

British Columbia and old woodstoves

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Overview

- Context
- BC Regulation
- BC change outs
- What have we done?
- Now what?

Context – Policy

- 1994: 1st and still only Canadian woodstove regulation
- 2000: Canada Wide Standard (CWS) for PM_{2.5}, with Continuous Improvement and Keeping Clean Areas Clean (CI/KCAC)
- 2005: Great Goal #4 "To lead the world in sustainable environmental management, with the **best air** and water **quality**, and the best fisheries management, **bar none**. "

Context - Pollutant

- From an outdoor air quality perspective, fine particulate matter (PM_{2.5}) poses the greatest risk to human health
- PM_{2.5} is the primary pollutant of concern in most of interior BC due to the prevalence of wood combustion

Context - Health

- Scientific weight of evidence indicates that:
 - there are no safe thresholds
 - risk increases ~ linearly with concentration
- Provincial Health Officer's 2003 report
 - Air quality in BC

<http://www.healthservices.gov.bc.ca/pho/pdf/phoannual2003.pdf>

BC Regulation

Solid Fuel Burning Domestic Appliance Regulation

http://www.qp.gov.bc.ca/statreg/reg/W/WasteMgmt/302_94.htm

On or before November 1, 1994 -
manufacturer, wholesaler or retailer must not
sell for use or for resale an appliance unless it
meets U.S. EPA or CSA emission standards



What have we done?

Change outs to date

■ 1995 BC	213
■ 2001/2/3/4/5 Okanagan	677
■ 2004 BVLD	35
■ 2002/3/5 Cariboo	180
■ 2004 Columbia-Kootenay	58
■ 2004/5 Golden	44
■ 2005 Sunshine Coast	17
■ 2004 Prince George	<u>17</u>
Total	1241

Have changeout programs made a difference?

- 730,000 households (excluding Okanagan and Lower Fraser Valley)

Phone Survey

<http://www.env.gov.bc.ca/air/airquality/>

- 209,000 use wood (including pellet)
- 84,400 conventional woodstove/fireplace inserts (woodstoves)

2003-06 Switch away from wood

Conventional woodstoves

- 510 exclusive
- 1167 multiple (i.e. electric and wood)
- Extrapolate to 10 years – 5534 households using conventional change away from wood altogether

2003-06 Switch away from wood

Question:

Where are the changed out
conventional woodstoves going

?

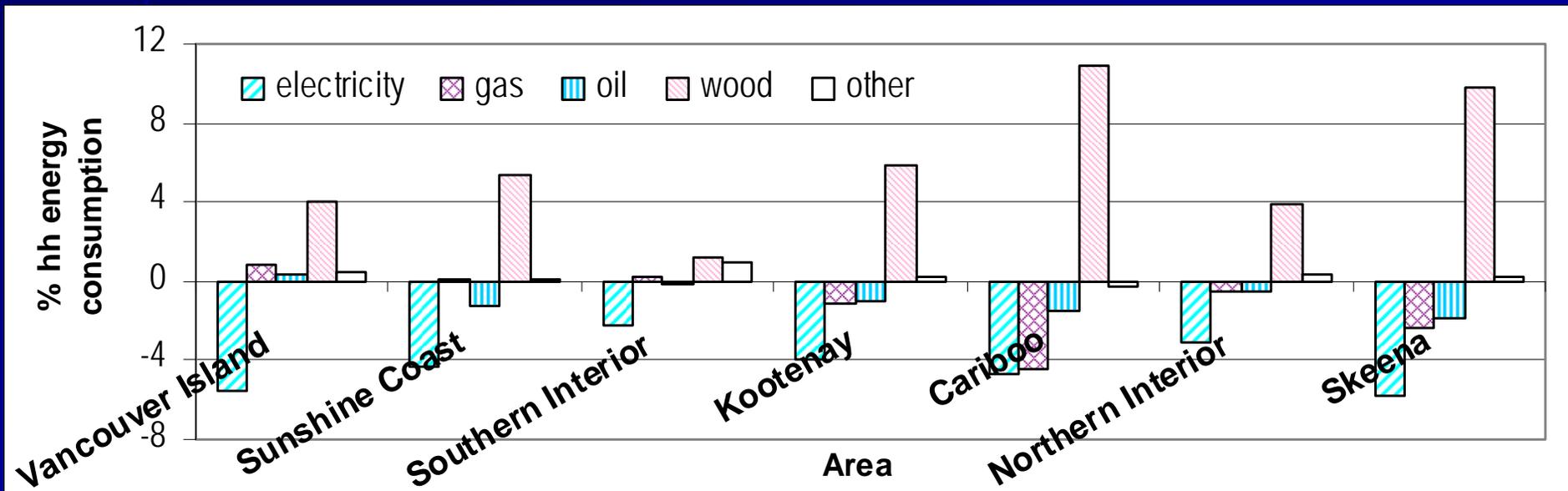
2003-06 Switch away from wood

Advanced woodstoves

- ~70 exclusive
- 584 multiple (i.e. electric and wood)
- Extrapolate to 10 years – 2158 households advanced change away from wood altogether

Other survey results

Wood heating is anticipated to increase (2003-06)



Other survey results (cont'd)

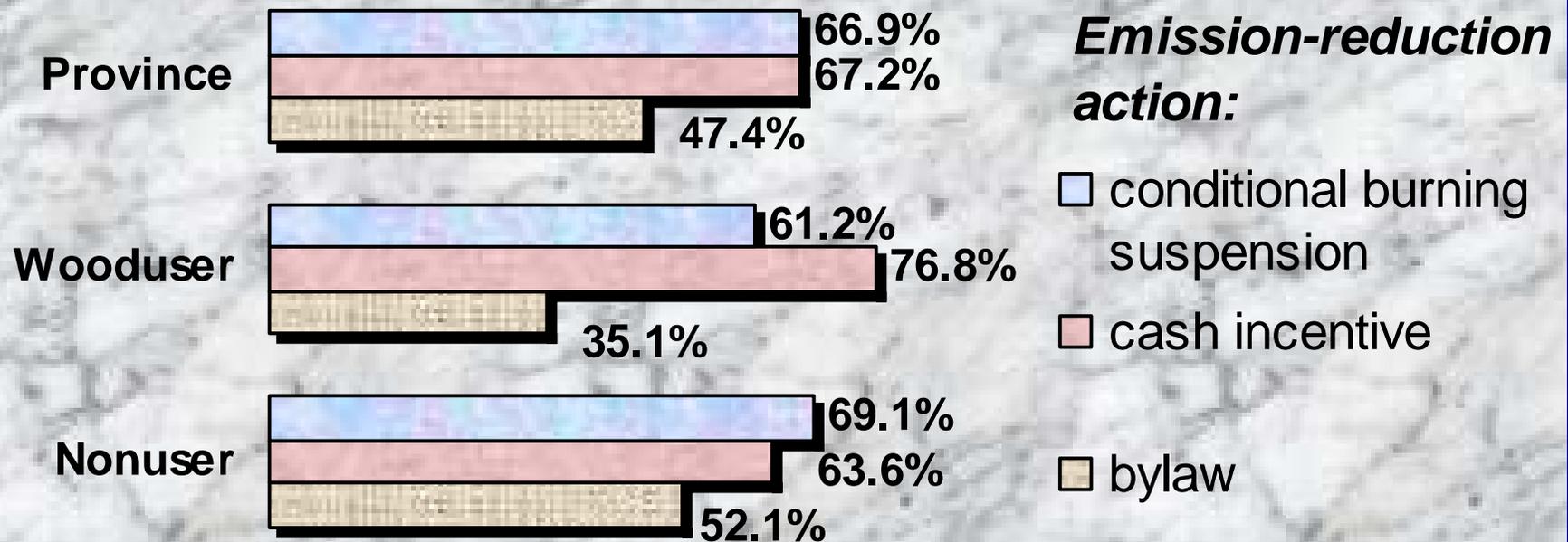
- From 2003-2006: 10,950 households are considering switching to wood (from electricity and gas)
- No way of tracking how many actual installations will be conventional or advanced technology

Other survey results (cont'd)

- Provincially 89% season wood for 6 months, drops to 44% in Bulkley Valley

Other survey results (cont'd)

Likely support for government actions



Now what?

- Formed working group with hearth products, fuel suppliers and other key stakeholders
- Project Charter: (1) dramatically reduce emissions from wood heating by changing out stoves in favour of cleaner alternatives, and (2) ensure that those who choose wood apply practices to minimize emissions

Now what? (cont'd)

- Use community based social marketing to identify barriers and benefits:
 - Target one area (Skeena – Hwy 16 corridor)
 - Questionnaire on attitudes and perceptions – Conservation Corps – door-to-door
 - Focus groups – have draft protocol (Doug McKenzie-Mohr) contract

Questionnaire

- Heat with wood? Conventional? > focus group invitation
- Changed out conventional – what influenced decision?
- Switch away from wood – rationale?
- Burn-it-Smart – behavior before and after
- Wood smoke – do you like smell? Think it is harmful to health? Value good air quality?
- Actions to reduce smoke – wood user and nonuser. Are these actions working? Why no action?

Questionnaire (cont'd)

- Responses to potential government actions
 - Public education
 - Cash incentive – ask conventional how much
 - Targeted smoke reduction
 - Ticket revenue > conventional stove replacement
 - Suspend wood heating during times of poor air quality
 - Tax on conventional stoves
 - Bylaw to regulate use of conventional

Questionnaire (cont'd)

Wood smoke contains many toxic pollutants. Several studies have related wood smoke to respiratory (lung) symptoms such as coughing, asthma, congestion, and wheezing. In British Columbia, air pollution is estimated to account for 25 to 250 deaths per year, and costs our health care system \$85 million per year. Health risks are higher for pregnant women, children, elders and those with existing heart and lung problems.

Air quality in Smithers/Hazelton/Telkwa is negatively affected by residential wood smoke. The provincial health officer has recommended that action be taken to reduce wood smoke emissions.



Morictown 30 km North of Smithers

Questionnaire (cont'd)

- Do these facts change your perception of wood smoke?
- After being made aware of these facts are you more supportive?

Where we hope to get

- Pilot changeout/education program
Skeena – Hwy 16 corridor
- Evaluate pilot
- Community guide for
changeout/education – add to US EPA
- Provincial program?