



by Delores Broten

Did you know that your \$3 eco-tax for tires sometimes pays for burning those tires? Did you think BC was taking a lead in Product Stewardship and Recycling? Wasn't the whole idea of the 1991 tire fee to prevent tire fires? Confused? Welcome to environmental policy making in the New Era. It's pretty much like environmental policy making in every other era.

Every time you buy a new tire in British Columbia, you pay a \$3 "eco-fee" to help deal with those tires when they get old. In the bad old days before the first of BC's product stewardship experiments, the Financial Incentives for Recycling Scrap Tires (FIRST) program, piles of tires were accumulating everywhere, in and out of landfills. When those tires caught fire,

the fires were almost impossible to put out, smouldering for months, layering black smoke and invisible toxics over neighbourhoods. The other main use for old tires was to toss them into logging slash piles or garbage dump burns to sustain the fire. Intentional open air burning was the fate of three-quarters of old tires even for a few years after the FIRST program was introduced.

Hydrocarbons (PAHs) to metals like chromium, mercury and cadmium. By some lucky stroke, these contaminants apparently disappear when the tires are burned more efficiently in cement kilns or pulp mills, with a permit from the Pollution Prevention branch of the Ministry of Water Land and Air Protection (MWLAP).

Does this mean the permit makes a difference? Or maybe the testing isn't very thorough, maybe the mills' air pollution control equipment actually works, or maybe there is just too much money at stake.

But this story is supposed to be about recycling. In BC, the massively successful FIRST program now diverts about 90% of scrap tires

But open burning of tires releases a wide range of unhealthy air pollutants, from dioxins, benzene and Polyaromatic

FIRST FACTS, 2002-03

Number of new tires sold in BC (estimate):	4 million
Number of tires collected for recycling:	3.5 million
Eco-fee collected (Estimate):	\$11-\$12million
Amount paid in transportation subsidies:	\$2 million
Tire Derived Product Credit:	\$4 million
Tire Derived Fuel Credit:	\$434 thousand
Balance	\$4-\$5 million

into recycling. It uses the \$3 eco-fee to subsidize the transportation of old tires to recycling plants. FIRST also pays a bonus to recycling companies for the creation of Tire Derived Products (TDP) — blasting mats, boot trays, roofing shingles, composters — and a smaller bonus for tires which are processed for burning as Tire Derived Fuel (TDF). That includes 70 cents each for the whole tires stripped of some metal and tossed into the kiln at Tilbury Cement (now Lehigh Northwest).

FIRST costs less to run than it brings in, and the balance goes into general revenue. On its website MWLAP says the money is used to fund its programs, but provides no dollar figure for income. Since the tire fee is simply returned by retailers with the sales tax, Rosemary Sutton, administrator of the program at IBM Business Consulting, says no one really knows the income total, except by estimates based on returned tires. One thing, though, is troubling. The more tires are burnt and the less recycled, the more money for general revenue.

There's a serious side to this story about tires and levies and MWLAP. As natural gas prices rise, BC's pulp mills are aggressively pursuing alternative fuels which will cut their costs. It's an environmental bonus for



the mills that the addition of coal or tires or railway ties with or without pentachlorophenol, to the mix of wet sludge and wood waste in their boilers creates more stable, and hotter fires, with potentially lower dioxin emissions.

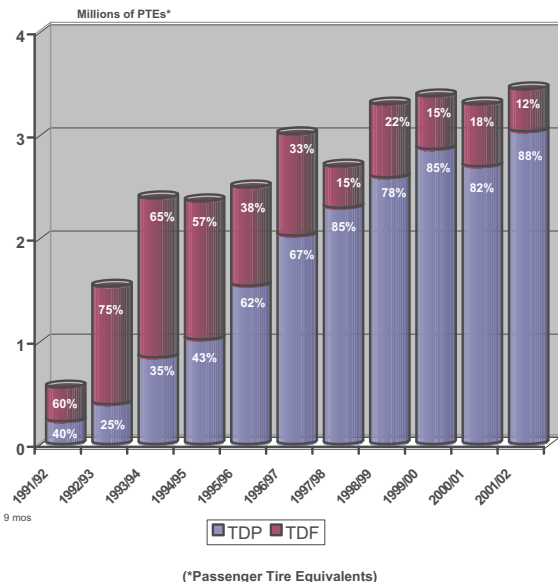
BC pulp mills need a huge amount of energy, some of which they generate by burning wood waste. The mills' appetite for rubber to burn could pose a serious threat to BC's tire recycling companies, which convert about 85% of scrap tires to other products under

the shelter of the FIRST program. If the pulp mills get their way, British Columbia will either have to import tires to burn, and/or Western Rubber and other smaller companies will be deprived of their stock, which is already in short supply compared to the companies markets.

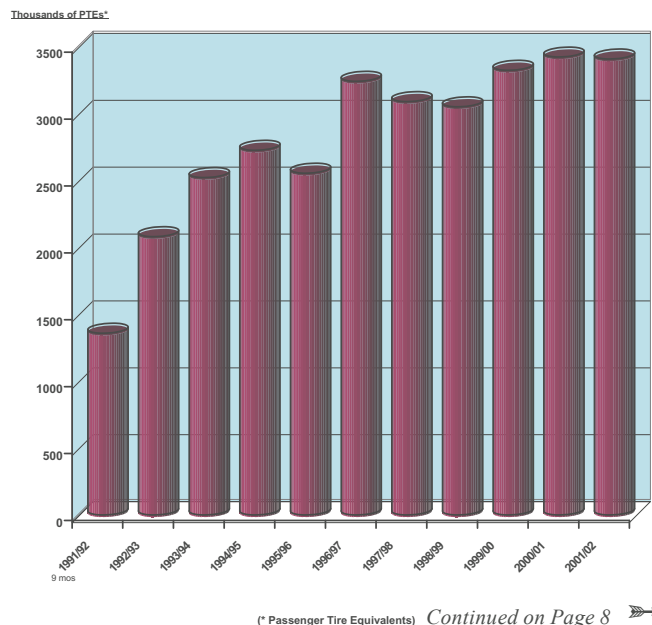
In a small scale and very limited three month trial last year, the Powell River mill burned 1490 tonnes of tire chips. In full time full scale burning, one mill alone could consume the TDF from close to a million tires a year. The BC "harvest" of recycled tires in 2002 was 3.5 million tires or about 28,700 tonnes. If BC pulp mills are going to burn tires, they will need to import millions of tires, which are guaranteed Free Trade under NAFTA as a fuel.

According to Helen Spiegelman, who sat on the Advisory Committee for the FIRST program, the picture is further complicated because Californian companies complain that Western Rubber puts up unfair, subsidized competition. They cannot supply rubber from recycled tires for rubberized

Ministry of Water, Land and Air Protection
Financial Incentives for Recycling Scrap Tires (FIRST) Program
**SCRAP TIRES CONVERTED TO TIRE DERIVED PRODUCTS (TDP)
vs. TIRE DERIVED FUEL (TDF)**
1991/92 - 2001/02
(PLT & MT Tires)



Ministry of Water, Land and Air Protection
Financial Incentives for Recycling Scrap Tires (FIRST) Program
SCRAP TIRES CAPTURED
1991/92 - 2001/02
(PLT & MT Tires)



← They recycle tires, don't they? continued

asphalt highway material as cheaply. FIRST subsidies from the tire levy are provided for transportation and also for rendering of the tires into cheap fuel.

For years BC has boasted of its progressive pollution prevention hierarchy policy – the Five Rs:

1. Reduce at source
2. Reuse
3. Recycle
4. Recover materials and/or energy
5. Manage residuals in an environmentally responsible manner.

However, when activists challenged the Powell River mill's permit for tire trials, citing that hierarchy, the official in charge of the program, Duncan Ferguson, told the Environmental Appeal Board that TDP, rubber recovered from tires for products, paid a higher credit to processors than TDF, rubber for fuel, because it cost more to make.

He added that TDP might be considered material recovery, *equal* to TDF. This opens the door to demotion of tire recycling in the Five R hierarchy.

To add to the confusion, the Ministry has no policy that requires the regional officers writing the pollution permits to consider the Five R recycling hierarchy. Policy from one department of MWLAP does not necessarily have any impact on the ac-

tions of another. As Spiegelman puts it, without some policy consistency, we could easily wind up “burning the furniture to heat the house,” and paying for the privilege too.

On top of all that, the future of FIRST itself is in upheaval. The Ministry has introduced the BC Industry Product Stewardship Business Plan for 2002-2005 with the goal that producers and users should finance waste management, rather than the general taxpayer. The Plan enunciates four Key Principles, although with few specifics on implementation, auditing or enforcement:

- Producer/user responsibility
- Level playing field — for all brand owners, and access to collection facilities for all consumers
- Results-based — cost effective, measurable and innovative toward pollution prevention with the onus on the producer
- Transparency and accountability — “Industry is accountable to both government and consumers for environmental outcomes and allocation of revenue from fees/levies.”

The plan notes that the FIRST program fails on all four counts, despite its \$3 user-fee and its enormous success in keeping tires out of the landfill. Perhaps it is that success which has led to the Ministry's failure to “replace the FIRST program with an industry product stewardship program...by March 31, 2003.”

Duncan Ferguson says that the reorganization is the subject of “ongoing discussion with government at high levels,” as well as consultation with the Retail Council of BC and the Rubber Association of Canada. However no conclusion about a new model has been reached, although government is determined “to devolve” the FIRST program.

In the meantime, Minister Joyce Murray has announced the addition of electronic waste to the Product Stewardship targets.



What is Rubberized Asphalt?

Some American states, in particular California and Arizona, have been experimenting with the use of rubber from scrap tires mixed with asphalt for resurfacing jobs, especially over concrete. A majority of reports suggest that the rubberized asphalt surfaces cut noise by at least 50%, and the rubberized surface does not develop cracking, so it requires less maintenance. It is also skid resistant. The cost, according to the Rubberized Asphalt Concrete Association, can be \$22,000 USD per lane mile cheaper than conventional asphalt when resurfacing is required. Like asphalt, it can be recycled during resurfacing, apparently using the same equipment.



In House Recycling from Toshiba

You can't buy it in North America yet, but Toshiba has begun marketing an in-house paper recycling system for Japan, China and India. The concept has the potential to save money, simplify office paper recycling and eliminate the transportation, handling and processing of recycled office paper.

The essence of the "e-blue™" system, in development since 1998, is an innovative ink that is entirely free of carbon and that decolours when exposed to a high level of heat. The toner prints words and images on standard plain paper in blue to distinguish it from normal carbon-black-based toner.

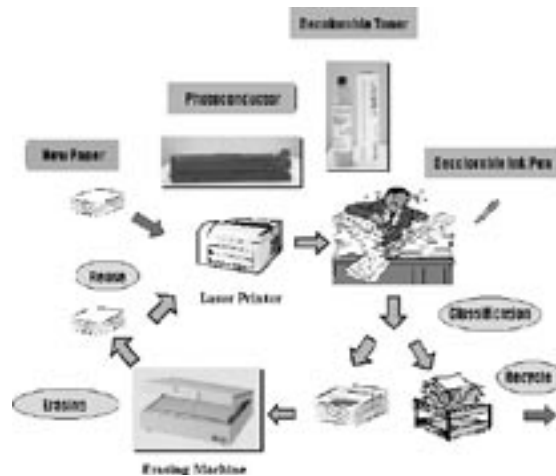
Toshiba will target initial sales of "e-blue™" at corporate clients who use laser printers and standard black toner, and plans to extend the application of "e-blue™" products in the near future to include copy machines and large-scale, industrial-use printing.

Toshiba is not announcing the price of the erasing machine, but the pens are priced at 300 yen, about \$3.75 Canadian and the e-blue decolourable toner at \$250.

MillWatch hopes Toshiba considers schools as another target market

—Toshiba Press Release,
December 2003

http://www.toshiba.co.jp/about/press/2003_12/pr0201.htm



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Norske's Mills

The Norske pulp mills on Vancouver Island have applied to BC Hydro to supply power to the Island through a combination of energy efficiency measures and co-generation of power by burning natural gas. Simultaneously, those same mills are holding trials of various unorthodox fuels for Canadian mills, such as coal (Elk Falls), tires (Powell River and Port Alberni) and railway ties (Crofton) which they plan to use instead of natural gas. Not all the mills have equal modernized boilers and pollution control equipment.

Port Alberni:	•Power Fuel – tires	•Savings \$20,000 a month since 1999. (See "Burning Rubber at the Mill," WS, June/July 2000).	•Pollution control devices: -Bubbling fluidized bed which forces air into the fire bed, and reaches 1600 degrees C, hot enough to destroy volatile organics, -Carbon monoxide monitor in the chamber and controlled feed to keep the fire even, -Electrostatic precipitator with ozonation to catch metals, and The tightest air emission permit on Vancouver Island.
Powell River:	Fuel – tires (trial, 2003)	\$2 million a year if approved full time	-New boiler with -New fluidized bed, -Five stage Electrostatic precipitator with very high removal rates
Elk Falls near Campbell River	Fuel – coal (permit to 2005)	\$1000 a day	-Wet Electrostatic Precipitator -Scrubbers
Crofton:	Fuel - coal, used railway ties, and tires (application for trial 2003)	???	-Precipitator -Multiclones

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