New tool to assess bioenergy potential from BC wildfire prevention work

A new online tool will help rural communities in British Columbia determine if debris left by local wildfire prevention work can provide a sustainable – and economically beneficial - source of fuel for clean energy production.

Details of the Fire Interface Rural Screening Tool for Heating – FIRST Heat – are contained in a new white paper from the Pacific Institute for Climate Solutions (PICS), a collaboration of BC's four research-intensive universities. The paper, *Fire in the Woods or Fire in the Boiler?*, was produced by PICS-funded researchers from the University of British Columbia and two NGOs, the Community Energy Association (CEA) and the Wood Waste to Rural Heat Project.

Wildfires in BC are becoming increasingly common due to global warming's byproducts of hotter, drier summers and mountain pine beetle affected dried-out forests, and with the increasing population of people living in the wildland-urban interface, according to the report. Rural residents also face higher energy rates than those in the Lower Mainland, and more than 60 percent of BC has no natural gas supply. Some 57 BC communities are off both the electricity and gas grids, and have to bring fuel in.

Co-author and CEA executive director Dale Littlejohn says a biomass district heating system (DHS) could resolve both problems by generating energy from harvested trees and undergrowth, rather than wasting this resource in controlled burn offs.

"Out-of-control wildfires cause huge economic damage in Canada and the US, and this research shows that a DHS can reduce that risk while providing cheap, reliable energy generation and local jobs. Reducing woody debris burning also improves regional air quality, and district heating systems produce fewer greenhouse gases (GHG) than burning conventional fossil fuels for space and water heating."

Littlejohn says FIRST Heat does not negate the need for a detailed DHS feasibility study, but it provides proof of whether the concept could work. He believes that for many rural BC communities, it could.

"This easy-to-use spreadsheet contains a vast library of different forest types, conditions and management data created from our study of three distinct BC eco-climatic regions (the North Interior, the Kootenays and the Shuswap) around the communities of Burns Lake, Invermere and Sicamous. It creates a short-cut for communities who can input local data to estimate capital costs, potential energy savings, the sustainability of biomass supply, and impacts on forest health and soil fertility."

For example, the tool suggests that using wildfire-abatement biomass to fuel a DHS in an area like Sicamous could more than halve the heating bills of local residents (by replacing electricity, propane or heating oil) while paying for itself over 25 years and keeping the money in the local economy. With a required capital investment of $5.5 million, the plant could create more than 50 fulltime jobs, and reduce GHG emissions by 10,000 tonnes/year, with little or no degradation of the local ecosystem.

Results will vary by community, forest type, and the size of heating systems considered.

Tom Pedersen, executive director of PICS, says, "The new FIRST Heat tool offers communities in BC's forested interior the prospect of win-wins: spending less on energy while at the same time limiting exposure to forest fires."

Interviews are available on request. Click on direct links to the full report and to the FIRST Heat tool.

Media contact: PICS Senior Communications Officer, Robyn Meyer at 250-588-4053 or rmeyer@uvic.ca

PICS is hosted and led by the University of Victoria in collaboration with the University of British Columbia, Simon Fraser University and the University of Northern British Columbia.