

GREEN WAVE

Environmental Incentive Program for Vessels

The Green Wave program, introduced in 2013, offers reduced harbour dues to vessels that have implemented emission reduction measures and/or other environmental practices to improve their environmental performance. The program focuses on environmental certification, technological implementation, and management practices. The aim of Green Wave is to incentivize shipping companies to increase their environmental awareness and continue to improve the performance of their vessels.

Vessels can qualify for one of three tier levels above the base rate based on environmental performance. These tiers are based on level of commitment towards aspects such as reducing air emissions and pollutants, using more energy efficient technology, and participating in the marine sustainability organizations and initiatives that are being rapidly adopted worldwide.

In 2015 the program mechanisms to qualify for discounted harbour dues rates include:

- Environmental Ship Index
- Green Marine Program
- RightShip GHG and / or Environmental Star Rating
- Green Award
- Clean Shipping Index
- Energy Efficiency Design Index

The following matrix illustrates these three tiers and the criteria necessary in 2015 to achieve a discount rate (only one satisfied criterion is needed to achieve the corresponding tier discount).

GENERAL	SPECIFIC	TIER 1 (10%)	TIER 2 (20%)	TIER 3 (50%)
ENVIRONMENTAL PROGRAM	Green Marine	Level 3 GHG AND min Level 2 overall	Level 4 GHG AND min Level 2 overall	Level 5 GHG AND min Level 2 overall
	RightShip	GHG B,C OR Environmental 3+ (min GHG D)	GHG B AND Environmental 3+	GHG A
	Environmental Ship Index (ESI)	Scores 20-30	Scores >30-50	Scores >50
	Green Award	Award certificate		
	Clean Shipping Index	Score of Yellow	Score of Green	
	Energy Efficiency Design Index	EEDI 5% better than required	EEDI 10% better than required	

GLOSSARY

Environmental Ship Index: ESI is governed by the World Ports Climate Initiative. ESI is used internationally and is incorporated into other environmental programs and classifications; currently there are over 3,400 ships participating. The program identifies ships that perform better in reducing air emissions, beyond levels required by today's IMO standards. ESI focuses on NOx, SOx, CO2, and onshore power supply, and is a points-based system ranging from 0 (compliance) to 100 (zero emissions).

www.environmentalshipindex.org

Green Marine: A non-profit, Canada-U.S. initiative that incorporates several environmentally sustainable measures, with 26 international and domestic ship owners currently participating. Green Marine uses a grading system up to Level 5; 1 being basic legal standards and 5 being a proven leader in sustainability. All aspects of environmental leadership are taken into account including air emissions, cargo residues, oily water, and garbage management.

www.green-marine.org

RightShip: Initially created as an independently run company backed by resources of BHP Billiton, Rio Tinto and Cargill. The program formed out of Australia and over 71,000 vessels worldwide are now a part of it. RightShip employs its own Existing Vessel Design Index (EVDI) to produce a Greenhouse Gas (GHG) rating system based on CO2. EVDI is closely related to IMO's EEDI, differing in that scores are given relative to other ships of similar size and type, and in that this index applies to all current ships rather than solely new vessels. Ships are given letter grades based on their EVDI GHG emission score; 'A' being the most efficient, and 'G' being the least efficient. A supplementary Environmental Star rating tabulates points earned based on a ship's environmental risk, certifications, compliance, and more resulting in a 1 to 5 star rating.

www.shippingefficiency.org

www.rightship.com

Green Award: A non-profit organization based out of the Netherlands that has grown quickly and now has international recognition. Green Award monitors several environmental factors including water ballast, anti-fouling, ship breaking, emissions, navigation in sensitive areas, and waste management. Participants of Green Award must also be participants of Environmental Ship Index.

www.greenaward.org

Energy Efficiency Design Index: EEDI is an IMO developed regulation of fuel efficiency in ships. It is a minimum standard with which all ships have to comply by international law. An International Energy Efficiency Certificate (IEEC) is given to new ships showing the required and attained EEDI score. For older ships, the IEEC is issued upon first intermediate or renewal survey for the International Air Pollution Prevention Certificate (IAPP).

www.imo.org/MediaCentre/HotTopics/GHG/Pages/EEDI.aspx

Clean Shipping Index: The Clean Shipping Index is based out of Sweden and is used across Europe. Currently there are approximately 2,000 vessels with the Clean Shipping Index. The program incorporates several environmentally sustainable measures such as air emissions, waste control and chemicals. The index uses a point system; the more points you have will give you a percentage and designated colour, with 'Green' signifying the most efficient and red the least efficient.

www.cleanshippingindex.com

FOR MORE INFORMATION CONTACT:

Jason Scherr
Manager, Environmental Sustainability
Prince Rupert Port Authority
jscherr@rupertport.com
250-627-2528