

Clean sailing. Cruise lines set a course for green seas.

EVERY SIX MONTHS OR SO, A NEW cruise ship blasts the whistle on its maiden voyage and, in its wake, leaves a new level of environmental sustainability. The cruise ship industry is increasingly focused on protecting the environment while at sea and in port through cutting-edge technology on its new ships, retrofits on older ships and new operations standards. The biggest developments stem from improving the environmental performance of the ships, with such recent advances as waste-water facilities that filter sewage and grey water to municipal levels; improved effluent filtration; more efficient engines; cleaner-burning fuels and biofuels; the elimination of unneeded packaging; the development of hull paints to prevent accumulation of sea life and increase fuel efficiency; and the industry's newest technology – pioneered in Alaska – shore plug-ins so vessels can access local power grids in port rather than rely on engines. And such technologies are usually built into the new generation. –*Ryan Stuart*



CRUISE LINE | SUSTAINABLE TRAVEL INITIATIVES (2009)

Carnival	Environmental programs that meet – or exceed – international and domestic environmental laws/regulations; solid waste is processed/incinerated on board where possible or at government-approved on-shore facilities; grey- and black-water treatment; enviro-engines; energy and water conservation audits; shore plug-in capability; Environmental Management System (EMS) certification (ISO 14001).
Celebrity	See Royal Caribbean
Crystal	Complies with environmental legislation and regulations; committed to responsible waste management; vessels have enviro-engines.
Holland America	Environmental programs that meet – or exceed – international and domestic environmental laws/regulations; treats waste water to a higher quality than most municipal treatment systems; bilge-water treatment; shore plug-in capability; engaged in in-depth study with the U.S. Environmental Protection Agency (EPA), Environment Canada and local regulatory agencies to develop and test scrubber to reduce sulfurous emissions and particulates; for additional measures, see Carnival.
Norwegian	Policies and technologies exceed existing laws and international conventions; on-board incineration of paper, oil, some plastics, bio sludge and dried food, with other solid wastes recycled at licensed onshore facilities; advanced black- and grey-water treatment (several ships approved for continuous discharge in port due to near-drinking water standards); three-step emulsion-breaking oily water separators; low-sulfur fuels in environmentally sensitive areas to prevent acid rain; shore plug-in capability, electronic fuel injection and multi-fuel capabilities; Hawaii foundation promoting island groups that preserve and protect oceans and marine life, education, lives of local children and youth, etc.
Princess	See Carnival
Royal Caribbean	Environmental programs that meet – or exceed – international and domestic environmental laws/regulations; black water treated by U.S. Coast Guard-approved system prior to ocean discharge; grey water is sanitized and discharged; recycling of solid waste on board or at regulated onshore facilities; hazardous wastes disposed in port via licensed disposal companies and reported to the EPA; bilge-water purification; regular audits by independent auditors (shared with U.S. Coast Guard and state and federal agencies); engines that cut sulfurous and nitrous oxides by more than 80 per cent; partners with Bermuda Biological Station for Research and adopts additional restrictions in the Bermuda region to further protect coral reefs. 