

# RIGHTSHIP – PARTNERING FOR SUSTAINABLE PORTS



Organization of  
American States

RIGHTSHIP



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25 November 2014



# TODAY'S DISCUSSION



- **RightShip**
- **Finding a green ship in a blue ocean**
- **RightShip's environmental ratings**
- **Optimization**
- **Port Incentive Program**
- **Conclusion**





# RIGHTSHIP SHIP VETTING AND RISK MANAGEMENT





# ABOUT RIGHTSHIP

## Independent company formed in Oct 2001

- Houston, Melbourne & London
- 240+ customers globally

## Ship Vetting & Risk Management

- Petroleum & dry cargo vetting service
- Environmental rating & CO<sub>2</sub> benchmarking
- Largest provider of third party vetting services
- Removed over 950 Ships from customer supply chains in 2013

## Award winning Proven System

- ISO9001 & ISO27001 certified
- Australian Prime Minister's 2013 Exporter of the Year





# IN A NUTSHELL 1 JULY 2013 – 30 JUNE 2014

- **35,207 Vets – ↑1,773 (6%) from 2012/13**
- **194,671 login sessions – ↑57k (41%) from 2012/13**
- **3.07b DWT vetted – ↑267m (10%) from 2012/13**
- **8,429 petroleum vets – ↑345 (4%) from 2012/13**
- **2,943 inspections – ↑196 (7%) from 2012/13**
  - 615 Dry – ↑65 (12%) From 2012/13
  - 2,328 Petroleum – ↑131 (6%) from 2012/13





# FINDING A GREEN SHIP IN A BLUE OCEAN





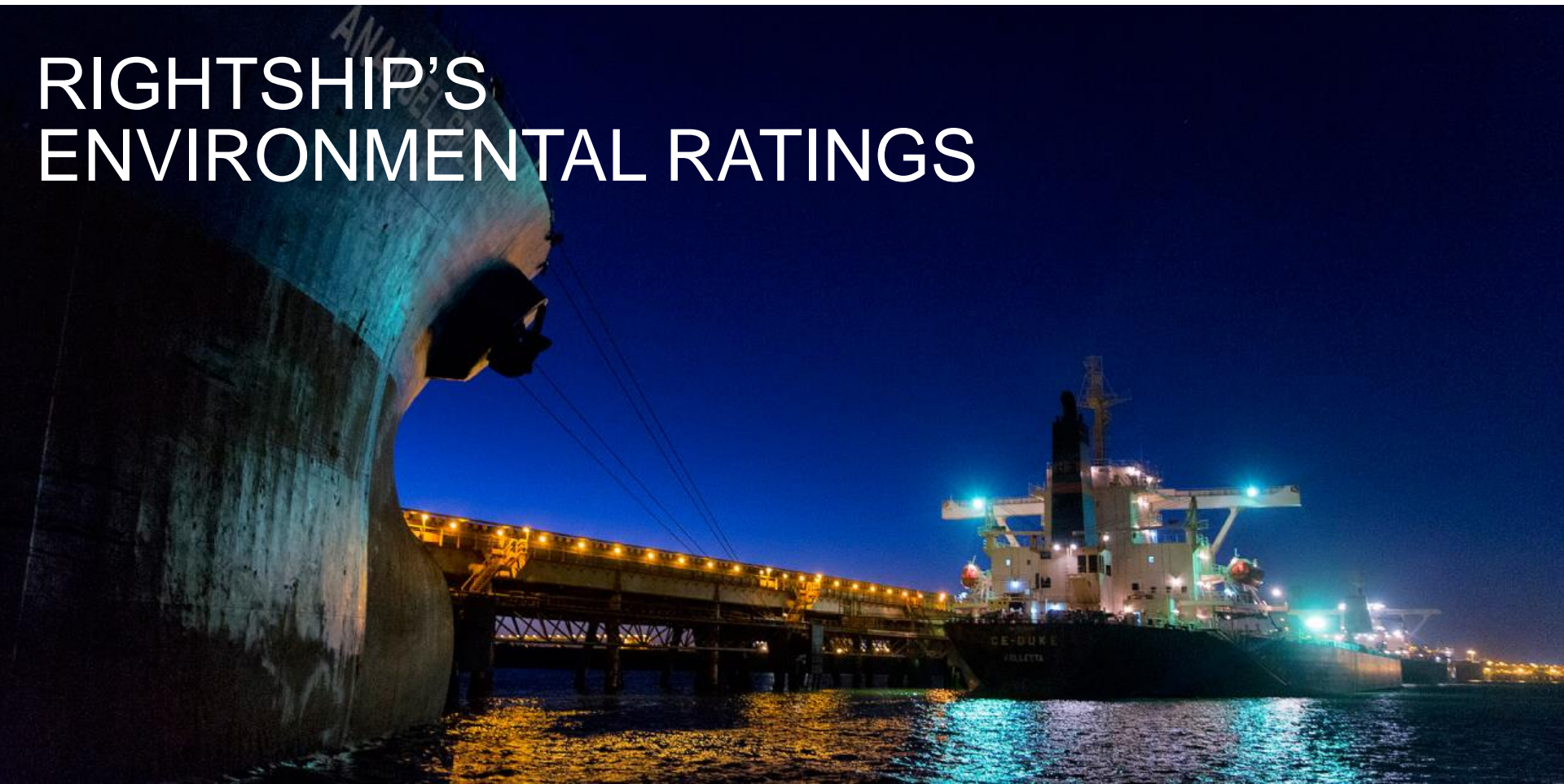
# COMBAT INFORMATION ASYMMETRY

Vehicle Information		
CO <sub>2</sub> emission figure (g/km)		
<div><div>&lt; 120 A</div><div>120+ to 140 B</div><div>140+ to 155 C</div><div>155+ to 170 D</div><div>170+ to 190 E</div><div>190+ to 225 F</div><div>225+ G</div></div>		
		A 104 g/km
Fuel Use (estimated) for 18,000 kilometres A fuel use figure is indicated to the consumer as a guide for comparison purposes. This figure is calculated by using the combined drive cycle (urban and extra urban fuel consumption cycles).		774 litres
Motor Tax for 12 months Motor Tax varies according to the CO <sub>2</sub> emissions of the vehicle.		€100
Vehicle Registration Tax (VRT) Rate Percentage rate of VRT payable of the value of the vehicle is dependant on the CO <sub>2</sub> emissions.		14%
Environmental Information A guide on fuel economy and CO <sub>2</sub> emissions which contains data for all new passenger car models is available at any point of sale free of charge or directly from the Society of the Irish Motor Industry, 5 Upper Pembroke Street, Dublin 2. Tel: 01-6761690, web address: <a href="http://www.simi.ie">www.simi.ie</a> . In addition to the fuel efficiency of a car, driving behaviour as well as other non-technical factors play a role in determining a car's fuel consumption and CO <sub>2</sub> emissions. CO <sub>2</sub> is the main greenhouse gas responsible for global warming.		
Make:		
Model/Version:		
Carbon dioxide emissions (g/km): 104 g/km This figure may be obtained from the vehicle's Certificate of Conformity. Important note: Some specifications of this make/model may have lower CO <sub>2</sub> emissions than this. Check with your dealer.		
Fuel Consumption:		
Drive cycle	Litres/100km	Fuel Type: Petrol
Urban	5.0	Engine Capacity (cc): 1497
Extra-urban	4.2	Transmission: Automatic
Combined	4.3	





# RIGHTSHIP'S ENVIRONMENTAL RATINGS







# RIGHTSHIP'S A-G GHG EMISSIONS RATING

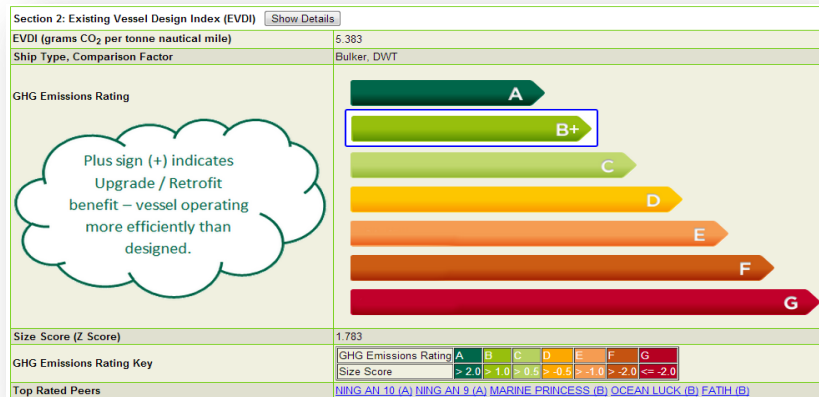
$$\text{EVDI} = \frac{\text{CO}_2 \text{ emission}}{\text{transport work}}$$

## EVDI – Basis for Comparison

- Data sources e.g. IHS Fairplay, SVIS, Owners, etc.
- Ship types – 75,000+ vessels
- Data verification during vetting process
- Approximately 7,000 ships in RightShip database verified
- [www.shippingefficiency.org](http://www.shippingefficiency.org)

## A-G GHG Emissions Rating

- Relative comparison of peer group
- Provides industry framework for comparison
- Identify most efficient vessel

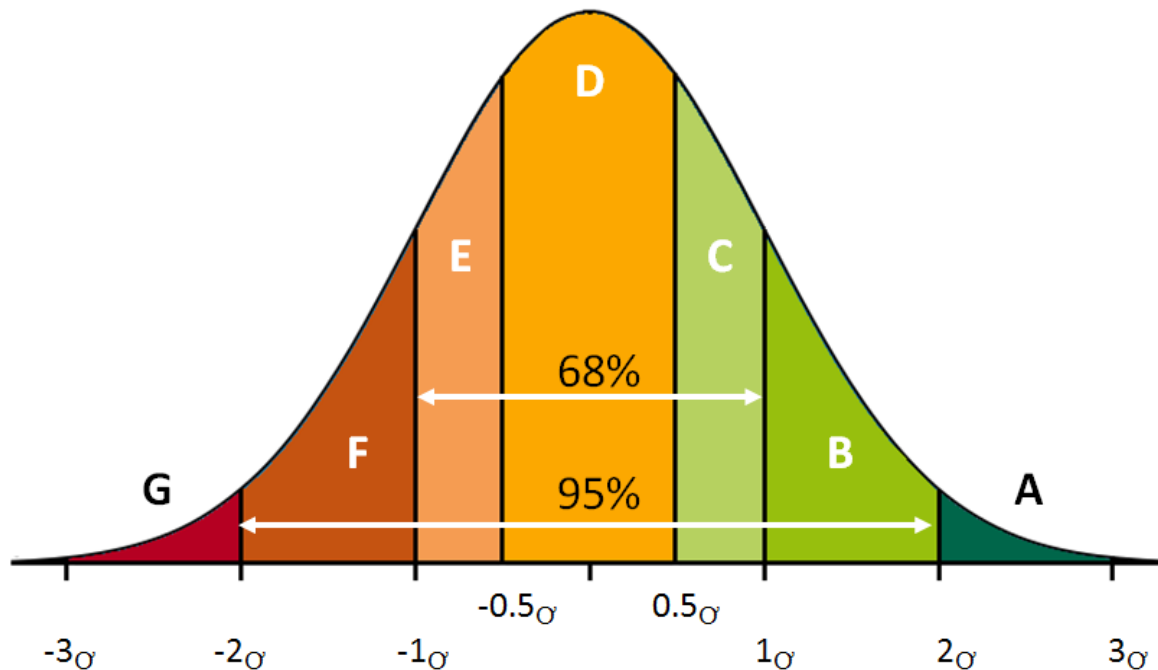


**Fact: ~15% of world fleet will have EEDI by 2020.**



# CALCULATING THE A-G GHG EMISSIONS RATING

GHG Emissions Rating – Normal Peer Distribution



90,000 DW  
Bulkers

4.334



5

GHG  
Emissions  
Rating

110,000 DWT  
Bulkers

3.742

4.401





# LET'S COMPARE

Section 2: Existing Vessel Design Index (EVDI) <span>Hide Details</span>																	
EVDI (grams CO <sub>2</sub> per tonne nautical mile)	11.626																
Ship Type, Comparison Factor	General Cargo, DWT																
GHG Emissions Rating	<div><div><div>A</div><div>B</div><div>C</div><div>D</div><div>E</div><div>F</div><div>G</div></div></div>																
Size Score (Z Score)	1.473																
GHG Emissions Rating Key	<table><tr><td>GHG Emissions Rating</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td></tr><tr><td>Size Score</td><td>&gt; 2.0</td><td>&gt; 1.0</td><td>&gt; 0.5</td><td>&gt; -0.5</td><td>&gt; -1.0</td><td>&gt; -2.0</td><td>&lt;= -2.0</td></tr></table>	GHG Emissions Rating	A	B	C	D	E	F	G	Size Score	> 2.0	> 1.0	> 0.5	> -0.5	> -1.0	> -2.0	<= -2.0
GHG Emissions Rating	A	B	C	D	E	F	G										
Size Score	> 2.0	> 1.0	> 0.5	> -0.5	> -1.0	> -2.0	<= -2.0										
Top Rated Peers	<a href="#">PIRGOS (A)</a> <a href="#">VECTIS EAGLE (A)</a> <a href="#">VECTIS FALCON (A)</a> <a href="#">VECTIS HARRIER (A)</a> <a href="#">VECTIS SPREY (A)</a>																
Peer Group	Peers(Minus) = 387 Peers(Plus) = 277, Peer DWT Range = 7,794 to 9,526																
Year Of Build	2014																
MEPC Reference Line Comparison	General Cargo vessel 15.164. Vessel EVDI is more efficient than MEPC Phase 0 Reference Line.																
In(EVDI)	2.453																





# ENVIRONMENTAL STAR RATING



## Holistic Rating

- Recognises performance and behaviours above compliance.
- Calculated environmental risk parameters
- Vessel performance
- Third party environmental factors



# MARKET MOVES FASTER THAN REGULATION

- **Twenty two charterers factor energy efficiency into the vetting selection process**
  - 1.8 billion tonnes of cargo
  - 23% of global non-containerized shipments
  - 21,500 vessel movements annually
- **Seven shipowners publicly endorse energy efficiency selection process**
- **Three ports factor energy efficiency into the vetting acceptance process**
- **ABN Amro**
  - Complimentary to internal risk management procedures
  - Factor vessels' energy efficiency into underwriting process



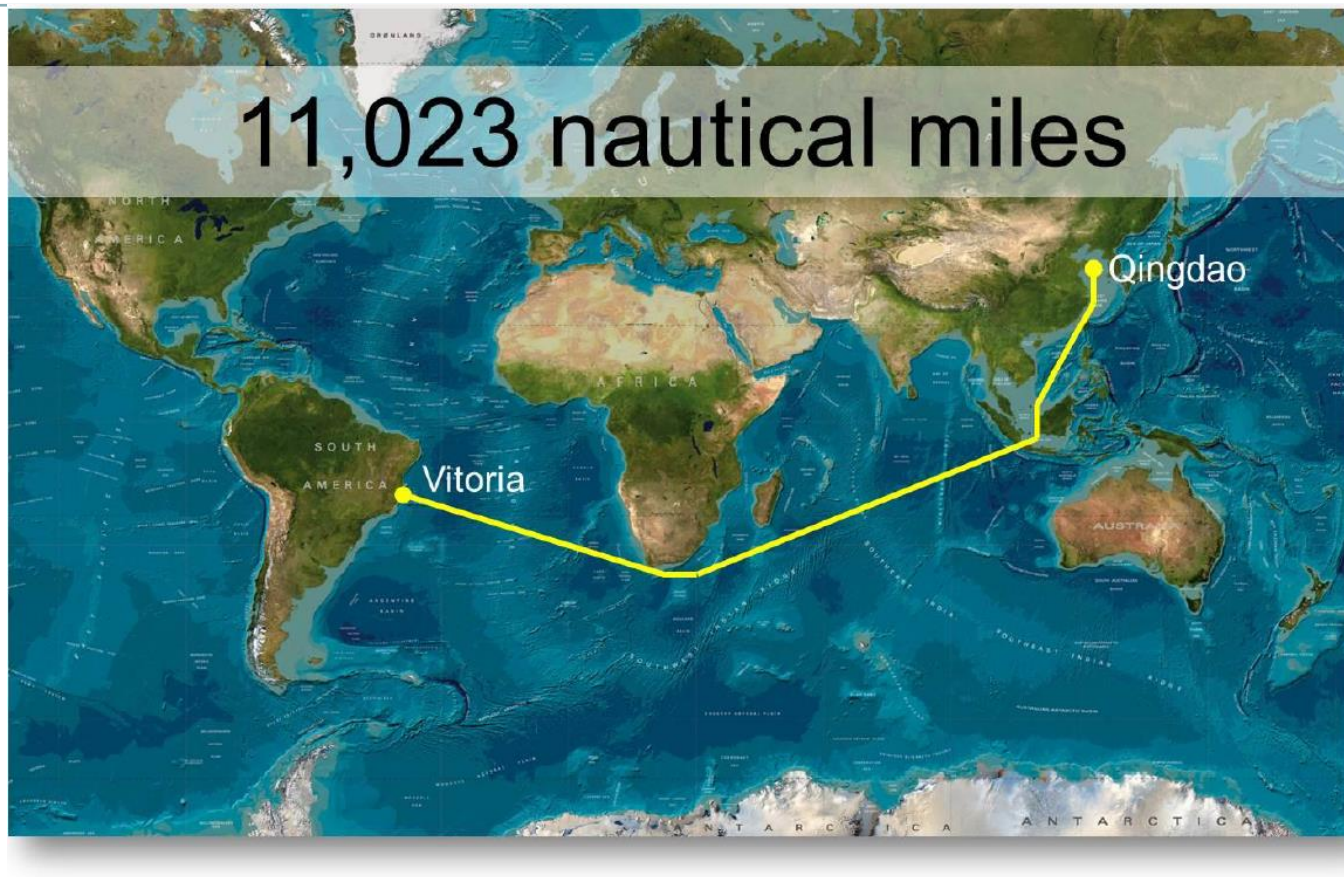


Figure 15: Possible voyage plan of a vessel travelling from Vitoria, Brazil to Qingdao, China





CO<sub>2</sub> emitted for the 11,023 nautical mile journey:

GHG Emissions Rating	DWT	EVDI™	CO <sub>2</sub> Tonne	Variation from Mean	Variation from Mean %
B	172,964	2.63	5,013	-734	-13%
C	172,964	2.75	5,243	-504	-9%
D	171,516	2.94	5,567	-181	-3%
E	171,681	3.15	5,966	218	4%
F	170,000	3.42	6,410	662	12%

The theoretical difference between a B rated vessel and an F rated vessel is 1,400 tonnes.



Using USD650 for the price of fuel / tonne:

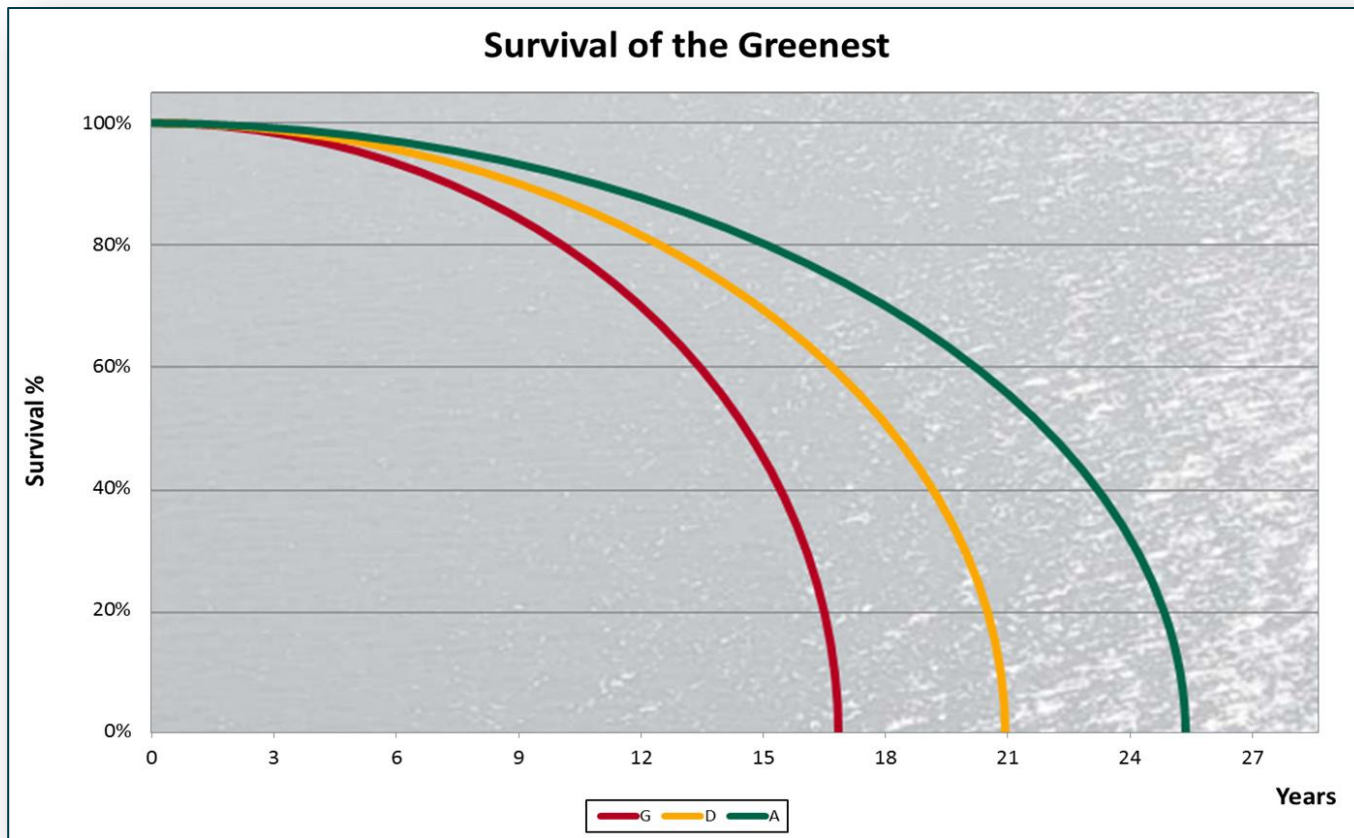
<b>GHG Emissions Rating</b>	<b>DWT</b>	<b>Power (Kw)</b>	<b>USD Price of fuel for voyage</b>	<b>USD Variation from Mean</b>	<b>% USD Variation from Mean</b>
B	172,964	14,711	\$1,304,325	-\$192,970	-13%
C	172,964	15,404	\$1,365,769	-\$131,527	-9%
D	171,516	16,861	\$1,448,044	-\$49,252	-3%
E	171,681	18,736	\$1,555,791	\$58,495	4%
F	170,000	18,661	\$1,671,314	\$174,019	12%

The spread between the best and worst performing vessel represents around a USD366,000 differential for the same amount of cargo being delivered over the same distance.

At today's bunker price of \$350 per tonne the savings are still \$197,000+



# SURVIVAL OF GREENEST







## OPTIMIZATION OF PORT INFRASTRUCTURE

**“ . . . . Ports and Maritime Administrations need to stop looking at Big Data *as a solution to a problem*, and start looking at Big Data as an opportunity to overhaul how they do business.”**

Example: Port Hedland



# PORT INCENTIVE PROGRAM

RIGHTSHIP





Organization of  
American States

# Congratulations!



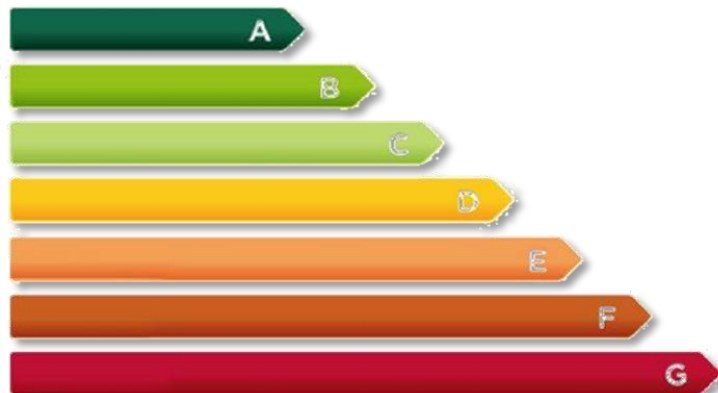
**Vision:** To be consistently the best of all Caribbean ports by providing quality services and facilities for cargo and cruise operations, and to use this regional leadership as a basis for enhancing international reputation.

- **Governance:** To manage the organisation with the best practice of corporate governance, bearing in mind the value of human capital and potential to contribute to community development.
- **Efficiency:** To operate a sustainable, cost effective business.

We look forward to working with RightShip to rewarding ship owners who are going beyond environmental compliance and significantly reducing greenhouse gas emissions. We confirm that the GHG rating access to your good selves will be provided free of cost.



## ECO ACTION PROGRAM



Section 3: Environmental Rating	
Rating	4 ★★★★★
Date	25/Aug/13 18:30



EcoAction Award Levels



### ECOACTION

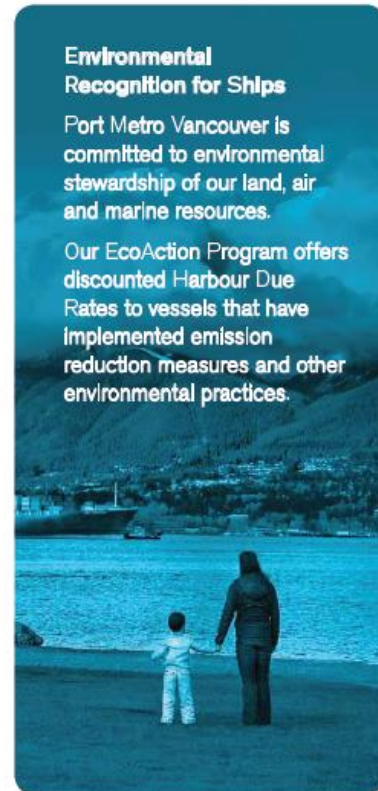
Receive Discounted  
Harbour Due Rates  
by Participating in our  
EcoAction Program



### Environmental Recognition for Ships

Port Metro Vancouver is  
committed to environmental  
stewardship of our land, air  
and marine resources.

Our EcoAction Program offers  
discounted Harbour Due  
Rates to vessels that have  
implemented emission  
reduction measures and other  
environmental practices.







## ENVIRONMENTAL INCENTIVE PROGRAM

### First Six Months

- Discounts to 83 vessels (127 total calls)
- 91 of these calls qualified through RightShip's A to G

### GHG Emissions Rating – Environmental Star Rating

- Over \$72,000 in discounts in first six months alone
- Access to rating provided free to ports







# PORT INCENTIVE PROGRAM – KEY BENEFITS

**TradeWinds**  
**Survival of the greenest**

A growing number of ports and terminals appear to be offering incentives to owners that are investing in technologies aimed at reducing ship emissions.



In Canada, Port Metro Vancouver's and Prince Rupert Port Authority are rewarding customers by offering discounts on port dues.

According to a statement the size of the incentive is now based on a ship's 'A to G' Greenhouse Gas Emissions (GHG) rating and the Environmental Ship Index (ESI), which evaluates the amount of Sulphur Oxides and Nitrogen Oxides (NOx) emitted by commercial vessels.

Duncan Wilson, vice president of corporate social responsibility at Port Metro Vancouver, says his organisation's initiative offered more than \$1m in discounts last year alone, which represents roughly 10% of the revenue the port received from deepwater harbour dues.

According to an announcement issued by Carbon War Room, which is backed by Richard Branson and teamed up with vetting specialist

Carbon War Room is backed by the likes of Richard Branson and Idan Ofer.

## Efficient ships *Act Local, Think Global*

- Reduce overall emissions in the port area
- Ultimately reduce emissions for entire journey
- Links between green ships and safer ships

## Recognition of sustainability efforts

- Prince Rupert / Port Metro media campaign – 6.7 million opportunities to view
- Increasing focus on emission reduction



# CANADIAN PORTS OFFER INCENTIVES



Jose Maria Figueres  
@figuerescr

Vancouver & Prince Rupert ports use Energy Efficiency rating developed by @cwarromm & RightShip to reward sh

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B.C. leads in 'clean' shipping, Richard Branson says

environmental  
**LEADER**

January 30, 2014

iPoint Conflict Minerals Platform

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➤ What are you waiting for! The 15,000

## Ports Offer Financial Incentives to Lower Ships' GHGs



Canada's two largest west coast ports are offering financial incentives to the most efficient vessels that enter the ports.

Port Metro Vancouver's Eco-Audit and Prince Rupert Port Authority's (PRPA's) Green Wave Program are based on the Carbon Positive Energy Efficiency rating system, which rewards ships with lower GHG emissions of shipping fleets.

The Canadian ports are the first to offer a rating system, says Carbon Positive.

PRPA's Green Wave Program is the first two west coast ports to offer a rating system. At both ports, emissions levels will be tracked.

The rating system, established by the Environmental Protection Agency alongside the Environmental Protection Agency, will allow ports to see a ship's energy efficiency and reward the most efficient.

### RELATED STORIES

Carbon Positive Launches Energy Management for Ports  
Northwest Ports Pledge 75% DPM Cut  
Ports Power Docked Ships with Electricity

### RELATED TOPICS

Efficiency  
Emissions  
Funding & Incentives  
Green Fleets & Transportation  
Green Incentives  
Sustainable Strategy & Leadership  
Transportation

businessGreen PLUS  
Canadian ports to reward green shipping





# WORKING TOWARDS A CLEANER ENVIRONMENT

- **Port Incentive Program**
  - Driving cleaner air through financial incentives
  - Promotes more efficient ships
  - Reduces emissions in port, also for entire journey
  - Links between greener ships and safer ships
  - Increasing community expectation on sustainability
  - Positive public relations / media exposure
- **Common platform for comparison**
  - A-G GHG Emission's Rating
  - Environmental Star Rating
  - Free access to port incentive providers





## 6-STEP ROADMAP

1

- Initial engagement with ports to scope **will and capability** to offer incentives

2

- Introductory presentations with RightShip and Carbon War Room to understand the '**A to G**' GHG Emission **Ratings methodology**

3

- **Data modeling** using historical arrivals data; analysis of historical '**A to G**' spread of vessels - to estimate cost implications

4

- Port **internal process** of approvals to implement revised harbor tariffs and discounts

5

- Collaboration with the Carbon War Room and partners on a **comprehensive PR plan** to announce the port using A to G ratings

6

- Milestone **announcement**: more ports sign up to offer financial incentives to more efficient vessels using '**A to G**' ratings

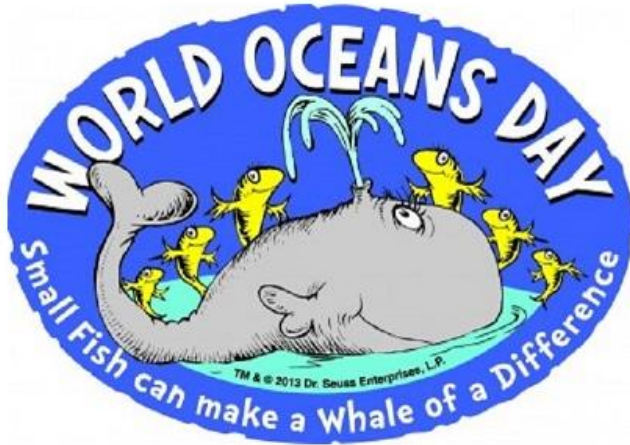


- *Sustainability* is now a Standard Consideration in Shipping
- Accelerate industry Sustainability by Terminals, Charterers & Owners *working together*
- A-G Rating is a common approach to compare *relative* and *absolute efficiency*
- Opportunity to *incentivize* Energy Efficiency using A-G Rating





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<http://blog.firstvacationrental.com/8-games-to-play-with-kids-at-the-beach/>

*Way Forward . . .*



RIGHTSHIP

# MUCHAS GRACIAS!

Email: [vetting@rightship.com](mailto:vetting@rightship.com)