

ONBOARD PRODUCTION

On board a ship, water is primarily used in staterooms for showers, bathtubs and sinks, as well as being utilized in galleys, laundry, pools, whirlpools, spas and for cleaning public spaces.

Our Company has increased onboard water production with evaporators and Reverse Osmosis (RO) plants that use seawater as the source, which reduces the need for the bunkering of fresh water. This is particularly important in countries where fresh water is limited and best reserved for local populations.

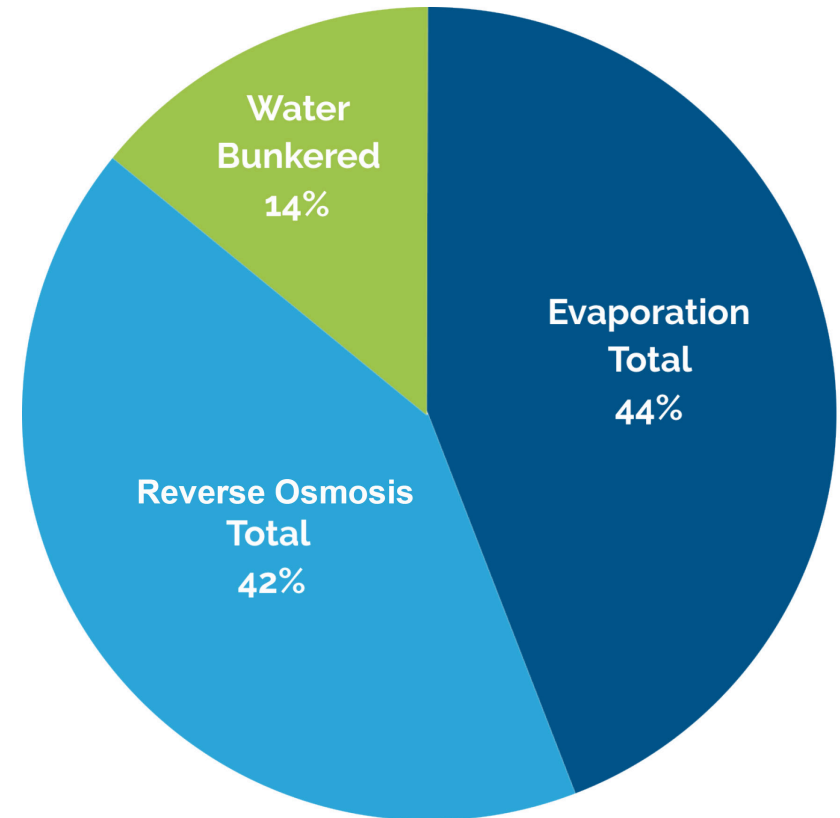
2019-REPORTED FLEETWIDE WATER PRODUCTION

In 2019, ~86% of water was produced on board

Reverse Osmosis (RO) produces fresh and technical water from seawater using high-pressure pumps and sophisticated water filters and treatment components. RO plant production can range from 250 cubic meters (m³) to 825 m³ per day, based on the size and capacity of the plant. We currently have 45+ RO plants across our fleet and are continually evaluating further installations.

Evaporators produce fresh water from seawater utilizing heat sources such as exhaust gas boilers, oil-fired boilers or wasted heat recovered from the main engine high-temperature cooling system.

Bunkered Water is potable water acquired in port for use on board.



UNDERWATER SOUND EMISSIONS

In partnership with DNV GL, we completed underwater sound surveys for three ships in service, Norwegian Jewel, Norwegian Joy and Norwegian Bliss, and during sea trials for Norwegian Encore. Conducting these measurements and monitoring provide the opportunity to demonstrate a low environmental footprint.

Monitoring our underwater sound emissions is just another way in which we are working to minimize our environmental impact. The Company qualified for and received SILENT-E (Environmental) class notation, which applies to vessels demonstrating a controlled environmental noise emission and ensures that vessels do not exceed typical average-to-moderate underwater noise levels. Vessels with this notation are able to document noise performance for authorities or others requiring proof of noise emission for transit through vulnerable areas.