



# MIBE 2015 – Cliff Funnell - Moderator





## Innovations for energy efficiency and emission control in waterborne transport

- **Topic:** MG-2.1-2017
- **Types of action:** Innovation Action – two-stage
- **Likely opening date:** 20-09-2016
- **1<sup>st</sup> Stage Deadline:** 26-01-2017
- **2nd stage Deadline:** 19-10-2017
- **EU Grant:** €5 – 9 Million



## Specific Challenge:

Waterborne transport still has huge potential in terms of energy use reduction and emission control, also and in particular with regard to existing ships. The specific challenges are:

- to defend the lead in world markets and introduce a step change in energy efficiency and emission reductions;
- to explore alternative fuels through real world demonstrators;
- to prepare the ground for vessel electrification where sailing distances and infrastructures permit it; and
- to optimise the basic performance of vessels.



## Expected Impact:

- Activities will contribute to a more energy efficient and less polluting waterborne transport in Europe in a tangible and quantifiable way through the demonstration of significant improvements in fuel efficiency (+15% compared to Best Available Technique),
- the demonstration of significant reductions in emissions through a variety of measures and their combinations (-80% for pollutants, -50% for greenhouse gases), and
- the proof of the full economic and operational feasibility of alternative fuels.

Energy use reduction, in addition to its positive environmental impact, will contribute to the significant reduction of operational costs and therefore lead also to positive economic impact.



## Scope:

In order to meet these challenges, proposals should address one or several of the following aspects:

- Safe, economical, environmentally sound and practical usage of improved, alternative, low carbon and renewable fuels in waterborne transport, in particular LNG and methanol.
- Advanced energy storage and DC energy systems on-board for full and partial vessel electrification, including hybridisation.
- Development, demonstration and evaluation of innovative pollution reduction and control technologies, including solutions for remote sensing and monitoring of emissions, aspects of human behaviour and training, decision support systems, and modelling and simulation of solutions with full scale verification.
- Reduction of frictional resistance through e.g. new hull coatings, boundary-layer control devices, and air lubrication, including the development of computational and experimental techniques to demonstrate the efficiency gain.