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**Seafood producers can often reduce emissions through simple actions.**

A few examples:

* Reduce vessel weight- weight control manages the amount of power necessary to achieve a certain speed
* Maintain the bottom- in order to reduce drag, keep the bottom of the boat as smooth as possibly by removing marine growth and any other unnecessary elements
* Check the exhaust- exhaust from a well-maintained diesel engine is almost invisible
* Check the prop- bent blades, dings, or eroded edges cause the boat to consume more fuel
* Plan the route and timing- taking advantage of tides, currents, and predicted winds can easily save a lot of fuel
* Use a fuel meter on boats, and adjust the throttle to the find the “sweet spot” in RPM where fuel consumption drops but speed is sufficient to meet the tides and delivery schedules (see graph below). Installing a simple device like a FloScan meter can help skippers optimize fuel use and vessel speed.
* If you run an auxiliary diesel genset or two on your boat, consider a high-efficiency hydraulic generator from Gen-Tech Global. Used with a good fuel meter, this system can replace a diesel genset, cutting the cost of generating onboard electrical power in half—or better. The system is particularly valuable for some working vessels that need power for pumps, refrigeration and other onboard systems. . *(Brad Warren full disclosure: this Ballard-based firm is the brainchild of veteran Bering Sea crabber Erling Skaar. I’ve watched him test and refine his product for more than a decade, and I believe in his operation enough that I’ve recently stepped in to help him bring it to market).* See related article on Gen-Tech Global.
* Consider a Fitch fuel catalyst on your vessel engine. This simple device enhances combustion of fuel; it appears to reduce emissions, injector fouling, and fuel consumption.
* If you ship seafood, avoid airfreight wherever possible. Ship by water if you can, by rail or road otherwise. Airfreight dominates imbedded emissions in most products that are shipped by air; it dwarfs everything else.
* Slow down - This graph (extracted from a fuel efficiency audit) shows that increasing speeds greatly increases the power necessary and therefore the amount of fuel consumed. Decreasing your speed by just 1 knot could reduce your cost by as much as 50%. 
* Got food waste or seafood processing waste? Compost it, or make fuel out of it. If it goes to the landfill, this waste frequently will form methane in the anoxic conditions below ground. Methane has ~21 times the insulating, warming power of CO2. A well-aerated compost pile converts the carbon into new soil material, where it becomes a useful nutrient instead of forming methane. You can also set up a simple biogas digester in a barrel and use it to generate fuel. If you burn it instead of venting it, biogas can replace commercially purchased fuel, shifting some of your energy demand to carbon-neutral status. Instructions to do this are readily available on Youtube.
* Ask your employees. Let your employees know that lowering energy costs and carbon emissions is important to your company. They may have a different perspective that could save you money and make your business greener.
* Don’t run more electrical than you need. Make certain that both on-shore and on-vessel you are not creating needless electrical draw. Computers turned completely off when not in use, as well as chargers, lights, printers – whatever the device, ensuring that small details are taken care of can make a real difference to your bottom line.
* Consider adding a wind-powered charger or solar panels.
* Keep good records. You only know whether you're making an improvement (or making things worse) if you have good numbers on vessel performance, both before and after changes. At every fuel-up you should record fuel replaced, operating hours (from your hour meter or engine hour logbook), and if possible, distance traveled. Other observations such as changes in coolant and exhaust temperatures, oil temperatures and pressures, and speed over the ground (as indicated by GPS or LORAN readings) should be logged.
* Do the math. Fuel is only one of the costs of your operation. Capital expenditure (the price of new equipment) and the value of your time and that of your crew are also costs. The cost of a solution, such as buying a new engine or even a new vessel, may be greater than the savings that could be realized. As fish prices, fuel costs, regulations, and other factors change, it is important to recalculate the trade-offs.

RESOURCES:

Alaska Longline Fishermen’s Association Fuel Efficiency Initiative

Alaska Sea Grant Marine Advisory Program