East Asia.



Heating Oil

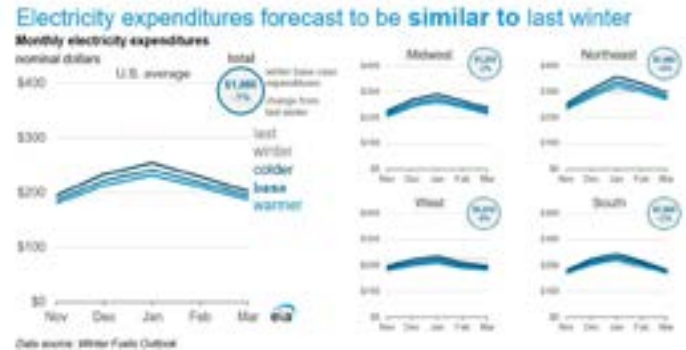
Heating oil, a variation of distillate fuel, is the primary space heating fuel for 4% of U.S. households. EIA forecasts households that heat primarily with heating oil will use about 440 gallons on average this winter. The Northeast has relatively little refinery capacity and therefore relatively little production of distillate fuel oil, including heating oil. East Coast distillate supplies come primarily from transfers from other regions, particularly the U.S. Gulf Coast, as well as imports, particularly from Canada.



Electricity

U.S. households that heat primarily with electricity will spend an average of about \$1,060 this winter on their electricity bills, which is about the same as last winter. A slight increase in forecast average U.S. electricity consumption is offset by an expected 2% decline in U.S. residential electricity prices.

For the upcoming winter, the largest driver of changes in electricity expenditures is the level of consumption. For the West, EIA forecasts 10% less residential consumption because of milder expected temperatures. In contrast, their forecast of winter consumption rises by 5% in the South. EIA forecasts a slight decrease in residential electricity prices this winter, with U.S. prices averaging 15.2 cents per kilowatt, about 2% lower than last winter. The lower prices for retail customers reflect the relatively low cost of producing power over the past year, especially the cost of natural gas.



To read this report in more detail or to review the colder or warmer cases examined by EIA, please visit www.eia.gov/outlooks/steo/report/perspectives/2023/10-winterfuels/article.php



July Commerce Club Featuring Captain Clint Winegar, Presiding Officer of the Houston Pilots

Houston Pilots Update



Piloting ships in and out of the Houston Ship Channel is a complex job that has been superbly handled by the Houston Pilots for over 100 years. Captain Clint Winegar, presiding officer of the Houston Pilots, presented a “Houston Pilots Update” at the July Commerce Club.

The Houston Pilots Association is comprised of 90 to 95 men and women, with a “50/50 mix” of individuals with bluewater and brownwater experience. They are Coast Guard licensed master mariners, with a state commission issued by the governor of Texas to guide deep draft ships into Harris County ports. They represent a combined experience of 1,275+ years and 315,000 Houston Ship Channel transits. The Houston Pilots are governed by the Board of Pilot Commissioners for Ports of Harris County.

Winegar describes them as an experienced team with diverse backgrounds to handle Houston’s diverse commodities. “If you name a commodity, Houston has it — from gas carriers, containers, tankers, chemical tankers, and bulk carriers. We also have battleships!”

The dispatch team operates 24/7 – through holidays and hurricanes – taking approximately 500 calls per day. The team works 12-hour shifts, with three operators on duty during the day shift and two during the night. Winegar highlighted the volume of vessel traffic the Pilots move, showing a ship tracking image for a typical day that reflected a dense number of ship movements.

He noted that the Ship Channel currently is 530 feet wide, and that Project 11 (the deepening and widening of several important segments of the Ship Channel) will extend it out to 700 feet. “That gives us more room, especially with the containerships coming, so we maintain two-way traffic.”

Different ports were visited by the Pilots to have the opportunity to board the new ships and familiarize themselves with the actual vessels. They have also invested in technology as part of the preparations. “We have the assets here ready to go when these ships come next year. Right now we’re moving Post-Panamax vessels of about 8,000 TEUs. When they come next year, they’re going to be in the 14,000 TEU range.”

Among the biggest challenges the Houston Pilots encounter to keep vessels traffic moving is hazardous weather and fog. Fog season occurs December to March and is generally the chief cause for halting vessel traffic. When the difficulties of fog seasons have lifted, it is then time for the Pilots to focus on hurricane preparedness. Since pre-storm evacuations take priority on highways, the Pilots utilize a helicopter service to shuttle Pilots back and forth to reach the Pilot station or a ship.

Reducing vessel emissions during a transit is another important priority for the Houston Pilots. “We have a duty to protect the waterway,” said Winegar. He explained that some emissions could be controlled through “dialing back the RPMS” of the engines. “It’s not a speed thing; it’s a steering thing,” he noted.

Winegar mentioned other emission-reduction measures ship-owners are considering, including greener, more efficient rudder systems and rotor sails. He also showed how digitization can create greater efficiencies in emissions by optimizing port operations.

The Houston pilots have the most modern and stable pilot boat fleet in the nation and is one of three Associations that maintain a full-time station boat as part of their operations. There are currently two station boats (or bar boats) operating to enable Pilots to board ships in a safe, time-efficient manner. For a Pilot boarding a vessel, utilizing the ladder is a highly hazardous move. The Pilots urge and require proper rigging and maintenance of ladders (and gangways) to help ensure Pilot boarding safety.

Staying involved with coastal protection plans is a priority for the Houston Pilots. The early proposed designs for a gate system in Galveston (also known as the “Ike Dike”) did not support the need to maintain two-way traffic on the Ship Channel at all times it eliminated an anchorage area. The Pilots, along with the Port Bureau, initiated a study to better model vessel traffic needs for an improved or alternative design for a gate system.

The Houston Pilots have also increased involvement and support of maritime education. They have provided scholarships through their own nonprofit, Anchor Watch, and participate with local schools. “We’re talking to with the next generation trying to get excited about maritime,” said Winegar.

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September Commerce Club Featuring Geoffrey Gauthier, Manager, Commercial & New Business Development for Shipping and Maritime, Shell



Decarbonization and the Maritime Sector - A Conversation on Perspectives Across the Industry



The Port Bureau hosted a conversation-style presentation focused on decarbonization and the maritime sector at the September Commerce Club luncheon with Geoffrey Gauthier, manager, commercial and new business development for shipping and maritime, Shell. Moderating the conversation was Vincent DiCosimo, vice president of governmental affairs at Targa Resources and first vice chairman of the Port Bureau's board of directors.

Getting buy-in for cleaner ports. Community needs to be able to see how decarbonization within the port directly benefits them. He referenced Shell's involvement with two local projects. Port Houston and Shell have committed to exploring key energy, mobility, and decarbonization projects that could be implemented at port terminals. In Galveston, Shell, together with Galveston Wharves, Carnival Corporation, CenterPoint Energy, Royal Caribbean and Texas A&M University at Galveston, are working toward potential solutions to develop environmentally beneficial shore power at the port. Decarbonizing at the ports also reduces the emissions in the local community — a valuable benefit to surrounding neighborhoods.

Alternative fuels. Shell has a very robust fuel portfolio, with decades of experience as a marine fuel supplier across the world. Electrification projects have been highlighted in the current discussion because they are "here now", but Gauthier noted the availability of LNG, ultra-low sulphur fuel oil, very low sulfur fuel oil, DMA/MGO, and biofuels (Europe and Singapore) through Shell. He noted that in supplying these alternative fuels, "it does come back to the importance of ports and infrastructure providers being ready to distribute these things."

What local stakeholders and community can do. Gauthier noted that the Galveston and Houston initiatives to reduce emissions is also an investment in the whole community. What helps move these projects along is the support of all industry and community. "Call your congressman to stress the importance of projects," urged Gauthier. "This makes it easier for these projects to move forward."

Conversation Highlights

Current drivers and methodologies in lowering emissions. The continued growth of shipping and its importance to the global economy is a central driver in lowering emissions. Shell is focused on achieving the net-zero emissions goal and supporting their customers in reaching sustainability goals. Gauthier referenced Shell's "All Hands on Deck 2.0", an industry perspective published in collaboration with Deloitte last March, for detailed specifics. The report offers analysis and recommendations in the goal to reduce emissions goals. (www.shell.com/business-customers/marine/decarbonising.html)

While numerous factors will play a part in achieving lower emissions, collaboration will be a key factor in success. The projects may not be perfect, but pushing forward in collaboration between stakeholders, including government, charterers, energy providers, infrastructure providers and others, will bring results.

Gauthier named Kirby Corporation's recent introduction of the *Green Diamond* towing vessel into their fleet as an example of stakeholder collaboration. The *Green Diamond* is the first plug-in hybrid electric inland towing vessel in the U.S. Kirby "took the risk" to build the boat. Shell is providing clean energy, investing in the charging infrastructure, and is chartering the vessel.

The challenge, said Gauthier, can be bringing businesses and organizations together. Issues such as lack of clarity on regulation, both on the water side and land side, can be a roadblock. If stakeholders can meet at "the table to talk", greater progress can be advanced.



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- **November 14:** Women in Maritime Happy Hour at USCG Sector Houston-Galveston and featuring Captain Nicole Rodriguez, Deputy Commander, Sector Houston-Galveston. Free to attend, but you must register. No walk-ins accepted.
- **November 16:** Commerce Club luncheon featuring Rodger Rees, Port Director & CEO, Galveston Wharves.
- **November 28:** GHPB, Houston Pilots & WISTA Christmas Shoebox event for the Houston International Seafarers Center. Donations accepted.

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