



*Energy efficiency – a competitive and
investment driver*
Helena Athoussaki, CEO, Carbon Positive

carbon**positive**

MARITIME CARBON EMISSIONS MANAGEMENT

Success and sustainability go hand in hand...

- + Corporate Social Responsibility initiatives are no longer optional
- + Emissions regulation has only just begun
- + Future-proofing for success
- + Carbon emissions reduction = tangible fuel cost savings



Climate Change is a business risk , or opportunity

- + The better you manage emissions now, the greater competitive advantage you will achieve in the future
- + Focus on sustainability to lower fuel bills and attract key stakeholders
- + Carbon management is a grey area for shipping, much confusion in the market
- + Risk and opportunity management strategy for your business
- + Plan and act for the future health of your ships

“CSR to us means a possible lower probability of default and it is factored into every risk analysis”
Karianne Tieleman, head of risk and portfolio management,
transport division, ABN Amro.

Respond to the demand

- + Demand originates from the consumer, drives investment forward
- + Greener supply chains
- + Banks looking for CSR policy as a key criterion for these reasons
- + Charterers favour energy efficient vessels
- + Shipping's image needs an eco-boost
- + Implement a corporate sustainable programme for your ships



Case study – Maersk Group – MEASURE

- + “Sustainability is becoming measurable and quantifiable”
- + Transparency – measurement sets the benchmark
- + A business approach – fully integrating sustainability
- + Award-winning CSR strategy
- + Maersk Line has reduced CO2 emission of own fleet by 15% in the period 2002 to 2008
- + Targeted 25% CO2 reduction in CO2 by 2020*



Case study – WW Group – REDUCE

- + Zero-emission vision
- + Setting targets, achieving reductions
- + Engaged on an industry-wide basis
- + Practical technical and operational measures
- + Milestone: independently verified GHG inventory process



Case study – Norwegian Cruise Lines – OFFSET

- + First line in the cruise industry to make carbon offsets available to guests
- + Directly supporting major wind and solar projects
- + Award-winning, milestones for the industry
- + Use a core set of standards for continual improvement
- + Visible onboard initiatives – passenger, crew and commercial benefits



Case study – Solstad – OFFSET

- + Solstad Green Operations initiative (SGO) directly links emissions reduction goals with the Rainforest Foundation Norway
- + Operational measures place crew at heart of sustainability
- + Results: More than 1 SGO registered every hour, 50+ tons of fuel saved daily *
- + Annual SGO goals per vessel equate to m2 of rainforest saved per year, per vessel
- + Clients compensate for carbon emissions through UN-approved emission credits, Climate Neutral Operations, offered as standard



* Feb 2011

Take a holistic approach

- + Mystery surrounding both global and regional regulatory developments is a contributing factor to an industry wide lack of understanding of emissions management
- + Structured – Standardised methodology. Certified process, independently verified
- + Monitoring and Reporting is critical for transparent data and gets you on the right path for future regulation and true sustainability
- + Put SEEMP into action and set best practice standards
- + In response, we have developed the Carbon Positive Programme for Ships (CPPS)

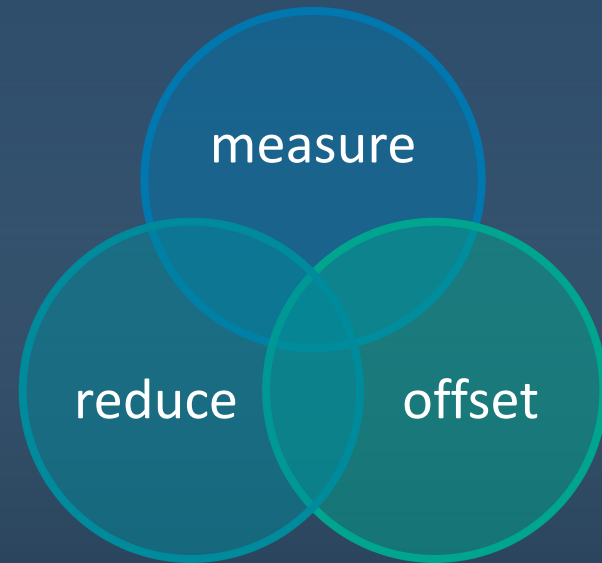


What is CPPS?

**A sustainability programme that spans three phases:
Measure, Reduce and Offset**

CPPS enables member vessels to:

- + manage their carbon emissions
- + stay ahead of regulation
- + improve fuel efficiency
- + reduce carbon emissions
- + proactively address CSR*



CPPS is intended to become the industry benchmark for carbon emissions management.

Automated cutting edge procedures allow for continuous monitoring of member vessel's energy performance.

* Corporate Social Responsibility

Benefits of CPPS

- + Delivers solutions to reduce the shipping industry's carbon emissions and its impact on the environment
- + Enables ship owners / operators to become frontrunners in carbon emissions and sustainable shipping
- + Ensures ship owners / operators are compliant with energy efficiency regulations (i.e. EEDI, SEEMP)
- + Uses in-depth scientific and technological research and analysis to make improvements for existing ships, on existing designs
- + Presents all technological and operational options available together with feasibility studies
- + In line with the energy management requirements for ISO standards

+ve

How CPPS works

1 MEASURE

Collection & analysis of vessel's data
Real-time scientific onboard Energy Audit
MRV* of vessel's energy performance
Base lining and benchmarking
CP Certificate for phase 1

2 REDUCE

Creation of ship specific SEEMP
Training of personnel on SEEMP
Selection & implementation of abatement measure(s)
MRV* of vessel's energy performance
CP Certificate for phase 2

3 OFFSET

Definition of offsetting target / time period
Setting of communication objectives
Producing risk & financial analysis
Selection of the right carbon offsets
CP Certificate for phase 3

* Monitoring, Reporting and Verification

Carbon Positive Certificates

- + A **CP certificate** is awarded upon conclusion of each Phase proving completion and recognition
- + **CP Certificate** is as per the established and verified carbon**positive** methodology
- + **CP Certificate** can be used as proof of fulfillment with EEDI and/or SEEMP (EEOI) ready for verification when required
- + **CP Certificate** is tailor made and can be communicated wherever required, enhancing also member's performance against charterers' vetting
- + **CP certificate** can include any data including Carbon footprint, EEDI and EEOI results as well as reduction achievements



I'm carbon**positive**

Our services

1: measure

- Energy efficiency assessment & analysis
- Energy efficiency indexes calculation: EEDI, EEOI
- Real-time energy audit on board
- Carbon emissions management
- Monitoring plan
- Analytical reporting
- Third party verification
- Baselining & bench-marking
- Carbon Positive Certificate 1

2: reduce

- Meet compliance requirements: Bespoke SEEMP
- Carbon emissions reduction strategy
- Technical & operation intelligence
- Access to research & technology
- Cost & benefit analysis
- Training & implementation support
- Regulatory risk analysis
- Vetting performance improvement
- Marketing & communication support
- Climate change CSR strategy
- Carbon Positive Certificate 2

3: offset

- Carbon offsetting strategy
- Access to high quality offset markets
- Carbon asset management
- Policy & market intelligence
- Carbon communication strategy
- Green supply chain compliance
- Carbon training seminars
- Economic benefit analysis
- Carbon Positive Certificate 3



With a deep knowledge of shipping, sustainability and carbon markets, Carbon Positive is the destination consultancy for owners, managers and operators who wish to address the increasing challenges presented by shipping's fight against climate change.

To join the Carbon Positive Programme for Ships, or to speak to one of our consultants, please contact us at:

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or visit

www.carbonpositive.com



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