



Challenges and Opportunities for the
Cruise Market....
....an Environmental Perspective

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HOLLAND-AMERIKA LIJN



ROTTERDAM - NEW YORK

An elite fleet.....

Signature-Class



ms Eurodam

Vista-Class



ms Zuiderdam



ms Oosterdam



ms Westerdam



ms Prinsendam



ms Noordam

Rotterdam-Class



ms Rotterdam



ms Volendam



ms Amsterdam



ms Zaandam

Statendam-Class



ms Statendam



ms Maasdam



ms Ryndam



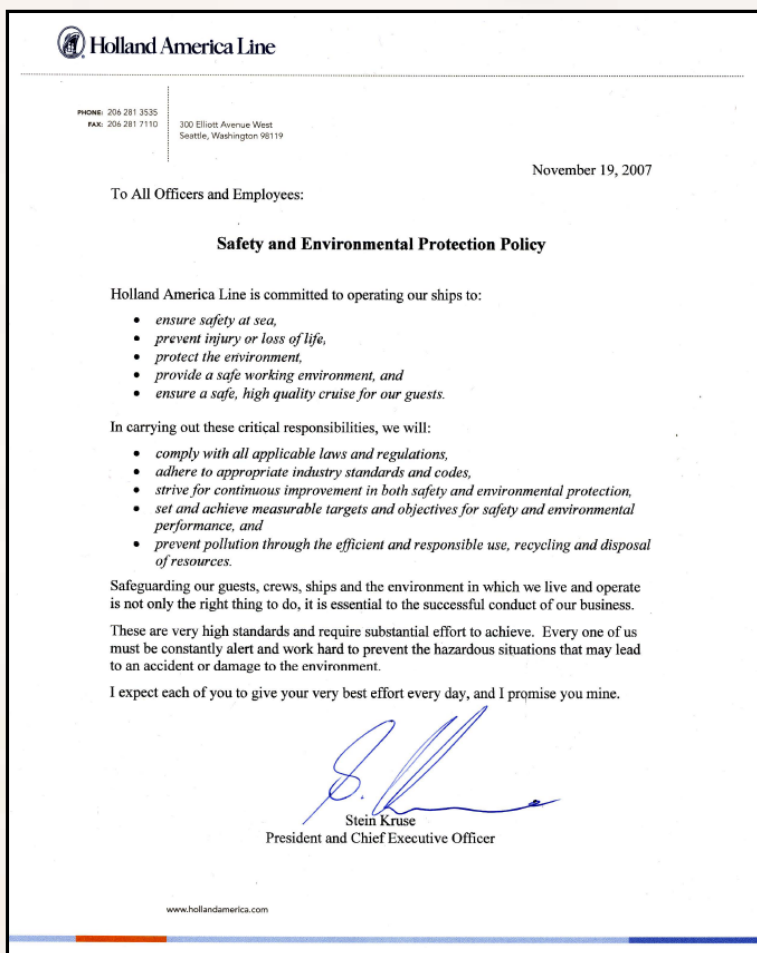
ms Veendam

.....travels the world and
through excellence we
create once in a lifetime
experiences every
time.....



Integrated Safety and Environmental Protection Policy..

.... Our program's touchstone



This policy drives:

- **Pollution prevention through.....**
- **Continuous improvement.....**
- **By setting environmental objectives and targets**

and provides quantifiable competitive business advantages.



Minimizing our Environmental Footprint..

..By setting real, measurable environmental objectives and targets

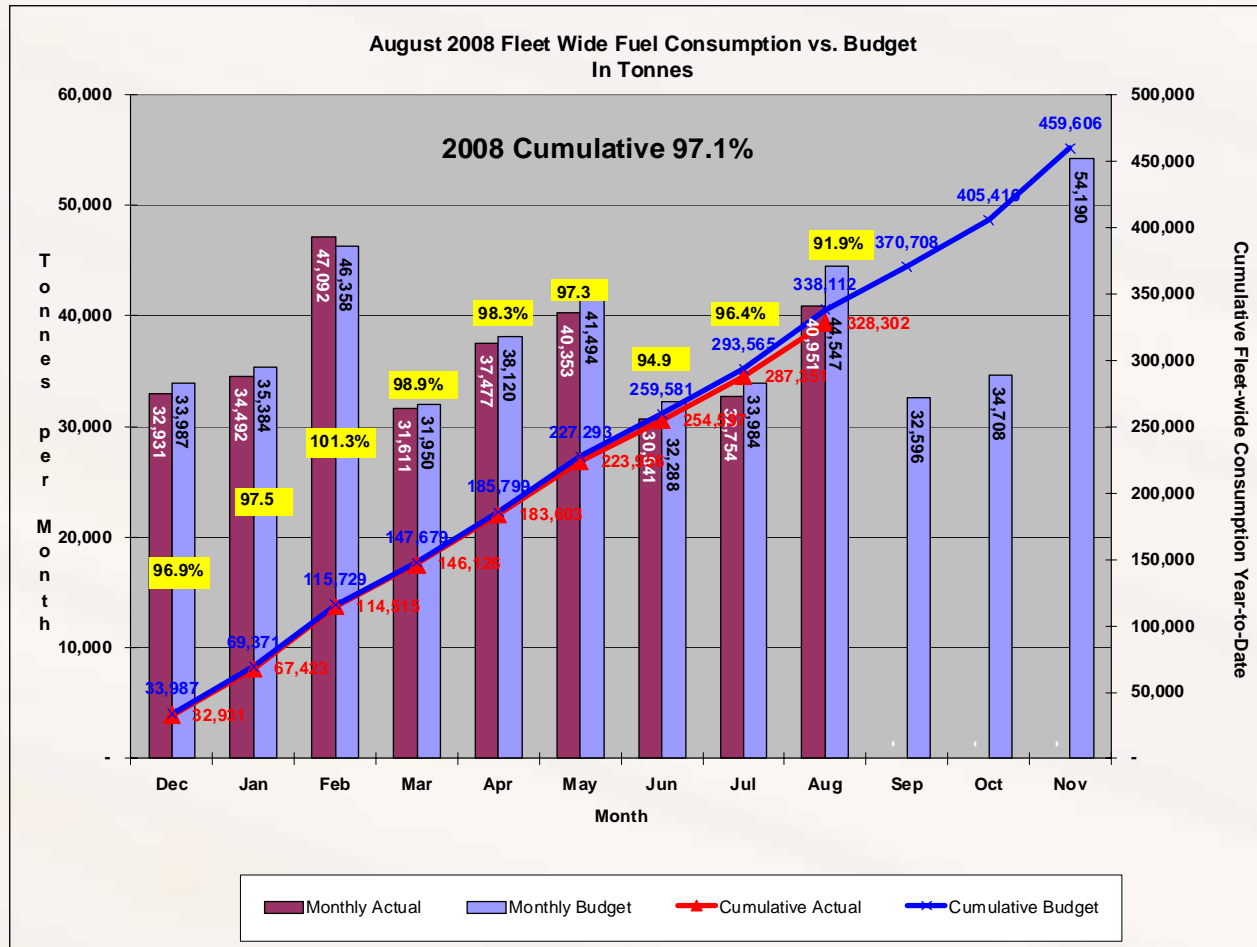
The BIG FOUR....

1. Conserve fuel to 2% below budget.
2. Reduce solid waste offloads by 15%.
3. Increase recycling by 10%.
4. Reduce engine emissions.



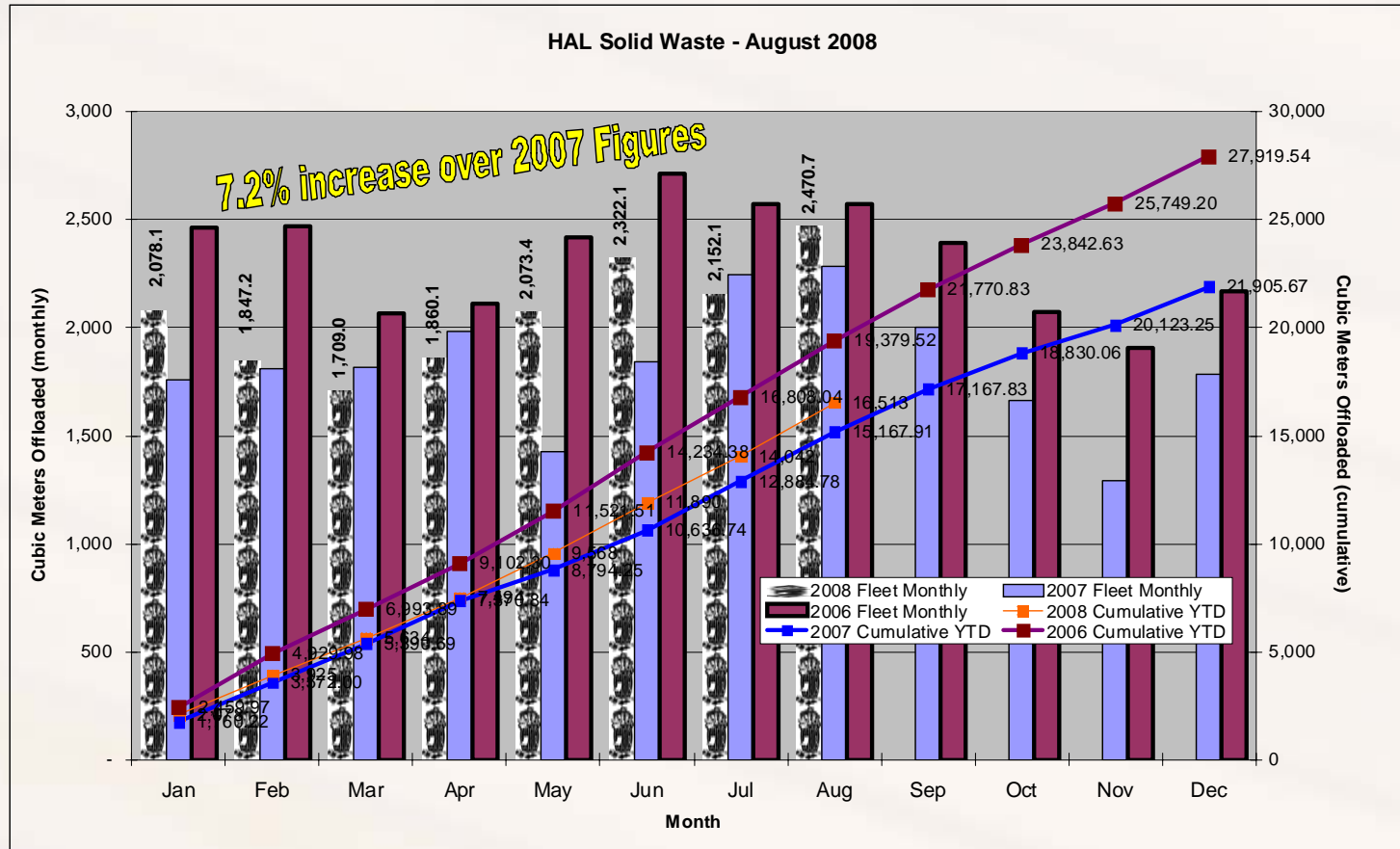
Reduce Fuel Consumption....

.... To 98% of budgeted amount



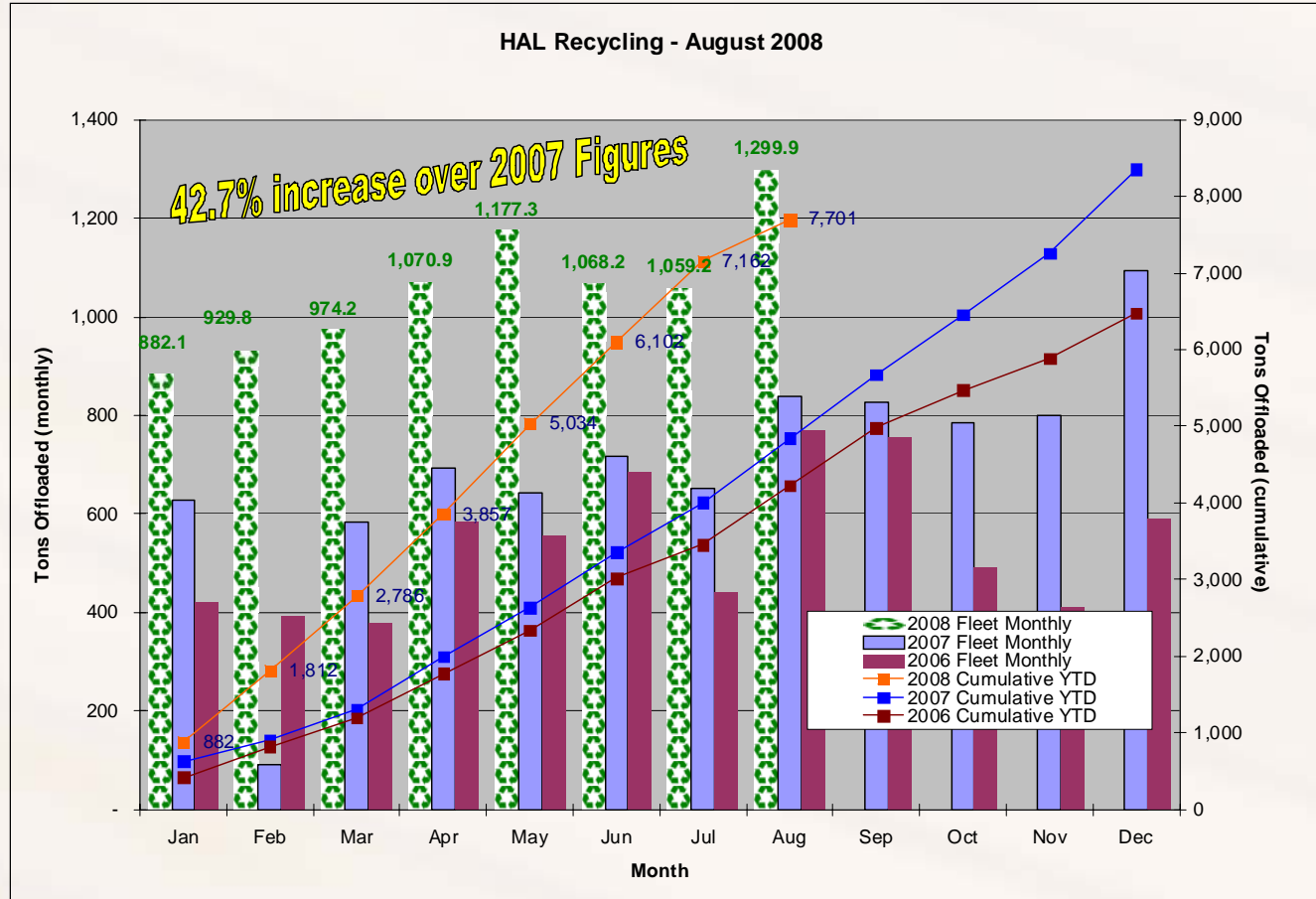
Reduce Solid *Waste Offloads*....

.....By 15% less than 2007 volumes



Increase Recycling.....

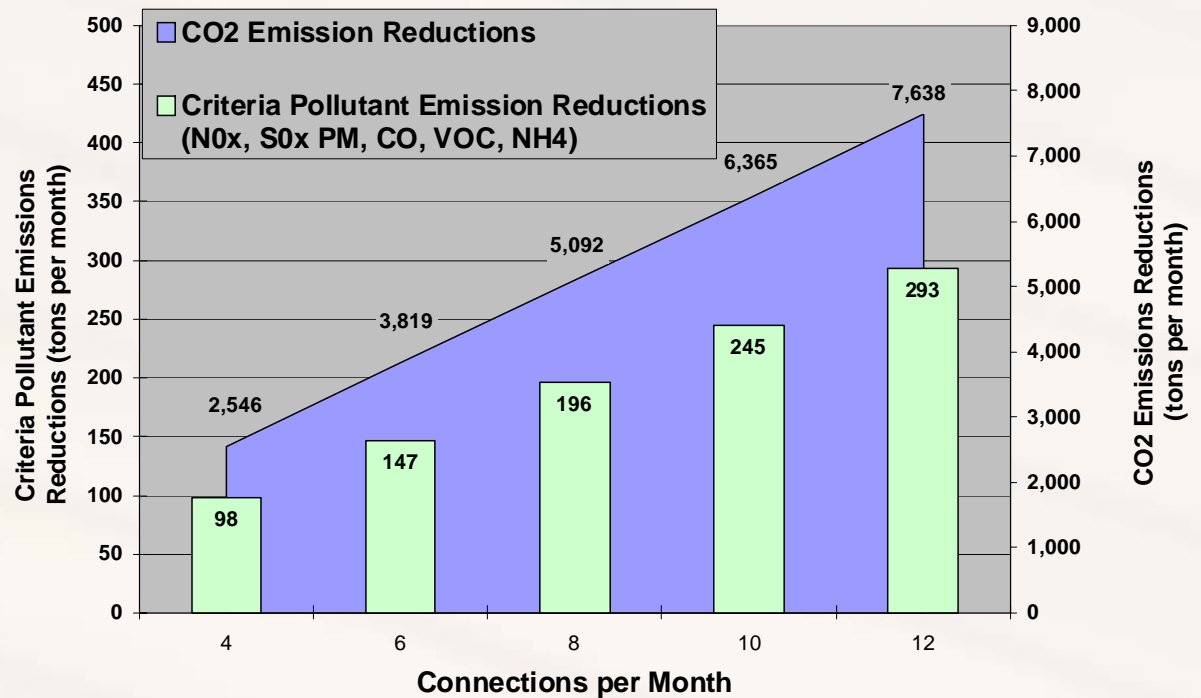
....By 10% over 2007 quantities



Reduce Seattle Dockside Emissions by 75%..

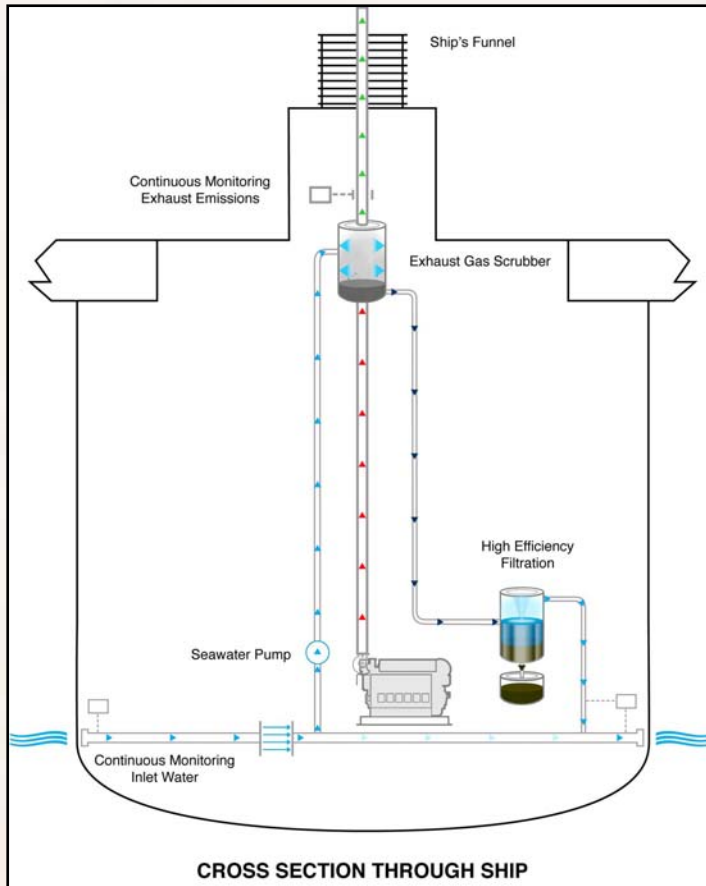
...By plugging into shore power

Holland America Line ships
ms Amsterdam, ms Oosterdam, ms Westerdam



Evaluate Sea Water Scrubbing...

.....Testing technology – looking for solutions



How does sea water scrubbing *stack-up* to cleaner fuel?

- **It works.** It provides a net environmental benefit taking 75% of SO₂ and 57 % of PM out of the environment.
- **Can be use anywhere a ship sails.**
- **Is cost effective** - Allows the continued use of heavy fuel oil (HFO) at \$750 per tonne as opposed to using distillate fuel (MDO) at \$1,275 per tonne (July 2008).
- **Contributes to energy global security** as it allows the continued use of residual petroleum hydrocarbon fuel.

HOWEVER

The quality of wash water discharge still needs improvement.

An engineering evaluation is underway.



Challenges in Environmental Management...

.....Our global industry faces many challenges

- Getting out our environmental message....
- Managing the patchwork of environmental regulations in a global marketplace.....
- Persuading others to work towards solutions which provide a net environmental benefit.....



Opportunities for Success.....

.....Abound

- Using *conservation* principles as a means to drive efficiency.....
- Using science and technology-based approaches to solve problems.....
- Collaborating with many stakeholders.....



Thank you!



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A Signature of Excellence

