

## **Burn it Smart to meet the One Tonne Challenge**

by Marion Pape

*This article is one of a series looking at island solutions to greenhouse gas emissions (GHG) and climate change. The One Tonne Challenge, part of the island's Community Energy Strategy, invites everyone to participate in identifying and reducing their individual contributions to GHG.*

*It is not too late to enter the One Tonne Challenge. OTC forms can be downloaded at [www.saltspring-onetonnechallenge.org](http://www.saltspring-onetonnechallenge.org), or picked up at the SSI Conservancy office. Bring your completed OTC form on December 3 and enter to win one of our OTC great seasonal draw prizes including: a gift basket from Salt Spring Soapworks, gift certificates for Harlan's Chocolates, Ganges Village Market, Volume 11 Books, Skin Sensations, and Studio 103. The OTC help table will also be in action for those who would like assistance with form completion.*

On Friday December 3, at 7:00 pm at All Saints by the Sea, Zigi Gadomski from the Wood Energy Technicians of BC (WETT) will lead a Burn it Smart workshop to help us improve our wood-burning habits to reduce air pollution and GHG emissions, and will tell us how to get more heat out of our wood stoves, safely. Bring a piece of wood from your woodpile and Zigi will test it for moisture content.

Fuel wood is the biggest source of winter air pollution on Salt Spring. Our wood stoves and fireplaces produce large amounts of particulate matter (PM), carbon monoxide (CO) and volatile organic compounds (VOCs). These pollutants can trigger coughs, headaches and eye and throat irritation. They also contribute to increased incidences of emergency room visits, hospitalizations and days lost from school and work – even in otherwise healthy people.

Based on estimated average annual consumption rates of about 1.5 solid cords (more for primary firewood users and less for occasional firewood users), we estimate that about 6,800 cords of wood were burnt in Salt Spring homes last winter. Combustion of wood is assumed to be carbon neutral (i.e., the life-cycle of the wood removes as much carbon from the atmosphere as it adds) but it does produce methane, which is a potent GHG. Wood burning on Salt Spring contributes about 2.1 T of GHG emissions per household, or 1.1 T per person.

When wood is burned at a high temperature, virtually nothing but carbon dioxide and water vapor are produced, but when you allow your fire to smolder then blue/grey smoke is produced, which means creosote is forming at the same time. Creosote is deposited on the inside of your chimney when wood is not burned completely and becomes a highly volatile fuel during a chimney fire. Smokey fires are also the source of air pollution.

To heat efficiently with wood, start with a stove matched to your heating needs. Smaller stoves use less fuel and burn cleaner because of higher operating temperatures. Look for Environmental Protection Agency (EPA) certification. EPA-approved woodstoves include features designed to completely burn pollutants before they leave the firebox. They are not only more efficient than most older models, but can cut smoke emissions by as much as 90%! If your existing stove is more than 10 years old, then it may be time to replace it with a new advanced combustion unit meeting EPA standards. When looking for an EPA-approved appliance, you have choices and it's important to find a stove that suits both your home and your lifestyle:

1) Advanced combustion stoves - use carefully designed fireboxes to optimize combustion. Features include baffles, preheated air supply and firebox insulation.

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2) Catalytic stoves (cats) - route exhaust gases through a catalytic combustor, a ceramic honeycomb coated with a rare metal such as platinum or palladium. Cats burn cleaner and produce more heat, particularly under low fire conditions.

3) Wood pellet stoves - consume a manufactured fuel that is dry and easy to burn. Pellet stoves burn cleanly because the fuel/air mix can be carefully controlled over a wide range of heat outputs.

Safe and healthy wood burning go hand-in hand. When little or no smoke is produced, both the chimney and the air are kept clean. At the 'Burn It Smart' workshop, participants will learn about good wood-burning practices, WETT certified installations, and the benefits of EPA-approved appliances so they may achieve a more efficient (less polluting) and cozy wood fire.

The "Burn it Smart!" campaign addresses the health and environmental effects of inefficient burning by challenging Canadians to change their wood-burning habits in order to reduce pollution from wood heating. In BC The Burn it Smart Workshops are co-sponsored by the Ministry of Water, Land and Air Protection, the BC Lung Association and the Wood Energy Technicians of BC. The Salt Spring workshop is co-sponsored by The Earth Festival Society and the Salt Spring Island Conservancy. For more information call 537-4567. Admission is by donation.