AG CARBONDEX
Fleet Emissions Performance Management Suite

5 Distressing CII & EU ETS Pitfalls

Every Shipping Company Must Know

CII & EU ETS:
The Regulatory Maze Shipping Companies Must Conquer

Product by: AVENTRA GROUP

How Data Quality Issues Can Sink Shipping Companies

01

Decarbonization:
A Strategic Data Approach

In the ongoing progression of the year 2023, maritime enterprises are presently engaged in the meticulous gathering of data pertaining to fuel consumption and voyage distance, a facet integral to the Data Collection System. This initiative aligns with the regulations set forth by the International Maritime Organization (IMO) for the Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII).

A notable contingent within the shipping industry adopts a cautious stance, adopting a wait-and-observe approach, anticipating potential regulatory alleviations while concurrently documenting their data through established Noon Reports systems, Excel spreadsheets, and CII software. However, contrary to optimistic expectations, regulatory stringency appears to be escalating over time, particularly for entities engaged in trade within the European region, given the imminent commencement of data collection under the European Union Emissions Trading System (EU ETS) in 2024.

The true ramifications of these regulatory measures will crystallize for shipping entities upon the issuance of their inaugural CII ratings in 2024, with financial implications materializing in the subsequent year as a consequence of the Carbon Emissions program in Europe.

Diverging from prior regulatory paradigms, such as those governing Sulphur Cap and Ballast Water Management, wherein rectification primarily entailed investment in equipment, the exigencies of Decarbonisation transcend mere material investments. Instead, a prerequisite for compliance lies in a state of preparedness vis-à-vis data, encapsulated succinctly as “Data readiness.”

Decarbonisation, in essence, surpasses the conventional realms of enhancing sail efficiency and substituting fossil fuels. It is, fundamentally, a contest governed by data. Analogous to any strategic game, adherence to established rules and adept application thereof delineates the chasm between success and failure in the enduring trajectory.

This juncture introduces a heightened level of complexity, underscoring the criticality of strategic acumen and meticulous adherence to regulatory frameworks.

The Pursuit of Data Excellence: Achieving Meaningful Insights

Ship captains bear the solemn responsibility of daily submission of the vessel's Noon Report, even amid unprecedented stress levels. Anticipating flawless execution from captains in the absence of error-prevention mechanisms is a manifestation of unwarranted optimism.

Regrettably, the maritime industry lacks a Noon Report System, not to mention Excel Sheets, that precludes captains from entering erroneous data. This void exposes the maritime sector to 365 potential pitfalls, each representing a distinct avenue for data quality lapses that could inflict substantial financial ramifications upon shipping enterprises.

The ramifications of data quality issues are profound, capable of inflating decarbonization costs by a consequential 10 – 20%.

Software vendors offering Noon Reports have implemented Carbon Intensity Indicator (CII) modules ostensibly as a client retention strategy. Paradoxically, these modules neither forestall manual errors in Noon Reports nor facilitate prompt corrections.

It is imperative to clarify that Aventra Group (AG) does not attribute vendor actions to bad faith. Nevertheless, drawing upon our extensive IT expertise, we comprehend the intricacies of legacy systems and their inherent resistance to adaptability.

Legacy systems, initially crafted and encoded to fulfill specific historical requisites, are inherently inflexible in accommodating the change. While vendors endeavor to stretch the limits of system flexibility, they remain bound by the immutable constraints dictated by the Law of Hardcode (a metaphorical construct employed for illustrative purposes).

Recognizing shipping companies' inclination to retain their existing Noon Reports or Excel Sheets, the optimal recourse is to undertake a meticulous Data Validation and Data Correction process on the resultant data.

Optimizing Maritime Operations: A Strategic Approach to Data Integrity Through Validation and Pre-Verification

In the realm of maritime operations, the significance of accurate data in Noon Reports cannot be overstated. Flawed data quality issues have the potential to adversely impact the Compliance in Industry (CII) rating, surpassing the implications of actual operational inefficiencies. This susceptibility arises from the latitude afforded to Captains in inputting crucial parameters, such as Fuel Consumption and distance, without requisite oversight from automated systems or the Operations (Ops) team. The repercussions of such errors are profound, translating into substantial financial ramifications ranging from thousands to hundreds of thousands of dollars for shipping companies.

The process of ensuring data accuracy through validation is a meticulous and resource-intensive endeavor, demanding personnel adept in sophisticated data analysis. Execution involves the application of Data Filtration and Validation techniques, typically conducted on platforms such as Microsoft Excel or analogous spreadsheet applications. Compounding the challenge is the scarcity of time for exhaustive analysis within the dynamic environment of Shipping Ops, prompting contemplation of augmenting personnel to assume dedicated roles in data analysis.

A pivotal consideration in the data validation landscape is the temporal investment required. An Environmental, Social, and Governance (ESG) Ops Manager, for instance, may expend up to 30 hours validating an entire year's worth of Noon Report Data for a single vessel. Notably, the synchronization of data submission and verification processes across all vessels within a similar timeframe exacerbates the inefficiency in resource allocation. Despite overseeing up to five vessels, the ESG Ops Manager faces a formidable challenge in optimizing the validation process.

Upon detection and aggregation of data quality issues, the ESG Ops Manager assumes the responsibility of engaging with Captains for the necessary corrections. Subsequent to rectification, a Pre-Verification process is imperative to facilitate a seamless verification procedure with the Classification Society. It is imperative that the Data Validation process aligns, at a minimum, with the contractual duration of the Captain to ensure a comprehensive validation and correction of the data.

Acknowledging the substantial workload imposed on Ship Operators, it is pivotal to recognize the potential for automation in both the Data Validation and Pre-Verification processes. By leveraging technological advancements, the maritime industry can streamline and expedite these critical procedures, fostering efficiency and reliability in the assessment of Noon Report Data.

Considering the financial implications and operational intricacies associated with Noon Report Data, the imperative for stringent Data Validation processes is unequivocal. Through the judicious integration of skilled personnel, efficient resource allocation, and the strategic deployment of automation, the maritime industry can fortify its data quality infrastructure, thereby mitigating risks and advancing operational excellence.

Automated Data Validation and Pre-Verification: The Secret to Data Accuracy

Aventra Group (AG) emerges as a beacon of innovation, having navigated hundreds of hours of insightful discussions and analyses with industry stakeholders. Our profound understanding has led us to a pivotal realization — a robust Data Validation engine is not just beneficial but imperative for the effective management of Critical Infrastructure Information (CII) and CO2 Emissions. Thus, AG proudly unveils its latest marvel: a state-of-the-art Data Validation engine seamlessly integrated into our acclaimed product, AG Carbondex.

AG Carbondex, a distinguished Fleet Emissions Monitoring System, redefines the way Shipowners, Ship Operators,

and Ship Managers handle Data Ingestion, Validation, Correction, Visualization, and Simulation for CII, MRV, CO2 Emissions, and EU ETS. It transcends traditional solutions, offering comprehensive insights for both voyages and charter contracts.

AG Carbondex stands tall as a beacon of excellence, distinguishing itself through unparalleled strength in Data Validation — a rare gem in the market. Our commitment ensures the integrity of data, minimizing the risk of costly errors and obviating the need for additional personnel.

Reports for CII & CO2 Emissions can be effortlessly generated on a yearly, monthly, weekly, daily, or on demand basis. This flexibility empowers Ship Operators with agility, enabling swift learning and application of corrections across the entire fleet.

Every formula and correction integrated into AG Carbondex adheres strictly to the standards set by the International Maritime Organization (IMO). This ensures uniformity in calculation and report submission across systems, with the real distinction lying in the quality of data employed for reporting.

AG Carbondex not only sails ahead but anchors itself as a pivotal asset for any maritime endeavour. Elevate your fleet's environmental performance, avoid costly data quality mistakes, and revel in the efficiency that AG Carbondex brings to your operations. Choose Aventra Group — where innovation meets maritime excellence.

Discover How AG Carbondex Can Save Your Time and Money on CII & EU ETS Reporting

Schedule A Demo Call Today

Shipping Relies on Accurate Voyage Reporting to Avoid Costly Errors

02

EU Allowances: Don’t Let Missing Events Undermine Your Compliance

The EU-MRV has been a steady companion since July 2015. While some shipping companies have adeptly charted their course through the reporting waters, others risk being caught in the doldrums of passive inaction and ill-preparedness. The assumption that the EU ETS will be a mere echo of its predecessor, the EU MRV, is a perilous miscalculation.

Until now, the EU-MRV served as a beacon of information on emissions. However, with the advent of EU ETS, the seas have grown more treacherous, with carbon “penalties” looming on the horizon. Successfully navigating these penalties will determine which shipping companies will thrive and which will face the prospect of fading into maritime oblivion.

Much like the challenge of Noon Report Data discrepancies in the context of CII, the MRV ETS encounters similar data hurdles, specifically in terms of erroneous report chronology. In the vast ocean of shipping operations, such issues are commonplace, slipping through the cracks of both automated systems and operational teams.

These data discrepancies cast a looming shadow over the verification processes, subjecting them to immense pressure and creating an environment of frustration, time wastage, and, at times, rendering the earnest efforts of employees futile.

In this maritime landscape, the omission or misinterpretation of critical events emerges as a looming threat, promising not only significant operational headaches but also the potential for ballooning costs. In this sea of compliance, a vigilant approach is not just advised; it is the only lifeline for businesses seeking to weather the regulatory storm.

Voyage Events: Navigating the Seas of Data Governance

As defined by EU-MRV, spans from the moment a vessel casts off from the berth to its arrival at the next port of call. However, the simplicity of this definition belies the nuanced complexities inherent in maritime terminology.

Presently, numerous shipping companies grapple with fundamental issues of Data Governance in determining the commencement and conclusion of a sea passage. Definitions diverge among industry players, ranging from considering the end of a sea passage at anchorage, when the pilot assumes control, or when the vessel docks at berth. The captain's discretion and various circumstantial factors further contribute to this variation.

In times gone by, such data intricacies remained inconspicuous, lacking real monetary consequences. Yet, in today's landscape, these discrepancies have transformed into potential sources of dispute between Shipowners and Charterers. Operators can now unveil emissions as integral facets of Shipping, Cargo, and Port Operations. Clearly defined definitions within Charterparty agreements are imperative to mitigate potential conflicts.

Data errors persist in the industry, manifesting as the wrong sequence of events, omissions of arrivals or departures, and the confusion of arrivals with departures, and vice versa. Despite the apparent simplicity of the departure-followed-by-arrival sequence, these errors pervade daily Shipping Operations without adequate correction.

Adding contextual gravity to the situation, a failure to report an intermediate port before reaching Europe classifies the entire voyage as Europe Trade. This misclassification necessitates the purchase of additional EU Allowances to offset Carbon Emissions—an undeniably high-risk scenario that no prudent company should entertain.

Approaching Data Quality concerns with the same gravity and without compounding complexities for Shipowners and Operators, it is paramount to acknowledge that Report Chronology Data requires meticulous validation. This precautionary step is not just a matter of compliance; it is a strategic imperative to avert potentially severe

Unlocking Smooth Sailing: Automated Report Chronology Validation

Report Chronology Validation emerges as a critical manoeuvre. Adopting a methodology akin to Data Quality Validation, this process requires meticulous analysis within the confines of spreadsheets.

While Voyage Events may yield fewer inputs compared to Noon Reports, Events Data demands heightened attention to detail. The ESG Ops Manager becomes the maestro, adding

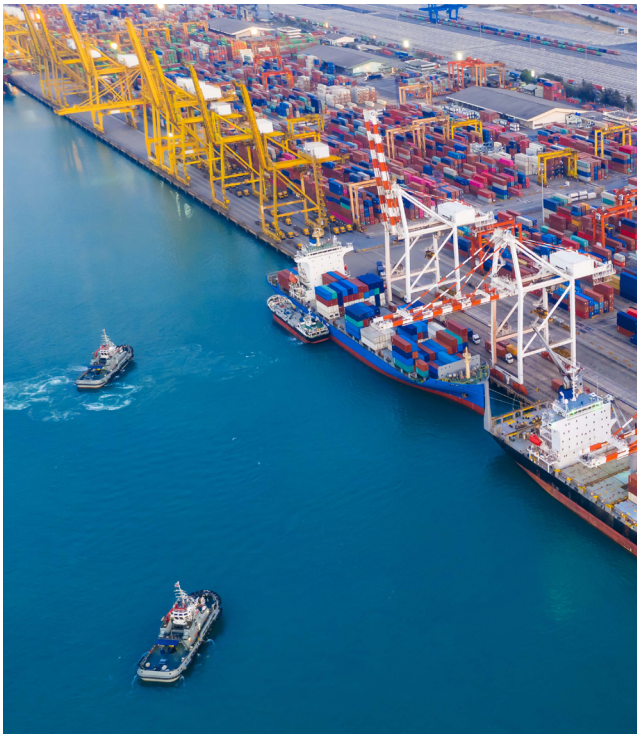
contextual layers to the analysis to decipher the situation and facilitate precise corrections from the captain. The estimated time investment for this crucial function is approximately 30 hours per vessel.

In instances of inconsistent data regarding the end of sea passages, a granular analysis comes into play. Factors such as anchorage duration, towing distance, and docking time necessitate scrutiny. Should an event be omitted, the ESG Ops Manager employs logical succession to align departure and arrival dates and times. If a port call is absent, a comprehensive analysis of the voyage schedule, duration, and fuel consumption ensues for a holistic understanding.

This complex process of analysis and correction introduces a potential friction point between Shipowners and Ship Managers. Typically, Ship Managers hold the reins for EU-MRV reports, but reluctance to delve into the depths of Data Validation for Report Chronology prevails. Shipowners, faced with potentially costly consequences, grapple with the decision to either demand Data Validation reports from Ship Managers or retain control within their Operations team.

Report Chronology Validation can and should be automated, transforming a potential source of tension into a seamless, efficient process. By embracing automation, maritime stakeholders can ensure compliance, reduce operational frictions, and chart a course towards smoother seas in the realm of EU-MRV reporting.

Revolutionizing Maritime Efficiency: The Power of Automated Report Chronology Validation



Aventra has undertaken a comprehensive analysis of complete years' worth of Report Chronology datasets, addressing a pervasive and critical issue in the Shipping industry.

Recognizing the significance of this challenge, AG Carbondex, as part of its Data Validation engine, has integrated a cutting-edge functionality specifically designed to Validate Chronology Data in Noon Reports against predefined rules for Sea Passages.

The Report Chronology feature within AG Carbondex stands as a beacon of innovation, generating alerts for missing events and highlighting inconsistencies in data events. It goes beyond mere identification by preparing the information for seamless collaboration with Captains, ensuring precise corrections. Once the data is refined, it seamlessly integrates into the CO2 emissions calculations, aligning environmental responsibility with operational efficiency.

AG Carbondex distinguishes itself by its unique focus on Carbon in monetary terms—a perspective that sets it apart from conventional systems. While many systems primarily concentrate on calculating CII and CO2 emissions, AG Carbondex goes beyond, offering invaluable support to Shipping companies in optimizing both their operations and budgets.

Versatility is the hallmark of AG Carbondex, catering to Shipowners, Operators, and Ship Managers alike. Empowering Shipowners to retain control over CII & EU ETS reporting, the system eliminates the need to outsource this critical function to Ship Managers. With Report Chronology seamlessly automated, Shipping companies not only sidestep costly mistakes but also mitigate the need for additional personnel.

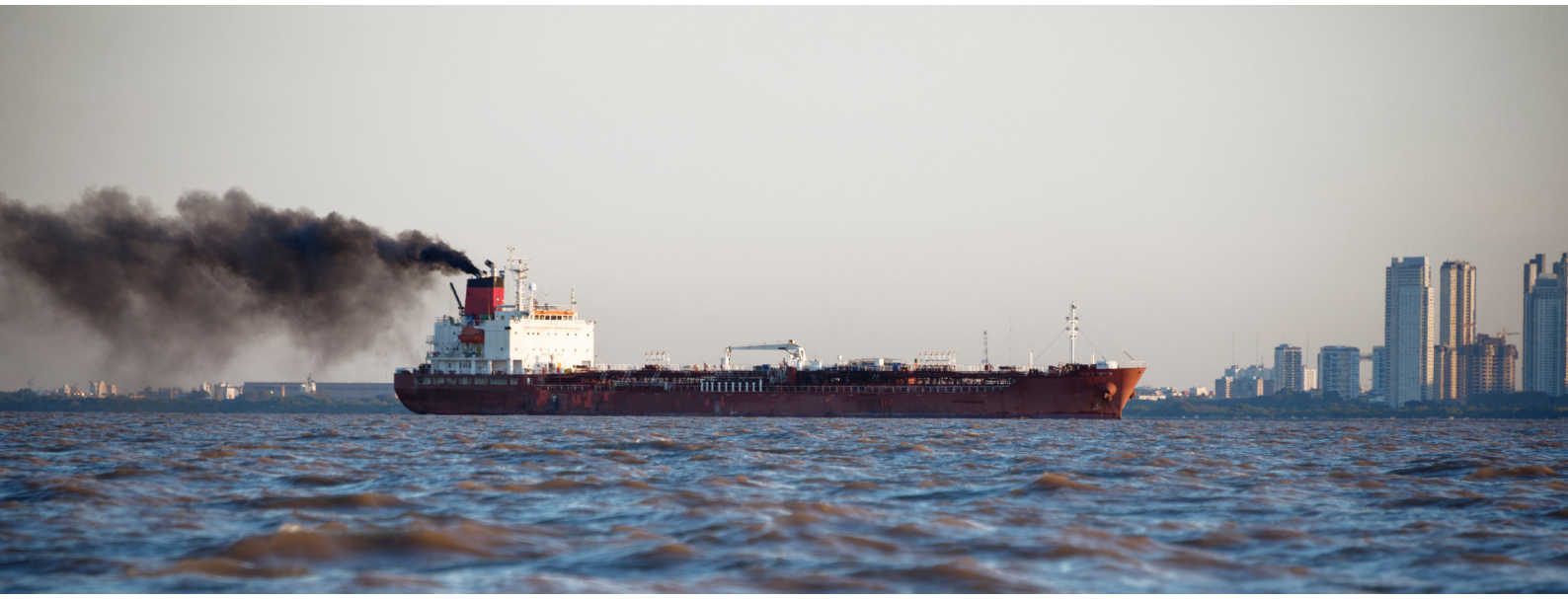
AG Carbondex emerges as a strategic ally, ensuring both compliance and financial prudence.

Discover How AG Carbondex Can Streamline Your Emissions Reporting and Verification Process

Schedule A Demo Call Today

Challenges in Verifying Emissions

03



In the ever-evolving seas of regulatory frameworks, the inability to adapt can sow confusion and frustration among stakeholders.

For Shipping companies, ensuring the accuracy of their CII & CO2 emissions data is a critical imperative. This verification process is facilitated through the Class Society responsible for certifying the vessel, serving as a crucial verifier. However, achieving successful verification demands meticulous preparations from the Shipping company. These preparations are no trivial matter, as each verification attempt necessitates time-consuming report preparation and incurs associated fees.

In the dynamic and fast-paced realm of Shipping, failure to navigate the verification process successfully only amplifies the complexity of already demanding daily routines.

What lies at the root of this challenge?

The Achilles' Heel: Non-Adherence to Agreed Formats

Within the International Association of Classification Societies, collaborative frameworks have been established to facilitate standardized formats among Class Societies. Despite these agreements, the maritime landscape is rife with report systems that lack the agility to adapt to this evolving environment.

As previously mentioned, legacy systems, while capable of generating reports with minor modifications, struggle to accommodate new requirements. The crux of the matter lies in the exportation of reports from existing legacy software in an aggregated manner—a practice that falls short of verifiers' expectations. Verifiers often request individual Noon Reports

for an entire year, a demand that may result in additional fees and poses a significant challenge for shipping companies.

Upon submission of exported Noon Reports, two detrimental scenarios unfold: a) inconsistencies in data integrity trigger multiple rounds of verification attempts, leading to frustration and incurring fees; and/or b) data quality issues manifest in inaccuracies, potentially resulting in worse-than-actual CII ratings and higher CO2 emissions & EU Allowances.

Regardless of the system employed for creating Noon & MRV Reports, the key lies in adopting an adaptable schema. This approach ensures alignment with verifier requirements, mitigating the risk of non-compliance, frustration, and financial repercussions for shipping companies.

Streamlining Verification: Beyond Manual Processes

Class Societies have taken a proactive step in fostering transparency and user-friendliness by publishing standardized formats for verification purposes, complete with clarifications on key terminologies such as speed and distance. While this initiative is commendable, the manual process of aligning reports with these formats remains a time-consuming task, placing a substantial burden on the shoulders of ESG Ops Managers.

As the fleet size expands, the manual approach becomes increasingly inefficient, underscoring the need for a more effective solution. The ESG Ops Manager, already equipped with essential data analysis skills highlighted in previous chapters, faces the additional requirement of possessing experience and knowledge in Emissions Regulation.

The question arises: Is there a more efficient alternative to the labor-intensive manual process?

Don’t Let Verification Headaches Slow You Down **Schedule A Demo Call Today**

04

Embracing Correction Factors:

A Critical Step Towards Operational Excellence in Shipping

IMO's CII Correction Factors

In the pursuit of easing the financial burden on shipowners, the International Maritime Organization (IMO) has rolled out Correction Factors for Carbon Intensity (CII). While applauded by the largest Shipping groups for its commitment to industry decarbonization, this initiative has encountered staunch resistance from more financially conservative groups, notably MSC, apprehensive about the associated costs.

In response to industry feedback, IMO has endeavored to address concerns by introducing corrections to make the decarbonization transition more equitable for shipowners. Despite the potential for correction factors to yield significant savings, a key challenge emerges—complexity.

In the maritime industry, characterized by multiparty interactions and multilayered processes, the practical application of correction factors becomes a labyrinthine endeavor.

The question then arises: If correction factors have the potential to unlock substantial savings, why do they present such a complex challenge?

Decoding the Complexity: Correction Factors in Maritime Operations

While correction factors stand out as powerful tools for cost savings, the practical implementation of these factors is marred by extreme complexity.

A critical oversight in the industry is the recognition that Carbon Intensity Index (CII) ratings transcend mere technical or commercial concerns; they are, at their core, an Asset Management challenge. Larger Shipping groups, equipped with dedicated Asset Management departments wielding sophisticated financial models, navigate this challenge adeptly to maximize their investments. In contrast, many Shipping companies lack

this level of sophistication, attempting to address CII ratings through their existing technical and commercial departments.

The crux of the matter revolves around discussions between Shipowners and Charterers within their charter party agreements. While grand claims of achieving net zero by specific dates capture attention, the reality is that few are willing to absorb the added costs of cleaner fuels. Cargo owners, often prioritizing lower prices, inadvertently hinder the reduction of carbon emissions and complicate long-term fleet transformation for shipowners.

In the simplest scenario, Shipowners exploring Energy Saving Devices (ESD) to enhance CII ratings face a conundrum in time charter agreements where fuel costs are borne by Charterers. This renders it impossible for Shipowners to realize a return on their ESD investment.

Escalating in complexity, slow steaming, widely acknowledged as an effective means to reduce emissions in Ocean Shipping, is subject to Charterers' prerogative. While it proves economically sensible, the impact is felt by the vessel rather than the Charterer.

The pinnacle of complexity arises with the prospect of discounting energy consumption related to cargo operations from the vessel Operations CO2. Although promising, few Shipowners possess the maturity to leverage this opportunity effectively.

Navigating this sophisticated landscape requires innovative strategies. Here are some ideas to assist Ship operators in navigating this multifaceted challenge.

Strategic Implementation of Correction Factors: The Role of ESG Ops Teams

As elucidated in preceding sections, the ESG Ops Team emerges as a pivotal force in mitigating the challenges faced by Shipping companies, offering expert guidance in Emissions Regulations and Data Analysis.

By harnessing this specialized expertise, ESG Ops Teams can devise practical frameworks to address and resolve critical pain points within a Shipping company.

In the context of implementing correction factors, particularly concerning the installation of Energy Saving Devices (ESD), the ESG Ops Team takes the lead. They construct ship fuel efficiency curves spanning from the latest dry dock to the upcoming one. Augmented by the ESD, Shipowners and Charterers collaboratively agree on a targeted fuel-saving percentage, often grounded in the manufacturer's estimations. This equitable agreement allows both parties to share the realized savings, enabling Shipowners to secure a return on their investment.

Navigating the difficulties of Slow Steaming poses additional challenges, as it is legally bound by contracts between Charterers and their customers. The BIMCO's CII Clause for Charterparty agreements plays a pivotal role in addressing this complexity.

Collaboration between legal teams and the ESG Ops Team is crucial to defining mechanisms for contract amendments or freight rate adjustments based on speed profiles. This approach requires unity among Shipowners, given Charterers' tendency to opt for the lowest bidder.

An alternative solution involves IMO permitting penalty payments for CII rating corrections solely attributable to Charterers exceeding speed limits. Shipowners could then impose penalties (akin to demurrage) on Charterers for surpassing agreed speeds, providing a financial avenue to address CII discrepancies.

In the domain of proper energy consumption allocation, the ESG Ops Team undertakes a rational distribution of operational hours based on 100% consumption. For instance, if a vessel consumes 100 tons of bunker fuel in 24 hours, the ESG Ops Team calculates the percentage attributable to specific activities such as reefers and cargo heating. This meticulous allocation allows for the discounted reporting of energy consumption, aligning with the vessel's operational realities.

100 Tons in 24 hours	= 100%
Reefer Energy Consumption	= 5%
Cargo Heating Consumption	= 10%
Actual Energy Consumption	= 85% *(85 Tons of Bunker in 24 hours)*

While the involvement of an ESG Ops team is crucial for designing, planning, implementing, and monitoring correction strategies, the advent of a robust Data Engine presents an opportunity to revolutionize these processes.

With the integration of a sophisticated Data Engine, these intricate calculations can be executed in real-time, providing instantaneous access to both Shipowners and Charterers.

Simplifying Corrections with AG Carbondex

AG Carbondex stands at the forefront as a Fleet Emissions Monitoring System, uniquely designed to excel in addressing diverse Data challenges faced by Shipping companies.

Featuring end-to-end Data capabilities encompassing ingestion, validation, correction, transformation, reporting, and simulation, it serves as a comprehensive solution for the maritime industry.

Our simulation modules within AG Carbondex empower Shipowners and Charterers to construct straightforward Vessels' fuel efficiency curves, facilitating agreements on fuel savings post-installation of Energy Saving Devices (ESDs). The simulation forecasts expected savings for voyages and generate actual consumption and savings post-voyage, providing a transparent basis for shared benefits, with the specific percentage and sharing terms defined collaboratively.

For Slow Steaming agreements, real-time monitoring through AG Carbondex sends alerts based on predefined thresholds. Both parties receive notifications, enabling prompt corrective actions and agreements. This proactive approach mitigates the risk of misunderstandings, disagreements, and potential arbitration cases.

AG Carbondex introduces a revolutionary concept of utilizing CII ratings as a budget, allowing Shipowners and Charterers to manage and optimize their carbon intensity targets. Even if a CII rating is exceeded for a specific voyage, subsequent voyages can contribute to maintaining the CII rating on target, preventing penalties and unfavorable ratings.

In the realm of energy consumption, AG Carbondex's Energy Module empowers Shipowners to track, monitor, and discount cargo-power consumption in real time. This eliminates the need for extensive Data analysis and endless email exchanges, ensuring a seamless and efficient process. Energy Data can be added manually or through sensors, adapting to the unique setup of each vessel.

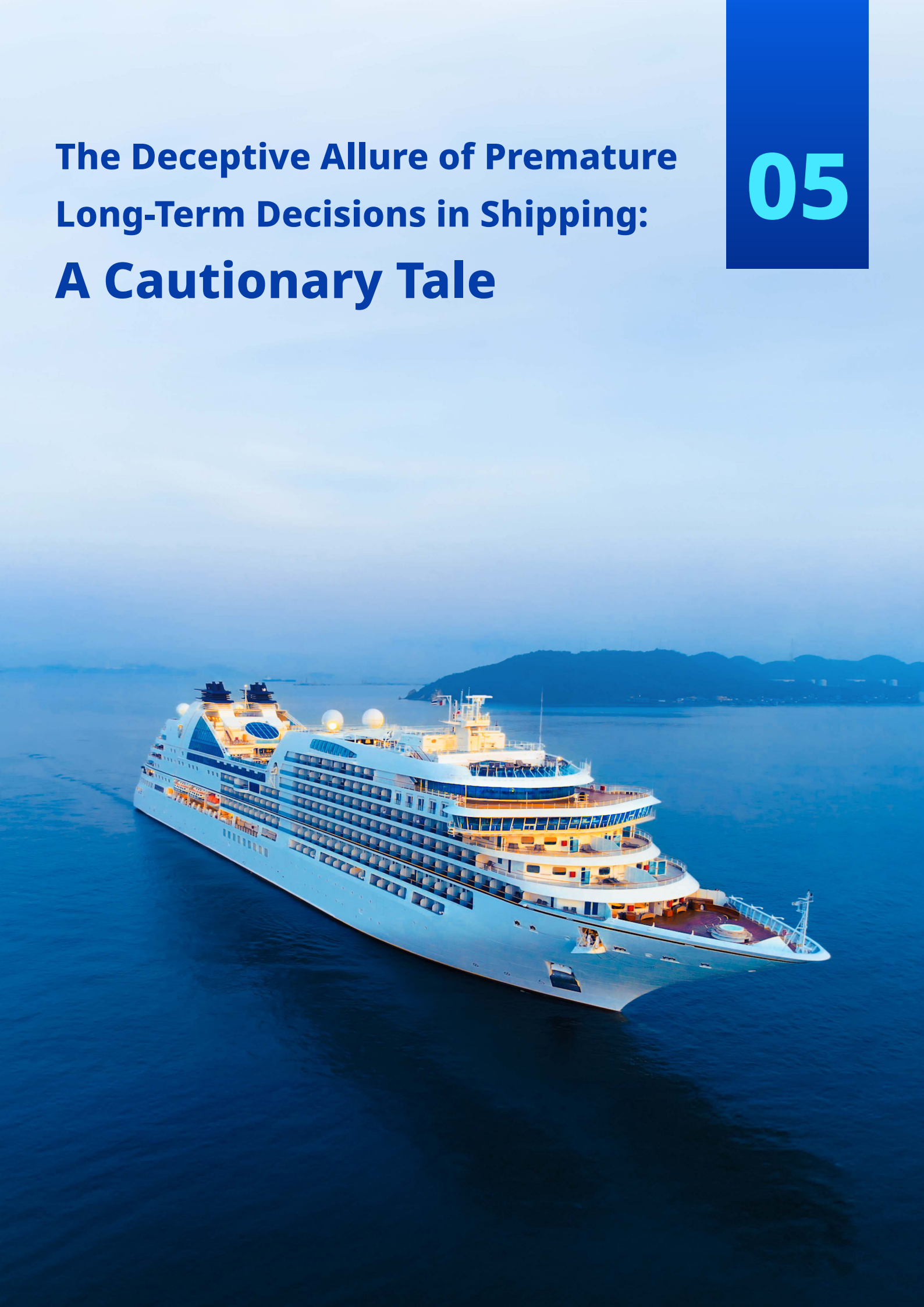
AG Carbondex not only addresses the most typical complexities associated with Correction Factors but also remains adaptable and expandable, ready to accommodate new Use Cases as regulatory landscapes continue to evolve.

Discover How AG Carbondex Can Simplify Your Emissions Reporting and Verification Process

Schedule A Demo Call Today

05

The Deceptive Allure of Premature Long-Term Decisions in Shipping: A Cautionary Tale



Charting the Future:
Daunting Long-Term Decisions Amid Evolving Parameters

The landscape of carbon intensity regulations, notably the Carbon Intensity Index (CII) and the European Emissions Trading System (ETS), undergo annual tightening. Commencing in 2024, the EU MRV regulations extend reporting obligations to vessels as small as 400 GRT, encompassing Offshore support vessels that were previously exempt.

Adding to the complexity, EU Allowances witness a steady escalation, intensifying the financial implications for Shipping companies:

2025	40% based on actual ETS from the preceding year.
2026	70% based on actual ETS from the preceding year.
2027	100% based on actual ETS from the preceding year.

As the regulatory horizon unfolds, additional challenges await, including Greenhouse Gas emissions reporting in the coming years. The transition to Biofuels introduces a new layer of complexity, demanding a comprehensive emissions reporting framework from well to wake. This includes distinct phases:

Well to Pump → Pump to Hull → Hull to Wake

The trajectory is clear: the reporting complexity burgeons year by year. Shipping companies face the imperative to transition fuels and confront the pressing need to elevate their Data preparedness and maturity. Preparing for this dynamic landscape is pivotal to effectively navigating the evolving regulatory framework.

Adapting to Complexity: Navigating Transitions without Long-Term Commitments to Legacy Systems

In the face of dynamic regulatory changes, Shipping companies must maintain agility and keep options open. Existing systems designed for EU MRV, often legacy systems, struggle to accommodate rapid changes in the short term. To bridge this gap, Shipping companies are advised to cultivate internal adaptability, leveraging the expertise of an ESG Ops team capable of managing the nuances that legacy systems cannot handle.

While existing systems may offer more flexibility for adjusting to ETS reporting requirements, manual interventions are likely to be commonplace. However, the complexities associated with Greenhouse Gas Emissions and Well to Wake reporting necessitate active management by an ESG Ops team. Consequently, committing to long-term contracts during this transitional period carries inherent risks.

Predicting the exact number of Full-Time Equivalents (FTEs) required per vessel for monitoring and reporting is challenging. AG posits that an FTE ESG Ops Manager can effectively oversee approximately 4 to 5 vessels, addressing the multifaceted challenges outlined earlier.

As the cost of carbon-neutral fuels is set to rise significantly, the addition of new ESG Ops personnel becomes a cost-intensive necessity. While Digital Technologies cannot alleviate the cost of these fuels, they serve as a valuable tool to help Shipowners limit the need for extensive hiring, reducing the overall impact on operational costs.

AG Carbondex: Pioneering Automated Adaptability

AG Carbondex stands out as a dynamic and flexible Fleet Emissions Monitoring System, dedicated to understanding and embracing the ever-evolving nuances of regulatory changes. Its adaptability is a key differentiator, allowing it to seamlessly incorporate new approaches and insights in response to evolving regulations.

Designed to be risk-free, AG Carbondex is preloaded with all known yearly changes for EU ETS reporting, providing users with immediate access to the latest updates as regulatory changes unfold. This approach enables Shipping companies to concentrate on their

Fleet Transformation initiatives, confident that the Data aspect is expertly managed.

The current version of AG Carbondex encompasses all EU ETS transitions, with a vigilant eye on Greenhouse Gas emissions reporting, even as the regulatory framework remains in flux. As more details emerge on Fuel EU, AG Carbondex commits to expanding its modules, empowering Shipowners to navigate the turbulent waters of regulatory change with confidence and success.

Discover How AG Carbondex Simplifies Navigating the Maritime Landscape with Efficiency

Schedule A Demo Call Today

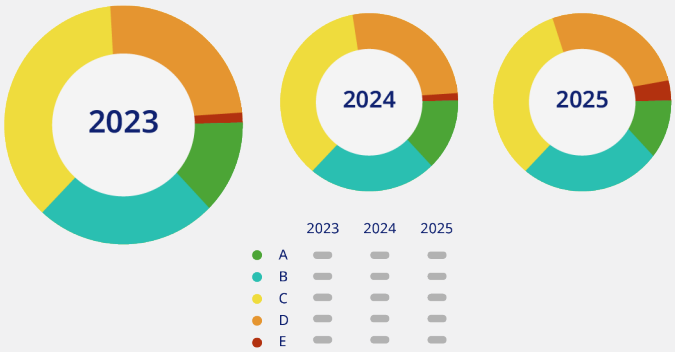
AG CARBONDEX
Fleet Emissions Performance Management Suite

Empowering The Maritime Industry

confidently navigating the future

AG CARBONDEX - The game-changer. Aligning business interests, combining both environmental responsibility and regulatory compliance. Empowering stakeholders in making informed decisions, reducing emissions, enhancing operational efficiency, and navigating the complex maritime landscape effectively.

Carbon Intensity Indicator (CII)



Consolidated Fleet Perspective

AG CARBONDEX – Connecting the dots and providing actionable insights. Enabling companies by capitalizing on the CII correction factors and improving their ratings.

European Union Monitoring, Reporting and Verification (EU MRV)

- CO2 Emitted 8,000MT
- ETS CO2 4,500MT
- Carbon Cost 12,000Euro
- Transport Work 568,712T-nm
- Fuel Consumed 2,500mt

Average Values Per Vessel

The EU ETS directive provides a clear trading pattern that falls in the ambit of ETS. **AG CARBONDEX** is constructed with these rules to assist users in making the best use of the scenarios when dealing with EU-related voyages. Appropriately forecasting the potential ETS cost on the fleet by using our Machine Learning (ML) models.

Case Study:

A Ship Management Company with a Fleet of over 40 Ships

>$1M
SAVED ANNUALLY
by optimizing fuel consumption and reducing operational inefficiencies.

12% EMISSIONS REDUCTION
aligning with sustainability goals and enhancing eco-friendly reputation.

5%
AVG REDUCTION OF VOYAGE DURATIONS
increasing vessel turnaround times and revenue generation.

CO_2
LOWER OPERATIONAL COSTS & REDUCED CARBON FOOTPRINT
equals winning in sustainability-focused market.

AG CARBONDEX transformed marine operations, achieving sustainability and cost savings.

Unlock Your Maritime Potential with AG CARBONDEX

CONTACT US
agcarbondex@aventagroup.com

AVENTRA GROUP
www.aventragroup.com
info@aventragroup.com
Malaysia | Singapore | India
Vietnam | UAE

Certificate of Compliance by
ISO 27001 2013
SOC 2 Type 2

Key Technology Partners
Microsoft outsystems SAP aws salesforce