

# William Burke

Scrubbers short circuit the acid rain cycle.

Numerous studies show scrubbers improve emissions by reducing SO<sub>x</sub>, NO<sub>x</sub>, and particulates. By using HFO, scrubbers enable avoidance of the additional carbon (~7%) from additional fuel refining.

On the water side, numerous studies show no impact from scrubber wash water in the water column or the sediment. Scrubbers take sulfur out of the air and put it in the ocean via wash water. Because sulfur occurs naturally in the ocean at far greater levels by orders of magnitude than could be contributed by burning all the world's fossil fuels, there is no sulfur impact.

Scrubbers are a net positive for the environment-improved air emissions and no negative impact on the water.