

Taking CO Seriously

Portable generators are a vital tool in hurricane recovery. But their carbon monoxide risks are more potent than many people realize.

BY LOLLY MERRELL

In August 2004, a day after Hurricane Charley took out power in much of southern Florida, Winter Haven's Robert Banks borrowed a co-worker's portable gas-engine generator and set it up in his utility room to run a few fans and lights. Two days later he and his stepson were found dead, victims of carbon monoxide poisoning.

The Centers for Disease Control and Prevention (CDC) and the Florida Department of Health soon discovered a disturbingly high incidence of such poisonings. More than 160 hospitalizations and at least five deaths during the 2004 hurricane season were attributed to carbon monoxide from gasoline-powered generators in or near the home. A CDC study found that the exhaust from a typical 5.5-kw generator contains as much CO as is produced by six idling cars.

To most people, safe generator use is a matter of common sense. Gasoline-engine generators were never designed for indoor use. Every generator manual includes several pages of warnings urging users to operate their generators in a dry, well-ventilated area to avoid both electrocution and CO poisoning.

"It's strange. People understand not to run their car in the garage, but they should also understand the same rule applies to generators," says Sage Marie, a Honda spokesman.

During hurricanes, however, many people move their generators into areas protected from wind



Westerbeke's SafeCO boat generators can cut dangerous CO emissions by 99 percent.

and rain that they assume are well ventilated. A CDC report traced several poisonings to generators placed outside, but near windows or air conditioners. The best bet is to put some distance between the generator and your house, advises Jon Hoch, founder of Electric Generators Direct, a Web-based retailer that sells thousands of generators a year. He recommends using a heavy-duty 25-ft.-long extension cable called a generator cord.

One technology that could reduce the risks is already being used in generators available to the boating community. From 1995 to 2004, at least 50 deaths were attributed to CO exposure near houseboats, cabin cruisers and ski boats. In 2000, for instance, two children swimming behind their family's houseboat on Lake Powell drowned after losing consciousness. They had been inadvertently breathing generator fumes exhausted underneath the swim deck.

Westerbeke, a Massachusetts company whose equipment was not involved in any of the fatalities, decided to create a better boat generator, using fuel injectors to improve the fuel-to-air ratio and a catalytic converter to clean CO and hydrocarbons from the exhaust. The company claims a 99 percent CO reduction in its smaller engine models. Not surprisingly, these modifications add cost: Westerbeke's SafeCO machines are about 20 percent more expensive than its basic models.

Should such technology be adapted for home generators? Perhaps, but the CDC's Kevin Dunn says that major manufacturers worry that machines with lower CO emissions could create a false sense of security.

"The consensus was that it's a bad idea to give consumers the thought that it's okay to put these machines indoors," Dunn says. "But it would certainly reduce the risk to persons who misuse generators." **PM**