

"The practicability loop in ballast water treatment markets"

Dennis King

University of Maryland Center for Environmental Science
Maritime Environmental Resource Center

The near-term success of US and International Maritime Organization (IMO) ballast water (BW) regulations will require widespread and relatively on-time compliance by the owners and operators of tens of thousands of vessels.

That will require global ballast water treatment system (BWTS) markets, which currently supply only a few hundred units, to grow rapidly. The big investments necessary for rapid increases in BWTS supplies are currently not being made. BW regulators need to address this situation now because of the typical multiyear lag between the time these big investments in BWTS supplies are made and when BWTS units will be installed on ships.

Full compliance with pending IMO BW regulations will require about 60,000 ships to purchase and install BWTS at about \$1 million per unit, so the potential global BWTS market, worth about \$60 billion, is being watched carefully by prospective investors in BWTS supplies. However, most of them remain on the sidelines awaiting more clarity about how many ships will actually be purchasing and installing BWTS, and when.

Both depend on as yet unmade government decisions about when, where, and how BW regulations will be enforced and whether penalties for noncompliance will be certain and meaningful.

Potential investors in BWTS manufacturing and installation capacity know that most vessel owners and operators are reluctant to buy BWTS now, and, in the future, will be comparing the cost of purchasing and installing a BWTS in order to comply with the expected cost of not complying or of delaying complying.

Even with growing certainty that BW regulations will be implemented, noncompliance costs, and therefore global BWTS demand, are still too uncertain for investors to have any confidence that making big investments in BWTS supplies will yield a financial return.

It is against this backdrop of uncertainty about supply and demand in global BWTS that the US Coast Guard included a "practicability" provision in the final US BW rule published on March 23, 2012.

That provision “allows ship owners and operators to request an extension of their compliance date if they cannot practicably comply with the compliance date otherwise applicable to their vessel” (my emphasis). The provision states further that this “will give flexibility to ship owners and operators to comply with the final rule.”

Unless the IMO is willing to risk clashes between flag nations and port nations and potential chaos in global shipping we can expect a similar practicability provision to be included in pending IMO BW regulations.

“Not practicable,” according to various general purpose and legal dictionaries, means impossible, unattainable, undoable, or “hopeless to expect given the resources available”.

Although individual vessels may face technical or logistical circumstances where they cannot practicably comply, it is likely that many requests for compliance extensions will be based on shortages of equipment and installation capacity in BWTS markets.

Giving politically and economically motivated BW regulators the right to grant vessel owners and operators compliance extensions because of these shortages makes sense in terms of preventing and alleviating problems for the shipping industry. However, it does have potential downsides because it increases uncertainty about future demand for BWTS, which is likely to inhibit already weak investments in BWTS supplies, and make noncompliance problems worse.

Whether we observe a harmful “practicability loop” – BWTS supply shortages lead to compliance extensions which reduce BWTS demand and stifle investments in BWTS supplies which leads to more supply shortages and the need for more compliance extensions – will depend on expectations about how strict or lenient the USCG will be in approving compliance extensions and the length of those extensions.

It will be interesting to watch how BW regulators use conditions in BWTS markets to justify giving some vessels that have not complied a comparative cost advantage over complying vessels by offering them no cost compliance extensions; and how they will distinguish between vessels that honestly deserve a compliance extension from those vessels that should be penalized for “knowingly” failing to comply due to negligence or willful misconduct.

It will also be important to watch how BW regulators manage the effects of their decisions on emerging BWTS markets and on incentives for vessel owners and operators to comply.