

August 17, 2012

Subject: Impacts from International Maritime Organization (IMO) Energy Efficiency Regulations

Reference: IMO Marine Environmental Protection Committee (MEPC).1/Circ.683 Guidance for the Development of a Ship Energy Efficiency Management Plan (SEEMP)

One of the goals at Elliott Bay Design Group (EBDG) is to keep our clients abreast of pending regulations and how they may affect your fleet. The purpose for this letter is to advise you of a specific pending IMO regulation that will influence operations and capital planning for your fleet. EBDG is not only aware of these regulations but we can help your staff to comply with these requirements. Regardless of whether you hire EBDG or another firm to assist, we want to be sure that your team has solid information as you consider operating budgets and schedules.

BACKGROUND

In August 2009, IMO published MEPC.1/Circ.683 – "Guidance for the Development of a Ship Energy Efficiency Management Plan (SEEMP)." At the IMO Marine Environmental Protection Committee meeting which was held in February of this year (MEPC 63), the Working Group on Air Pollution and Energy Efficiency adopted the 2012 guidelines for the development of SEEMP. All International Tonnage Certificate (ITC) vessels, 400 Gross Tons (GT) and over, must obtain an International Energy Efficiency Certificate (IEEC). The IEEC is mandatory on the first renewal or intermediate survey after January 1, 2013. Obtaining an IEEC requires that a SEEMP be developed, implemented and kept onboard the vessel.

SEEMP OVERVIEW

The purpose of a SEEMP is to assist operators and owners in managing the energy efficiency of their vessels. It is based generally on "best practices" to conserve energy and reduce fuel consumption. The SEEMP provides a formal means to capture processes by which a ship owner can improve the environmental and energy efficiency aspects of their operations. A vessel's SEEMP is to be kept onboard and reviewed regularly to establish the relevance and impact of each measure on ship operations. In some cases, the SEEMP may form part of the ship's Safety Management System (SMS) and possibly the Environmental Management System (EMS), as applicable.

SEEMP REQUIREMENTS

There are four key requirements that a SEEMP must address and describe.

1. Planning
2. Implementation
3. Monitoring
4. Self-Evaluation and Improvement

1. Planning

Under planning, the ship operator/owner is required to define and review current energy usage practices. This information is then evaluated to determine where energy is not being used efficiently, and what energy usage areas are to be targeted for improvements, and how these improvements are to be accomplished.

2. Implementation

Once planning is complete, implementation of a systematic plan for accomplishing the various energy efficiency measures is to be put into place.

3. Monitoring

Quantitative monitoring is required to measure and record progress along the SEEMP's implementation schedule. A monitoring system is to be established and maintained that fits the operations and capabilities of the vessel and crew. There are a number of ways an effective monitoring system can be developed and implemented; these may be ship and system specific.

4. Self-Evaluation and Improvement

This final step is where management reviews the results of all previous SEEMP requirements. This is essential to determine progress along the path and value to the company. In addition, the review affords management an opportunity to further develop and improve the SEEMP itself.

TYPICAL SHIPBOARD AREAS FOR IMPROVING ENERGY EFFICIENCY

MEPC.1/Circ.683 provides "Guidance on Best Practices for Fuel-Efficient Operation for Ships," which lists a number of areas for review by vessel operators and owners, when developing a SEEMP. Some of the "Best Practices" categories and ideas for improving energy efficiency that may be applicable to your operation are summarized below:

- Energy Audits
- Speed, Trim, and Ballast Optimization
- Optimized Shaft Power, Engine Maintenance and Operation
- Optimum Propeller and Propeller Inflow Considerations

- Advanced Hull Coating Systems (to reduce drag)
- Waste Heat Recovery
- Energy Efficient Lighting
- Smart Pump and Motor Controls
- Computerized Fuel Monitoring
- Shore Power Optimization
- Optimized HVAC, Fan, and Pumping Systems and Control

EBDG is committed, experienced, and well positioned to support operator needs in the general area of environmental and energy efficiency and compliance. EBDG's SEEMP development support options range from general consulting and guidance, to providing technical materials and analysis or a turn-key SEEMP.

Please do not hesitate to let us know if you would like additional information on this or other related topics. We work closely with our clients and their vessel crew to share SEEMP development efforts where they make sense, thus keeping costs low and development time short.

Saving energy benefits the environment and also lowers operating costs, two good reasons to move forward with developing energy management plans for the vessels in your fleet. EBDG can help turn a requirement into an advantage. Give us a call.