

## Energy Performance Indicators 2019

PI Aspect	Impact	Significant Sources / Uses	Destination	Significance	Objective	Compliance with	Frequency	KPI	Target	Min	Responsible	Applicability	Unit of Measure
<b>Fuel Consumption</b>	Air Pollution	Marine Propulsion systems and other fuel consumers as identified in each ship Specific Energy Efficiency Management Plan (SEEMP)	Environment	1	Reduction of CO <sub>2</sub> , SO <sub>x</sub> , NO <sub>x</sub> , PM Emissions and contribution to global reduction in GHG Emissions	IMO MARPOL 73/78 ANNEX VI ISO 50001 EU MRV	A	Monitoring against the set Energy Baselines	1. Remain below the established Energy Baselines	N/A	Operations & Technology	All Managed Vessels	tons / nm
<b>Energy Efficiency</b>	Air Pollution	Vessel Design, Marine Propulsion systems and Machinery	Environment	1	Development of more efficient ships - Strengthening the EEDI for new ships	IMO MARPOL 73/78 ANNEX VI Regulations 19,20,21 ISO 50001	A	Energy Efficiency Design Index (EEDI)	1. Attained EEDI ≤ Required EEDI as stated in the International Energy Efficiency (IEE) Certificate	N/A	Innovation & Technology	All managed vessels (New ship specification. Existing vessel major conversion.)	grams CO <sub>2</sub> /tonne-mile
<b>Engine Efficiency</b>	Air Pollution	Engines	Environment	1	Reduction of NO <sub>x</sub> emission limits onboard	IMO MARPOL 73/78 ANNEX VI NO <sub>x</sub> Technical Code	A	NO <sub>x</sub> Technical File	1. Nox Emission Value ≤ Applicable NO <sub>x</sub> Emission Limit (g/kWh) regulation 13.4 and 13.5.1 Tier II-Tier III, as stated in the Engine International Air Pollution Prevention (EIAPP) Certificate	N/A	Innovation & Technology	New buildings	g/kWh
<b>Operational and Technical Efficiency</b>	Air Pollution	Measures that mandate operational and technical efficiency standards implemented into each Ship Specific Energy Efficiency Management Plan (SEEMP)	Environment	2	Reduction of CO <sub>2</sub> , SO <sub>x</sub> , NO <sub>x</sub> , PM Emissions and contribution to global reduction in GHG Emissions	IMO MARPOL 73/78 ANNEX VI ISO 50001 EU MRV	A	Ship Specific Energy Efficiency Management Plan (SEEMP) PART I Appendix 1 - Annual Energy Evaluation Form	1. Percentage of the total ship specific goals achieved within the year to exceed 80%	N/A	Operations & Technology	All Managed Vessels	percentage