

Voluntary NOx trade for vessels in Europe Prospects and Benefits

Background

Human activity has scrutinised the ecosphere to a point where scientists have become fearful of the future. Still, regulatory approach has not been very successful. As global competition stresses margins and costs in Europe, it is evermore important to rapidly find an inexpensive solution. But what the economists of the 19th century neglected in their economic functions, is what emission trading promises: a mechanism compatible to the existing economic system on how to cost the environment.

In brief, in an emissions trading scheme, government sets a ceiling to a land combustion installation permitting it to emit a certain amount per annum. If the installation emits less than its allocation, it can trade the difference with other installations, which struggle to achieve their own annual targets. Automatically, industries with lesser costs in abatement technology are encouraged to reduce more emissions and are awarded through trading in an emissions market. At the same time, those –unfortunate– installations with higher abatement costs may find an inexpensive solution to environmental calls. But as emission trading is still emerging in Europe, opportunities may be obscure.

The outcome of the study

The study examines the prospects of maritime traffic participating voluntarily in a future NOx European market and measures the benefits on the behalf of the shipowner. Individual vessels, representing the volume of European traffic, are sampled - such as tankers, general cargo, containers ships, passenger ferries, cruise, tug and utility – in terms of their annual NOx emissions and their investment and operational expenditures on NOx abatement technology. SCR (Selective Catalyst Reduction system) was chosen among other technologies, as it accomplishes the highest reductions (90-95%) and falls under the best available technology (BAT) concept.

Vessels are virtually placed in a European NOx market. Revenues and investment recovery are measured for three different NOx market price scenarios. The results are encouraging as even smaller vessels could participate with satisfying returns. Payback time fell between nine months and five years, depending on the main engine size, utilization and time employment, with vessels of 7MW and 30% annual steaming time year to be on the low end. On an average, payback time fell within two years, proving that in a market situation, environmental investment is not necessarily a burden but a self-supporting project, where one abatement installation (SCR) can finance another two installations in a five year time horizon.

Business opportunities

Nonetheless, what is of interest is not just the direct revenues from trading but also business opportunities arising from tactical selling to land emitters. For cargo vessels tactical selling to specific buyers may ensure new business flow in, tighten business relations, increase information sharing, prolong contracts and better position the carrier within the supply chain. For passenger vessels, emission reduction is also an excellent tool for Marketing and Public Relations to a demanding and eco-sensitive clientele. In terms of the transportation service, tactical selling satisfies recent and unspoken needs of the customer.

Within an ever increasing competitive environment, a mature market and over capacity routes, NOx trade could prove to be a niche that differentiates the elite from the rabble. NOx trading is an example of market collaboration to achieve the common good without much sacrifice. Especially for shipping, this is an example of how an accessory (like an SCR installation) can become strategic.