

The recent fall in oil price has filtered down to the cost of bunkers which are now roughly half of what they were 12 months ago. This is good for operators as, until recently, bunkers accounted for around 60% of daily vessel costs. Crew salaries, insurance premiums, port dues, maintenance and other costs continue to rise but vessel operators are enjoying a respite in meeting hefty bunker bills – although they must still be managed efficiently.

An added dimension to bunker management is, of course, the 0.1% cap on sulphur content that is required within all Emission Control Areas (ECAs). This became effective at the start of the year and applies to ECAs in the North and Baltic seas as well as the North American seaboard. As it seems likely that we'll see additional ECAs established in the Mediterranean, Asia and elsewhere the requirement to switch to and from low sulphur fuels has added an additional layer of complexity to bunker management.

“The introduction of ECAs has encouraged software developers to introduce a bunker element to scheduling solutions to overcome growing complexity”

Automation through the implementation of sophisticated software systems has long been a feature of shipping companies seeking to streamline the core processes within their businesses. In the past, it was only the larger companies with deep pockets who could afford such technology but the advent of accessible computing and associated software has allowed all market players to benefit. Because of the nature of container operations, automation has enjoyed a much deeper penetration in that sector, where many operators are employing sophisticated algorithms to ensure their vessel schedules are optimised to generate maximum profitability.

# Boosting bunker efficiency

Wider access to sophisticated software systems is enabling more operators to manage bunkering efficiently, writes **Lars Fischer**, managing director of Softship Data Processing. And with the complexity added by recent emission control changes, effective scheduling has never been more important.



The same systems are used to simulate a variety of potential remedial solutions when a vessel has to deviate from its planned schedule. This allows the operator to identify the best possible option that will get the vessel back on track at the least cost and with the least inconvenience to the customer. The introduction of ECAs has encouraged some leading software developers to introduce a bunker element to their scheduling solutions to help overcome this growing complexity.

Today it is more important than ever for an operator to maintain complete control and visibility over its bunker management process. As schedules are being created, good software will incorporate ECAs to give an accurate assessment of the amount, types and cost of bunkers required to complete a voyage. This allows bunker consumption to be forecast and profitability calculated. If unplanned changes to the schedule are required, the software will then assess the impact on bunker consumption for each alternative solution.

Taking this a step further, intelligent software will also calculate if the vessel has sufficient bunkers on board – and of the correct type – to undertake the necessary schedule change. Inbuilt alerts will inform the operator if fuel is likely to fall below a pre-set threshold. The best systems will also include a series of bunkering options and suggest the most suitable port for the ship to take on fuel of the required type. They will also automatically raise a pro-forma bunker order for the operator.

Because of the various types of fuel now required by vessels trading within ECAs, the purchasing process has also become more labour intensive. Clever software systems are being implemented to assist with this. It is possible to store existing bunker contracts within the software and then match them with each new order. When bunkers have been delivered, the delivery order can be automatically matched with the original order to identify and highlight any discrepancies. This information is then used in an automatic reconciliation process where invoices are checked against agreed volume and prices for each type of fuel taken on board. The software will highlight any irregularities before authorising payments to be made.

Integrating real-time bunker data into a voyage scheduling system is also a useful management tool that allows the operator to understand and monitor consumption in all conditions. It identifies the costs associated with operating inside an ECA as well as supplying a comprehensive analysis of bunker costs per voyage, per nautical mile, per hour or even per container.

## CUSTOMISATION

Good software is much more accessible than it has ever been and the days when shipping companies commissioned bespoke systems are almost a thing of the past. The issues facing one company are much the same as any other and so it pays to install off-the-shelf or “packaged” software which is often available at a fraction of the price of a made-to-measure solution. Packaged software is tried and tested and usually developed to run on the latest and most effective technology platforms. Although a standard solution, this type of software usually allows a great deal of customisation enabling it to fit seamlessly into the peculiarities of individual businesses.

With vessel operating costs continuing to rise and certain activities such as bunkering becoming more complex, operators are increasingly turning to sophisticated IT solutions to help them manage and streamline their daily tasks. Installing modern, value for money software systems is giving a head start to those operators who are willing to exploit available technology.

Bunker Type	Volume (MTons)	ISO Spec.	Grade	Deviation in USD to price index	Index (Name)	Currency
IFO380 High Sulphur (IFO380HS)	1,000.00	ISO 8217 2005 (2005)	Grade 1 (G1)	1.00	Price Index 1 (IDX1)	EUR

Bunker scheduling is becoming an increasingly important aspect of fleet management software