**ECONOMIC INSTRUMENTS**

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**Study No. 1**

# AN ALTERNATIVE APPROACH TO ASSIST CANADA'S PULP AND PAPER INDUSTRY TO ADAPT TO NEW WATER POLLUTION REGULATIONS

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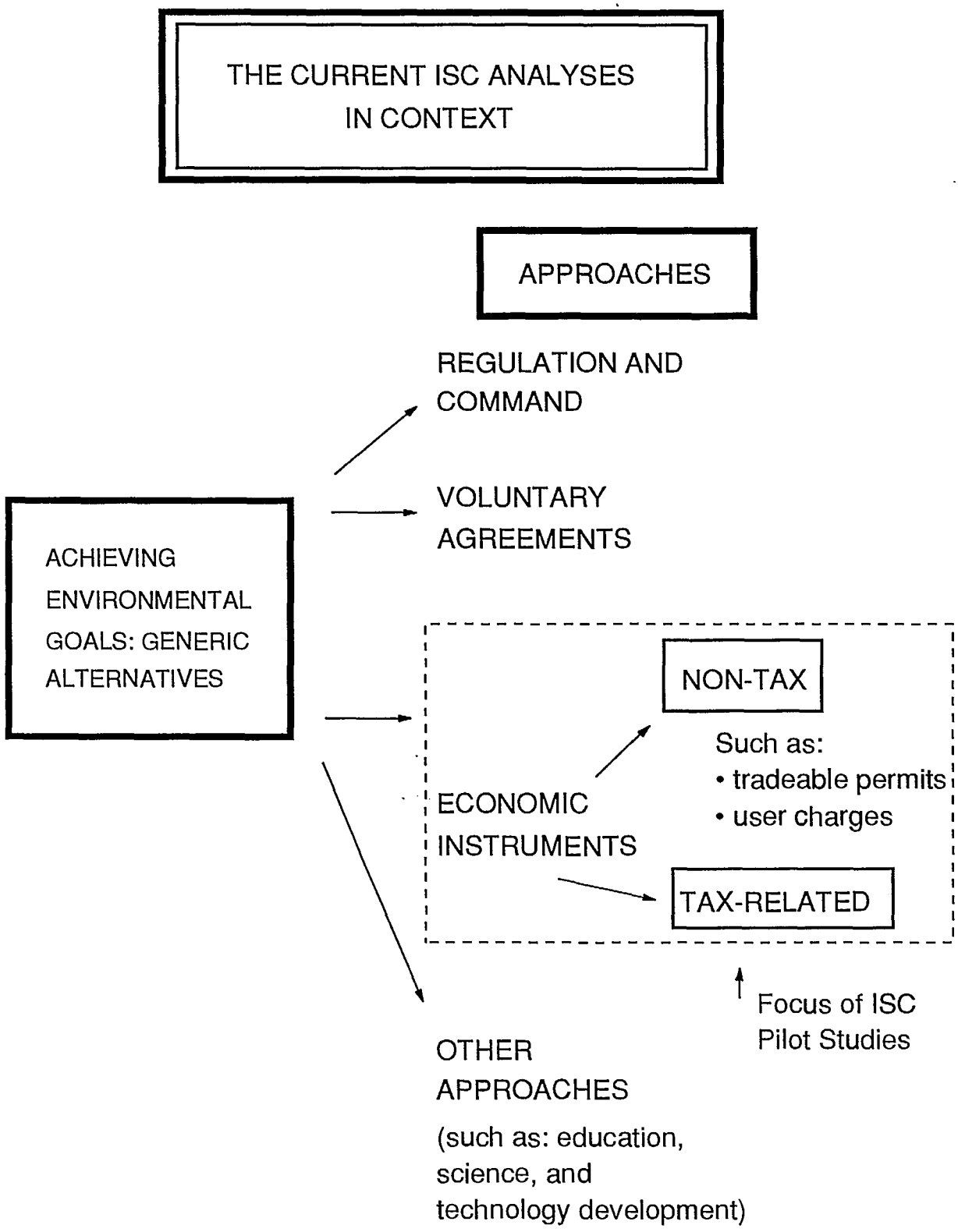
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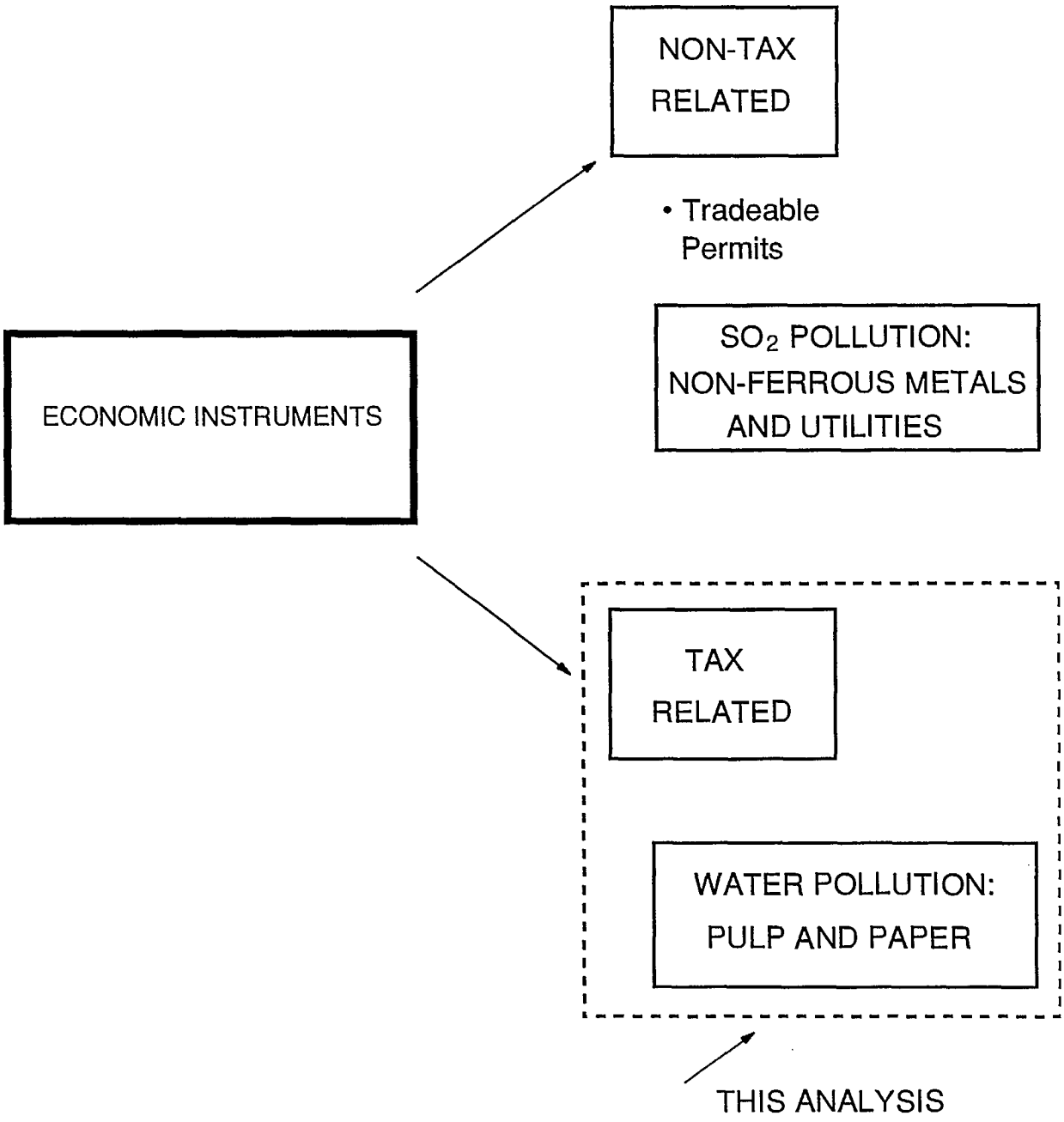
ECONOMIC INSTRUMENTS

ISC HAS TWO PILOT PROJECTS IN PROGRESS



## THE INTRODUCTION OF NEW WATER POLLUTION REGULATIONS MUST FACE SERIOUS INTER-MILL EQUITY CHALLENGES

¶ **Benefits of Delay**

- Mills that have delayed complying are reaping significant competitiveness benefits.

¶ **Inter-Regional**

- Compliance is much greater amongst western Canadian mills.

¶ **Old: New Mills**

- Mills built prior to 1974 receive more favourable tax write-offs than mills built after 1974.

¶ **Ownership**

- Mills that have changed ownership forego favourable tax treatment.

## THREE POTENTIAL POLICY ALTERNATIVES FOR THE FEDERAL GOVERNMENT ARE:

**RESULTS**

¶ **Continue Extensions Selectively**

- Significant inter-mill inequities.
- Environmental goals not achieved.

¶ **Ensure Compliance by End - 1995**

- Many mills will be forced to close.
- Environmental goals achieved.

¶ **Create an Economic Instrument to Facilitate Transition**

- Mill closures limited to non-competitive mills.
- Environmental goals achieved.
- Reduced inter-mill inequities.
- Fiscal costs to governments.

Focus of this presentation

# ECONOMIC INSTRUMENTS
# WATER POLLUTION: PULP AND PAPER SECTOR

## SUMMARY

### PREMISE

¶ The December 1992 water pollution regulations are "worth the cost". The benefits from reducing Total Suspended Solids (T.S.S.), Biochemical Oxygen Demand (B.O.D.), Dioxins, Furans and Toxicity to target levels exceed the costs.

### THE CASE FOR AN ECONOMIC INSTRUMENT

¶ Approximately one-half of Canadian mills (mostly in Eastern Canada) do not comply with the new regulations despite favourable CCA treatment (Class 24) since the 1960s.

¶ Significant increases in capital and operating costs are necessary to achieve compliance; these cost increases are equivalent to approximately 46 per cent of normal industry profits.

¶ The "deadweight burden" (i.e. no returns) is particularly difficult for the industry; firms cannot raise capital on the merits of environmental projects; and, they do not have sufficient funds from internal sources.

¶ The industry was badly hit by the recession; markets are still depressed; and firms have low or negative cash flows.

¶ Mills that have changed ownership, or new mills are disadvantaged; they do not have access to the accelerated CCA provisions of Class 24.

¶ Enforced compliance at the end of 1995 risks closure of many, otherwise profitable mills. There would be a severe economic cost associated with these closures.

¶ Extensions are not the answer; they create inequities that benefit greatly the firms that delay compliance.

## CANADIAN AND U.S. REGULATIONS

¶ The Canadian and U.S. water pollution regulations are roughly equivalent today; U.S. regulations are somewhat more stringent on new mills and somewhat more lenient on existing mills. The U.S. plans to implement more stringent regulations in the 1995 to 1998 period.

## INSTRUMENTS ASSESSED

¶ Assuming compliance with the new regulations, four economic instruments were assessed to aid firms in making the transition: higher CCA levels; tax-exempt ("green") bonds; refundable investment tax credits; and flow-through common shares.

## THE PREFERRED INSTRUMENT: FLOW-THROUGH COMMON SHARES

¶ Facilitates firms' access to capital markets.

¶ Provides assistance at lowest cost to governments.

¶ Ensures capital market discipline.

# 1.0 INTRODUCTION

As background to understanding the advantages and disadvantages of alternative economic instruments in the pulp and paper sector we have:

- ¶ Focussed on water pollution: more specifically we have focussed on meeting the December 1992 regulations for: suspended solids; $BOD_5$; dioxins; furans and toxicity.
- ¶ Examined the degree of enforcement in Canada.
- ¶ Illustrated the importance of environmental expenditures.
- ¶ Chosen a representative sample of approximately 31 pulp and paper establishments to examine in detail the effects at the mill level of meeting the revised, December 1992 standards.
- ¶ Illustrated the extent of inequities introduced by delaying enforcement.
- ¶ Highlighted the importance of retrospective expenditures.
- ¶ Extrapolated the results from the above sample to estimate the total industry effect.

**OUR ANALYSIS OF ECONOMIC INSTRUMENTS HAS FOCUSSED ON THE EFFECTS OF PARTICULAR WATER POLLUTION REGULATIONS**

MORE SPECIFICALLY, WE HAVE EXAMINED THE DECEMBER 1992 REGULATIONS WITH RESPECT TO:

¶ Total Suspended Solids (TSS)

- Total amount of solid matter found in effluents.

¶ Biochemical Oxygen Demand ($BOD_5$)

- Oxygen consumed by organic matter breaking down in the effluents.

¶ Dioxins, Furans

- Two complex classes of organic compounds formed during the bleaching process as by-products of the reaction between chlorine and lignin.

¶ Toxicity

- Degree of acute lethality of effluents for aquatic life.

WE HAVE NOT EXAMINED THE EFFECTS OF REGULATIONS WITH RESPECT TO:

¶ AOX (Adsorbable Organic Halogens)

- Chlorine is a halogen which physically attaches to the surface of organic matter.

# CANADIAN AND U.S. FEDERAL REGULATIONS: WATER POLLUTION

## 1.1 CANADIAN

¶ THE 1971 REGULATIONS WERE LESS STRINGENT, NOT UNIVERSAL AND COMPLEX

- 1971 regulations were set based on the best available technology available in 1971
- 1971 regulations only applied to new or altered mills (less than 10 per cent of today's total)
- Emission limits were process-based and "politically sensitive"

THERE WAS LITTLE EFFECTIVE ENFORCEMENT PRIOR TO 1992

¶ THE 1992 REGULATIONS ARE MORE STRINGENT, UNIVERSAL, AND LESS COMPLEX

- Allowable emission levels for BOD, TSS and Toxicity have been significantly reduced
- All mills are subject to the regulations (however, extensions until 1995 may be allowed)
- Standard, non process-based, formulae are used to calculate emission limits.

SIGNIFICANT REDUCTION IN ALLOWABLE POLLUTION LEVELS, BUT MANY EXTENSIONS HAVE BEEN MADE

# CANADIAN AND U.S. FEDERAL REGULATIONS: WATER POLLUTION (CONT'D)

## 1.2 CURRENT CANADIAN AND US REGULATIONS

¶ TODAY, CANADIAN AND US FEDERAL REGULATIONS ARE SIMILAR

- 1992 Canadian regulations were designed to be equivalent with US regulations. The table below illustrates current regulations that apply to a bleached kraft pulp mill:

| | TSS | | BOD | |
|---|---|---|---|---|
| | CDN monthly max. (lbs/ton) | US monthly max. (lbs/ton) | CDN monthly max. (lbs/ton) | US monthly max. (lbs/ton) |
| Bleached Kraft Pulp Mill: | | | | |
| Existing Mill | 22.5 | 32.8 | 15.0 | 16.1 |
| New Mill | 22.5 | 19.0 | 15.0 | 11.0 |

# CANADIAN AND U.S. FEDERAL REGULATIONS: WATER POLLUTION (CONT'D)

## 1.3 U.S. REGULATIONS ARE BEING REVIEWED

- In the 1970s and 1980s, U.S. enforcement was more stringent than that in Canada; Canadian mills have historically had an advantage.

- Existing regulations were developed during the 1970s and 1980s. New regulations are due in 1995; mills will have up to three years to comply.

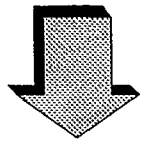
- Indications suggest that the 1995 U.S. regulations will be more stringent; the new regulations will be based on the best available technology.

## OUR APPROACH

**TO ESTIMATE THE OVERALL IMPACTS OF THE NEW REGULATIONS AND ALTERNATIVE ECONOMIC INSTRUMENTS**

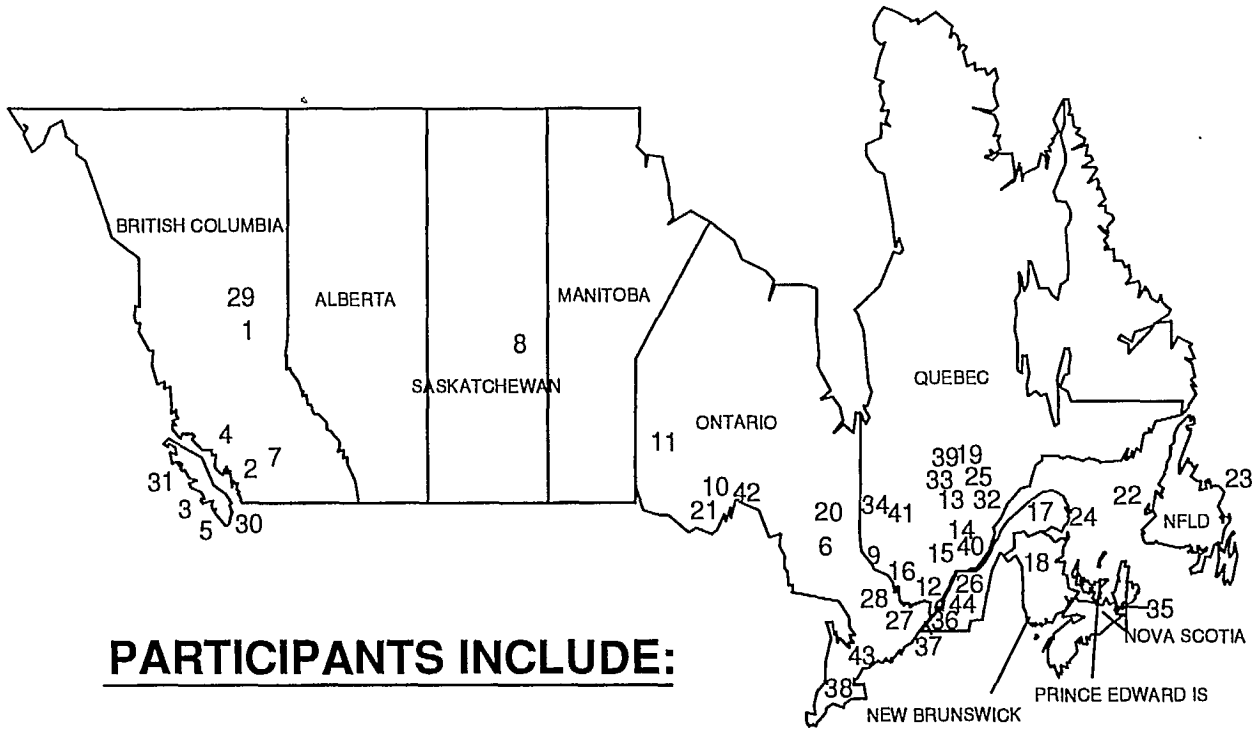
¶ **We examined a sample of 44 mills (approximately 29 per cent of Canadian output) reflecting:**

- a representation of western and eastern mills;
- a mix of old and new mills;
- a mix of products.



¶ **We extrapolated the findings to the universe of 150 pulp and paper establishments.**

# OUR ANALYSIS WAS BASED ON INFORMATION FROM 44 MILLS




## PARTICIPANTS INCLUDE:

1. Canfor - Prince George
2. Canfor - Howe Sound
3. MacMillan Bloedel - Port Alberni
4. MacMillan Bloedel - Powell River
5. MacMillan Bloedel - Harmac
6. MacMillan Bloedel - Sturgeon Falls
7. Weyerhaeuser - Kamloops
8. Weyerhaeuser - Prince Albert
9. Tembec - Temiscaming
10. CPFP - Thunder Bay
11. CPFP - Dryden
12. CPFP - Gatineau
13. CPFP - La Tuque
14. Stone - Grandmere
15. Stone - Belgo
16. Stone - Pontiac
17. Stone - Chaleur
18. Stone - Bathurst
19. Abitibi-Price - Alma
20. Abitibi-Price - Iroquois Falls
21. Abitibi-Price - Fort William
22. Abitibi-Price - Grand Falls
23. Abitibi-Price - Stephenville
24. Abitibi-Price - Chandler
25. Abitibi-Price - Kenogami
26. Abitibi-Price - Beaupré
27. Noranda - Thurso
28. Noranda - Masson
29. Fletcher - Mackenzie
30. Fletcher - Crofton
31. Fletcher - Campbell River
32. Donohue - Clermont
33. Donohue - St.Felicien
34. Donohue - Amos
35. Stora - Point Tupper
36. Domtar - Beauharnois
37. Domtar - Cornwall
38. Domtar - St.Catherines
39. Domtar - Dolbeau
40. Domtar - Donnacona
41. Domtar - Lebel-sur-Quevillon
42. Domtar - Red Rock
43. Domtar - Trenton
44. Domtar - Windsor

# ESTIMATING THE COST OF COMPLIANCE

¶ **Environmental Related Capital Expenditures Are Important**

- Given an average equipment life span of 25 years, the weighted average annualized environmental capital expenditures per mill (for the period 1981-1997) totals $2.31 million (1992) per year.
- Historic After-tax Industry Profits (1986-1990): $1.125 billion per year
- P.V. of capital expenditure tax shield = $0.28 per dollar (assuming all mills are considered taxable)

| Capital Allocation $ per year (before-tax) | $ Per Tonne Production (before-tax) | $ As A % Of Profits (after-tax) |
|---|---|---|
| 2.31 million | $7.89 | 22.3% |

¶ **Including Operating Costs (for 1990s)**

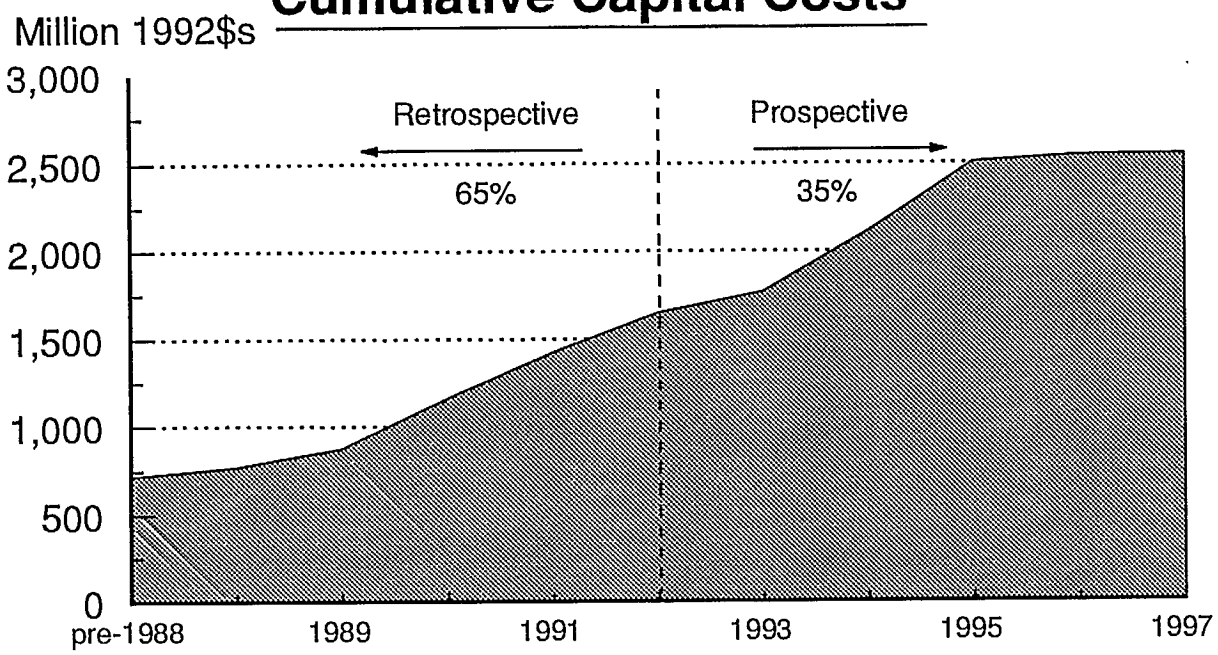
| Capital Cost $/tonne (before-tax) | Operating $/tonne (before-tax) | Total $/tonne (before-tax) | $ As A % Of Profits (after-tax) |
|---|---|---|---|
| $7.89 | $11.14 | $19.03 | 46.6% |

**CONCLUSIONS:** **Total incremental burden is at least 46% of historic after-tax profits; given loss carry forwards it is actually higher.**

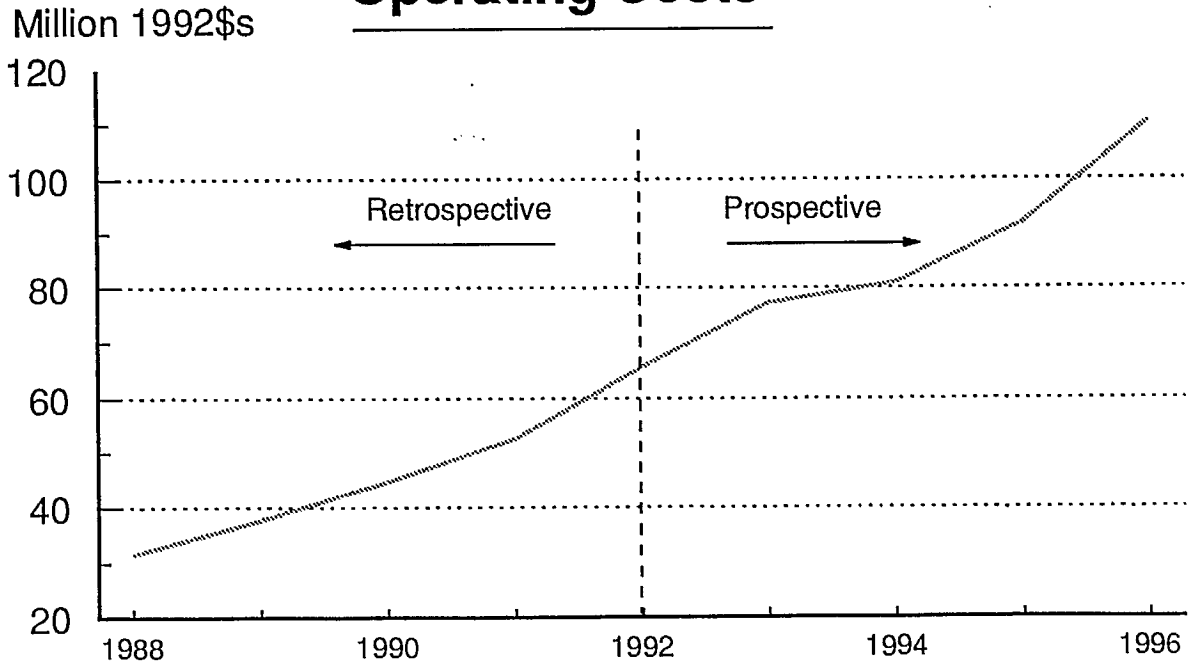
# Retrospective and Prospective Capital and Operating Costs are Both Important

## 44 Mill Sample

## Cumulative Capital Costs



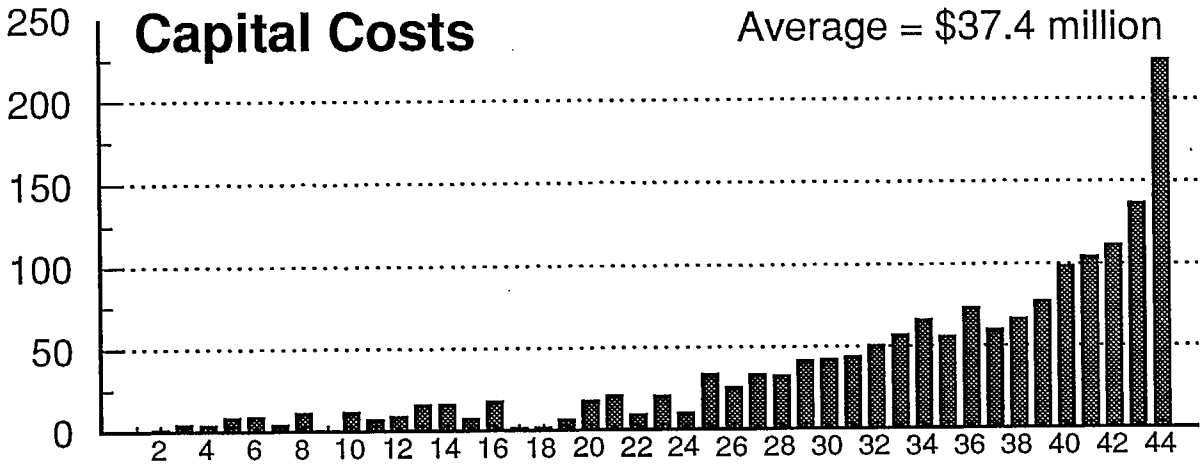

## Operating Costs*

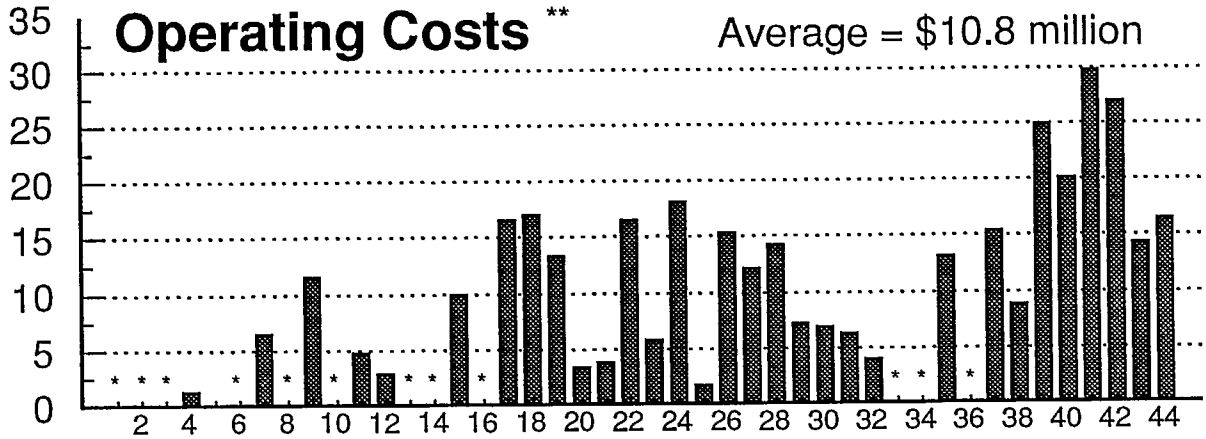



* Operating costs not available for all mills.

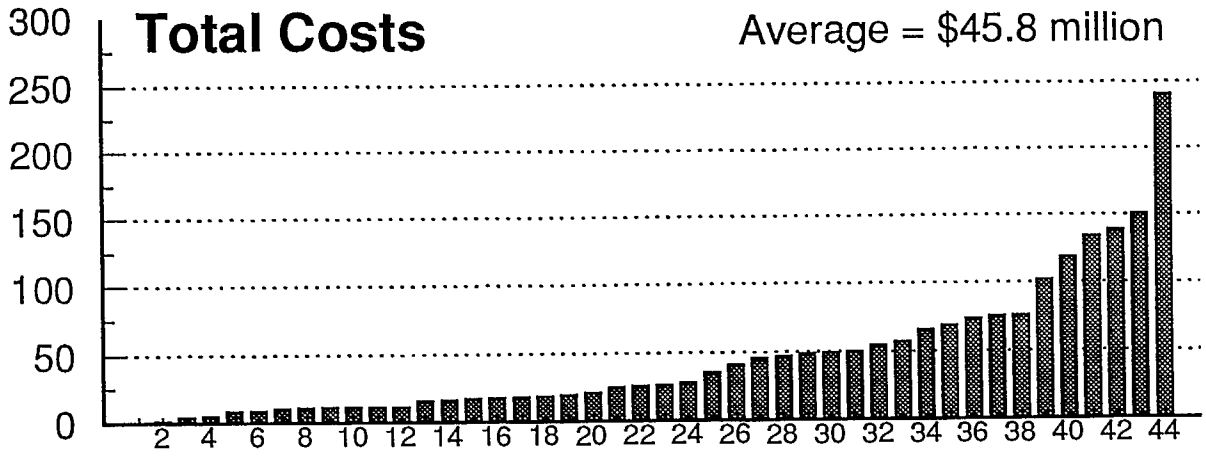
# The Retrospective Costs by Mill Were

**(1992 $Cdn Millions)**




* Not Available.
** Represents the sum of annual costs from 1984 to 1992.



# 2.0 THE CURRENT CANADIAN ENFORCEMENT CREATES SIGNIFICANT INEQUITIES

- Approximately one half of the mills are non-compliant with existing regulations.

- The granting of extensions to meet the regulations could result in the same dilemma at the end of the extension period (end 1995).

## CLASS 24 REGULATIONS CREATE INEQUITIES BETWEEN FIRMS

### The Existing Treatment

1. With change of ownership, the new mill owners are not able to claim water pollution expenditure under Class 24.

2. New mills also are unable to use Class 24.

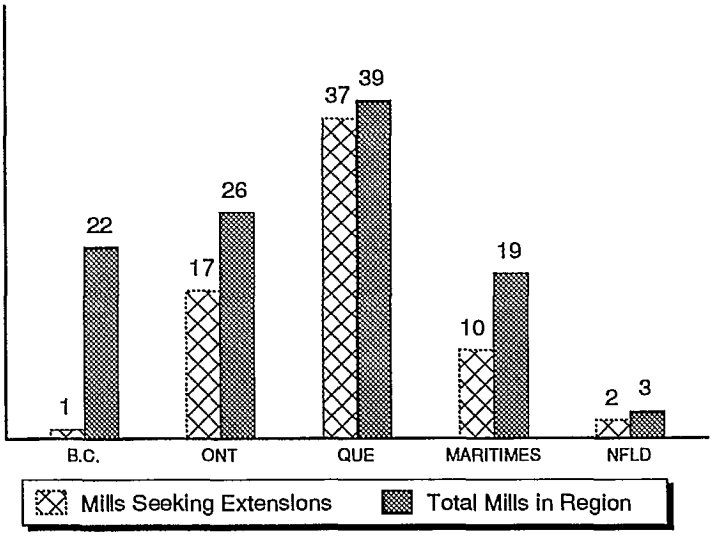
### The Problems

1. Mills which have changed ownership are faced with changes in regulations; these were not anticipated in the purchase price; they cannot use accelerated write-offs of Class 24; and they are disadvantaged compared to other mills

2. Investments in new mills is not treated equitably with investments in existing mills.

### WHY NOT MAKE CLASS 24 AVAILABLE TO ALL MILLS?

# COMPLIANCE EXTENSIONS HAVE BEEN REQUESTED FOR A SIGNIFICANT NO. OF MILLS




SEVERAL PROBLEMS EXIST TODAY

1. Mills have reacted differently; some mills have had secondary treatment for 20 years; approximately 50 per cent of mills were non compliant at end of 1992.

2. Non-compliant mills exist despite favourable CCA treatment since the 1960s.

3. Extensions translate into inequities.

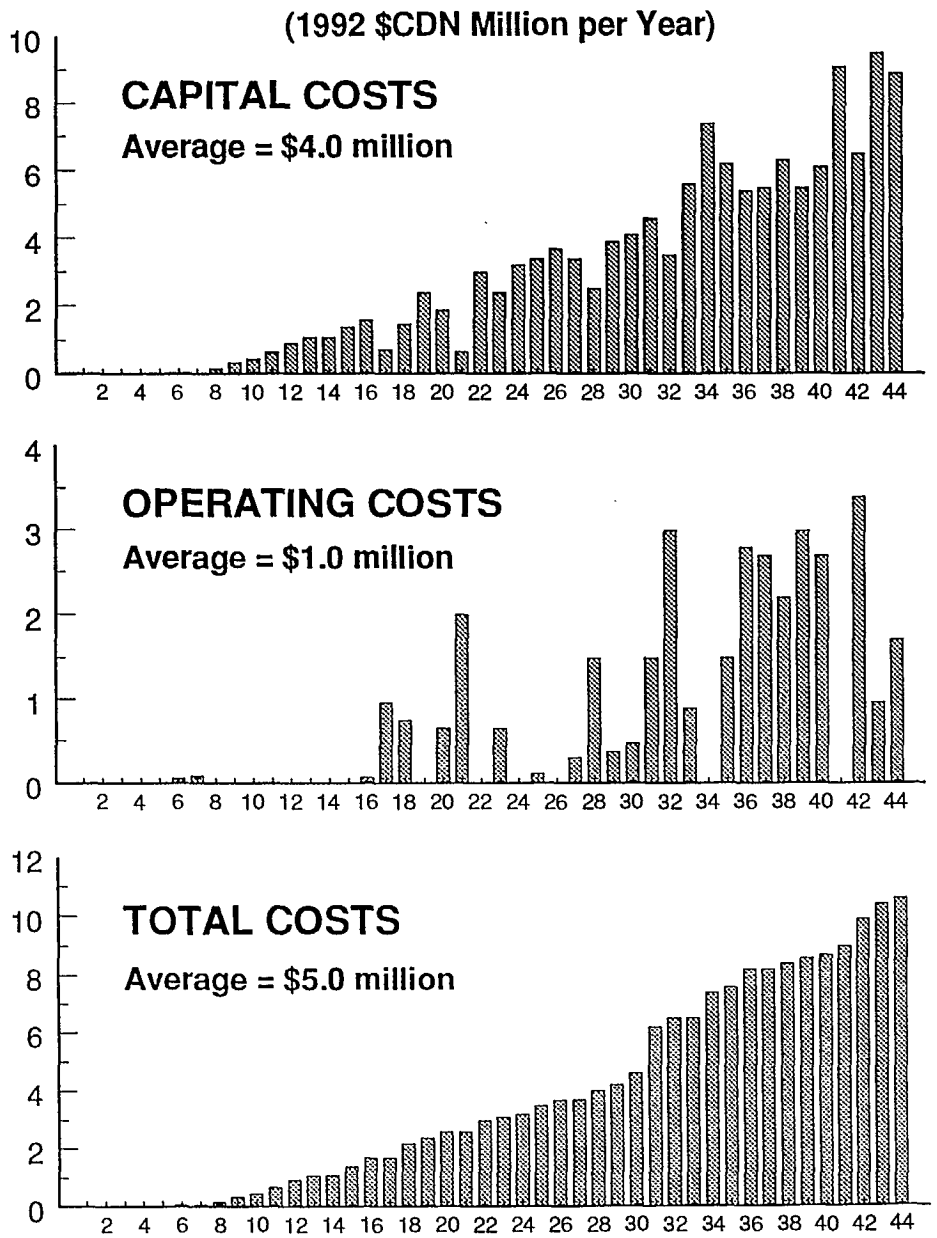
4. Extensions could become exemptions.

**There is a real danger of rewarding the mills that have delayed expenditures and punishing those who have complied.**

# THE BENEFITS FROM DELAYING COMPLIANCE ARE VERY COMPELLING

¶ Our 44 mill sample will be used to illustrate the incremental benefits of delaying compliance.

ANNUAL BENEFITS FOR DELAYING INCREMENTAL CAPITAL AND OPERATING COSTS




Note: averages include non-compliant mills only.
Note: mill 1 is non-compliant and plans no expenditures; mills 2-11 are fully compliant.

## THE BENEFITS FOR MILLS THAT HAVE DELAYED COMPLIANCE ARE VERY COMPELLING

¶ Non-compliant mills benefit from:

- not having incurred the level of historical capital and operating costs of compliant mills.
- delaying the incurring of the additional prospective capital and operating costs to become compliant.

¶ The 44 mill sample was divided into two categories:

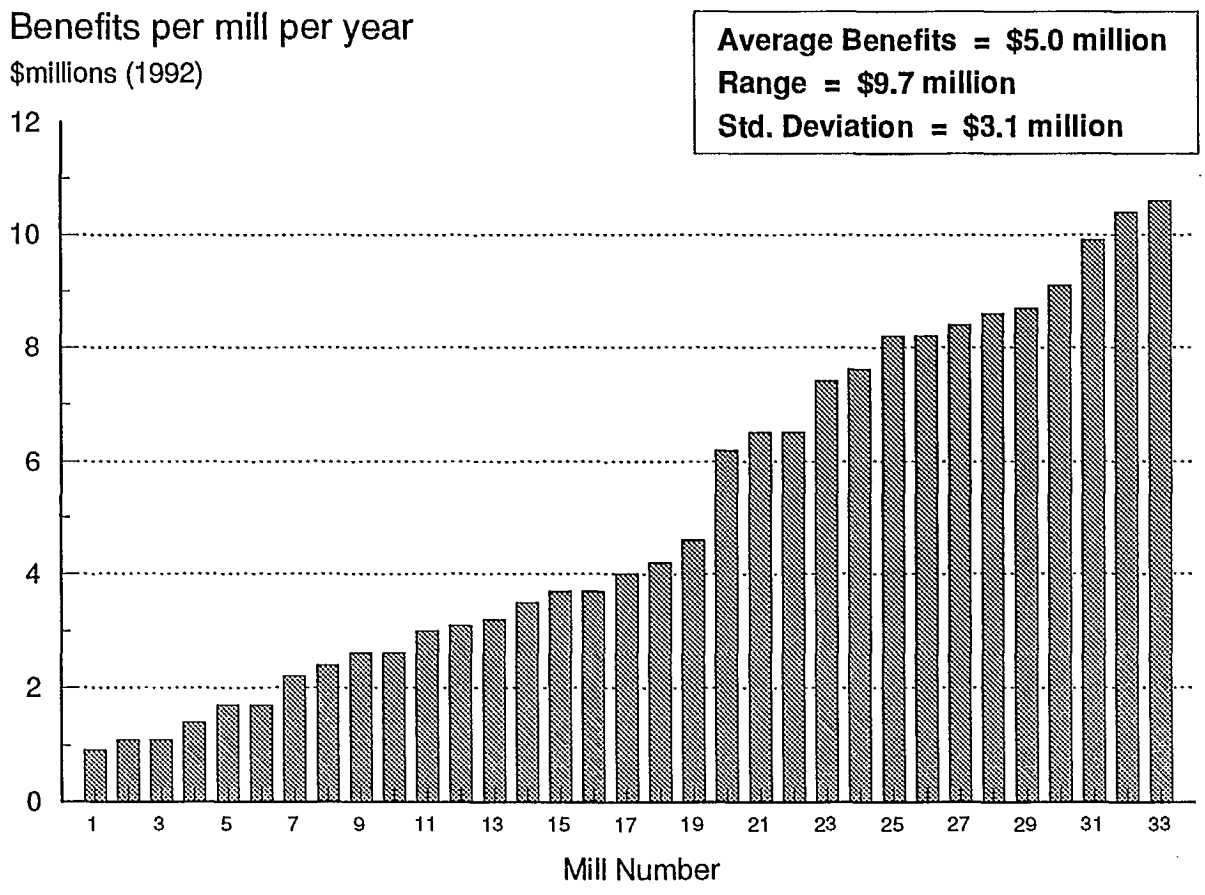
- the mills (10) that were fully compliant.
- the mills (34) that were less than compliant.

(Note: one mill was excluded; it had no plans to become compliant)

| THE BENEFITS | $millions per mill/year (Before tax) |
|---|---|
| Lower Historical Expenditures | |
| Capital | 1.1 |
| Operating | 0.9 |
| Total | 2.0 |
| Delayed Prospective Expenditures | |
| Capital | 4.0 |
| Operating | 1.0 |
| Total | 5.0 |
| **ESTIMATED BENEFITS TO MILLS FROM DELAYING COMPLIANCE** | 7.0 |

# THE BENEFITS FROM CONTINUING TO DELAY COMPLIANCE VARY APPRECIABLY ACROSS MILLS

¶ For the 34 mills that are not fully compliant, the benefits from delaying are as follows.



**IN SUMMARY, THE AVERAGE INCREMENTAL INEQUITY INTRODUCED BY EXTENSIONS IS:**

- ¶ $5.0 million per mill
- ¶ $20.52 per tonne
- ¶ 4.0% of sales
- ¶ 60.7% of profits

**THE BENEFITS VARY SIGNIFICANTLY FOR NOT FULLY COMPLIANT MILLS**

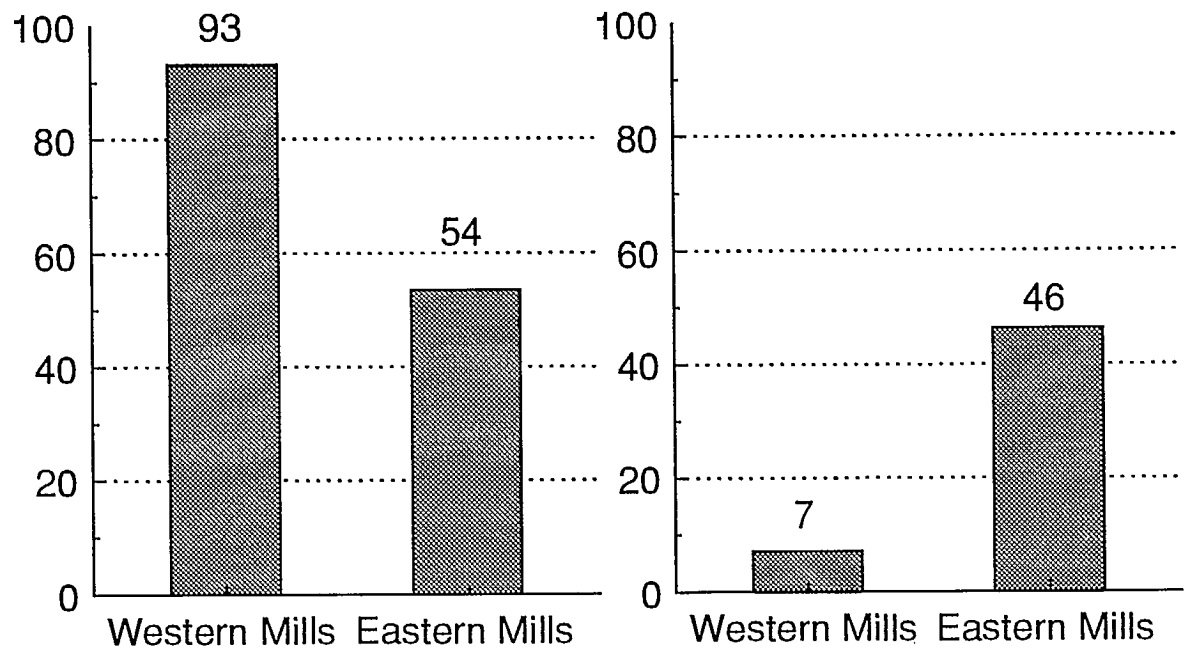
| | Low | High | |
|---|---|---|---|
| ¶ | $0.9 | $10.6 | million per mill |
| ¶ | $3.70 | $39.86 | per tonne |

# THE WESTERN MILLS ARE MUCH FURTHER ADVANCED IN INSTALLING WATER POLLUTION REDUCTION FACILITIES

## Retrospective Capital Expenditures

## Prospective Capital Expenditures

Per Cent of Total Expense to Become Fully Compliant



## 3.0 THE COMMAND-AND-CONTROL IMPOSITION OF NEW ENVIRONMENTAL STANDARDS COULD RESULT IN INSOLVENCIES FOR SIGNIFICANT NUMBER OF MILLS

¶ Deadweight costs for environmental expenditures must be recovered from either:

a) Internal funds; or

b) Funds raised in capital markets

¶ Today, pulp and paper enterprises:

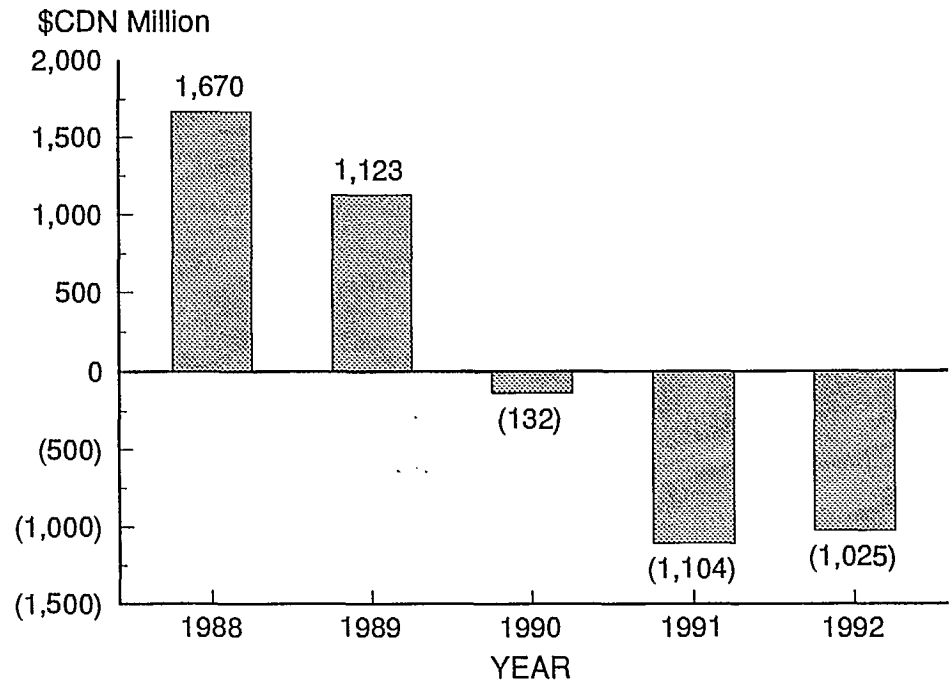
a) Are in a cyclical recession and are not generating appreciable cashflows;

b) Have great difficulties in accessing capital markets

# ALL INDICATORS SUGGEST INABILITY OF INDUSTRY TO ABSORB ENVIRONMENTAL EXPENDITURES

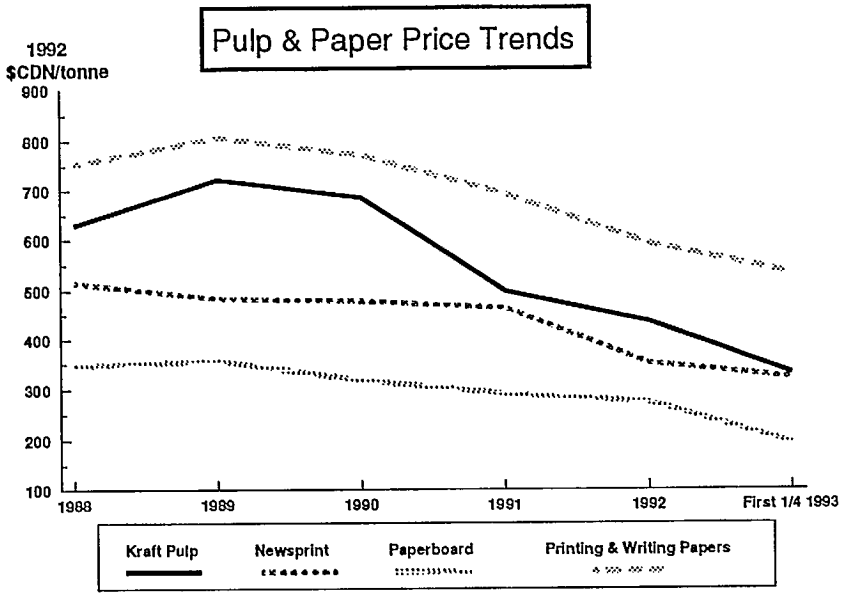
## Financial Indicators Point To Weakness

¶ Industry profits have fallen significantly

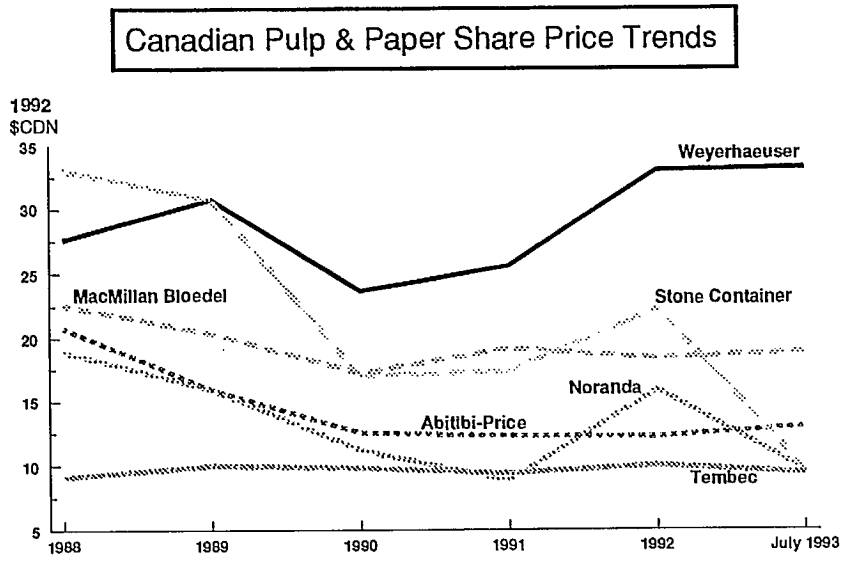


## Financial Indicators Point To Weakness (Cont'd)

¶ Product prices are at ten year lows

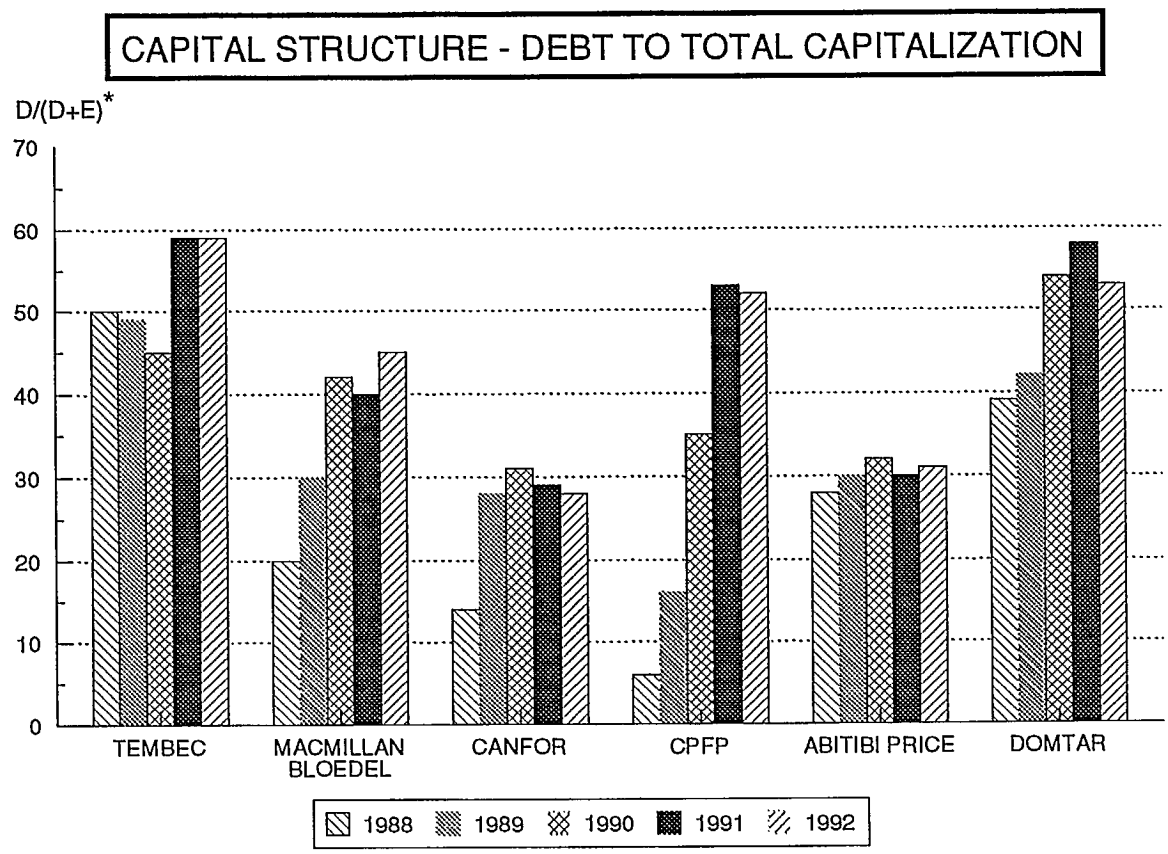



¶ Share prices have not performed well, with rare exceptions



## Financial Indicators Point To Weakness (Cont'd)

¶ Consequently, low share prices have resulted in higher than traditional levels of leverage




* Note: (Book Value of Debt) / (Book Value of Debt + Market Value of Equity)

## Industry Reports Suggest Financial Hardships

### Illustrative Quotations

¶ Nov. 30, 1992

"The Canadian pulp and paper business, already under pressure to invest billions of dollars to reduce operating costs and pollution, lost a total of $1.3 billion last year, a year when prices hit rock bottom."

Globe & Mail, pg.B5

¶ Oct. 22, 1992

"Canadian Pacific Forest Products Ltd.. of Montreal reported a nine month loss of $188.5 million or $3.69 a share on revenue of $1.4 billion.....CP Forest is continuing an aggressive restructuring program that includes the sale of two Quebec corrugated container plants..."

Globe & Mail, pg.B9

¶ July 15, 1992

"Public and private Canadian companies making pulp, paper, lumber and related products lost a collective $2.5 billion in 1991, on sales that plummeted almost 10 per cent to just less than $32 billion, according to a new report sponsored by the Canadian Pulp and Paper Association."

Globe & Mail, pg.B3

## Industry Reports Suggest Financial Hardships (cont'd)

### Illustrative Quotations (Cont'd)

¶ June 17, 1992

"Canada's pulp and newsprint producers have the highest labour costs, while the pulp producers also have the highest processing costs."

Globe & Mail, pg.A18

¶ April 10, 1992

"MacMillan Bloedel, hit by a record-setting $93.4 million loss last year, must restructure its operations.....The company closed one of its five newsprint machines at Powell River last month, putting almost 200 people out of work."

Globe & Mail, pg.B5

¶ Feb. 6, 1992

"Canfor posts 'worst year' with $93.9 million loss."

Globe & Mail, pg.B5

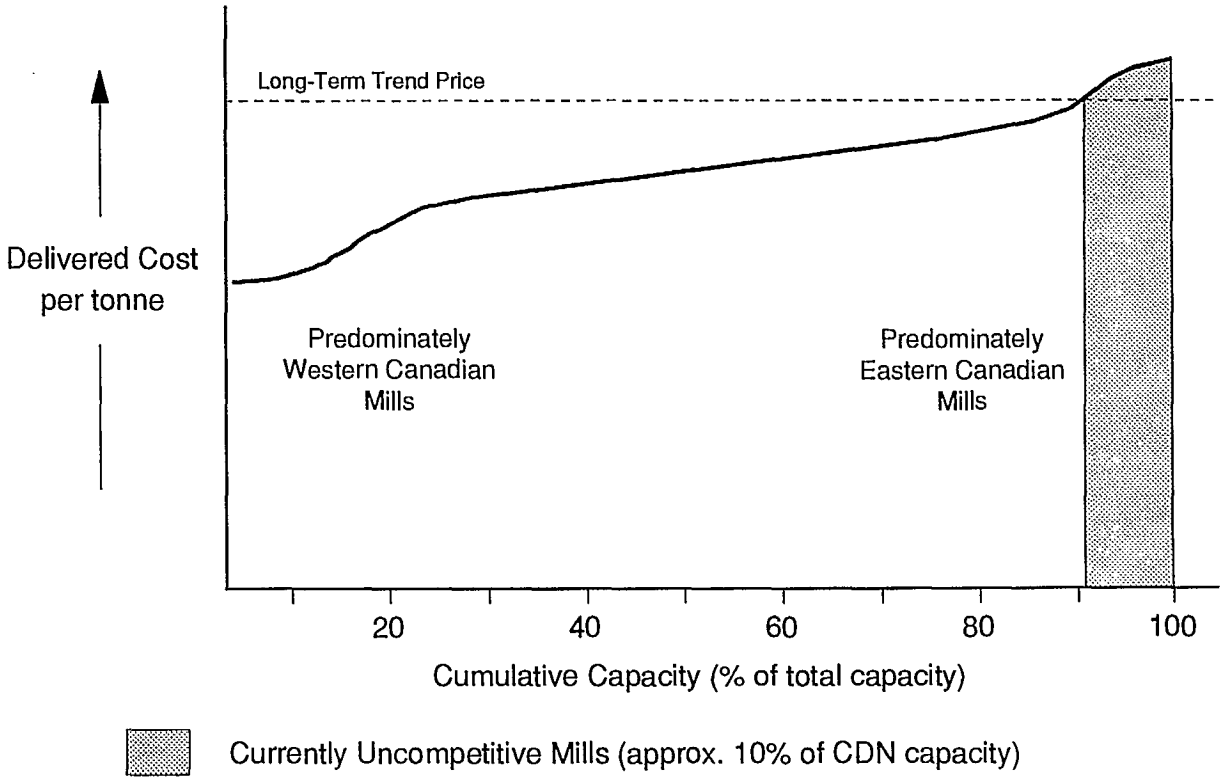
## The Industry Is Ill Equipped To Take On Incremental Environmental Expenditures

# 4.0 CLOSURE OF OTHERWISE PROFITABLE MILLS WOULD RESULT IN SIGNIFICANT ECONOMIC COSTS

# ESTIMATING MILL CLOSURES RESULTING FROM INCREMENTAL ENVIRONMENTAL COSTS

¶ It is estimated that 10 per cent of Canadian capacity will have to close for competitive reasons.

## CANADIAN PULP AND PAPER MILLS: BENCHMARKING

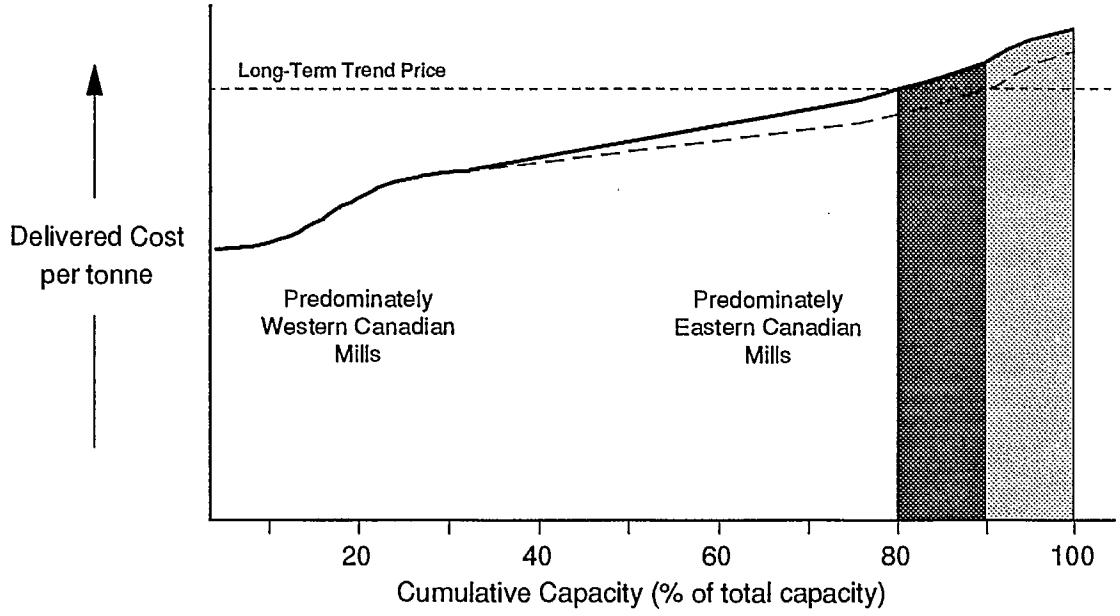



¶ Environmental Costs result in an additional $5 to $7 million cost per mill per year (i.e. $20 to $25 per tonne).

## ESTIMATING MILL CLOSURES RESULTING FROM INCREMENTAL ENVIRONMENTAL COSTS

¶ It is estimated that these environmental *"deadweight costs"* will force the closure of an additional 10 per cent of Canadian mills.

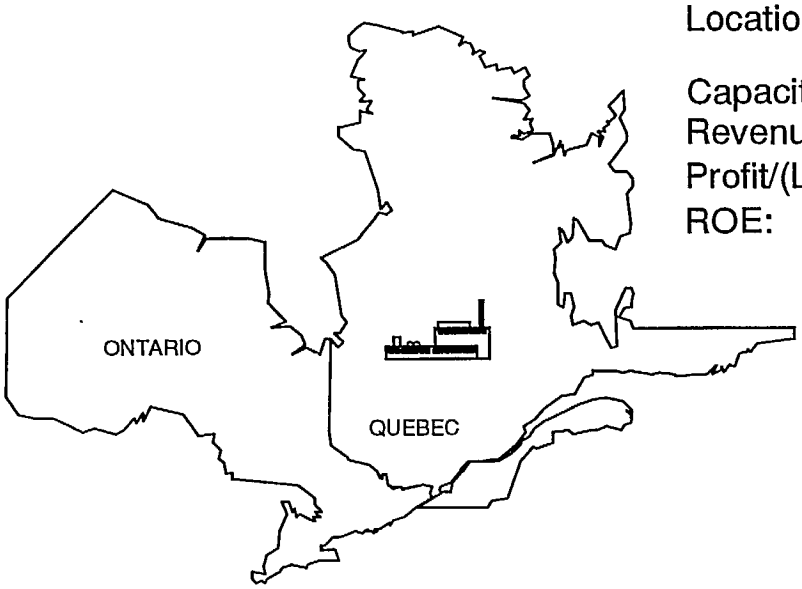
**CANADIAN PULP AND PAPER MILLS: BENCHMARKING**
(COST CURVE INCLUSIVE OF ENVIRONMENTAL COSTS)




**IN THE ABSENCE OF AN ECONOMIC INSTRUMENT THE ENFORCEMENT OF REGULATIONS WILL FORCE THE CLOSURE OF AT LEAST AN INCREMENTAL 10 PER CENT OF CANADIAN MILLS**

# REPRESENTATIVE NEWSPRINT MILL

## The Existing Mill




| | |
|---|---|
| Location: | Remote, small community |
| Capacity: | 250,000 Tonnes |
| Revenues: | $179 Million |
| Profit/(Loss): | $3.5 Million |
| ROE: | 3.6% |

## Cost of Required Incremental Water Treatment Facilities

| | |
|---|---|
| Capital: | $30 Million |
| Operating: | $2 Million a Year |

## With Water Treatment Installed

Profit/(Loss): $(0.6) Million a year

Note: Over 80 per cent of environmental expenditures would be made in Canada

# SUMMARY

**¶ There are appreciable benefits to continuing operations of the representative mill.**

| | Present Value ($Millions/Mill) |
|---|---|
| **Internalities** | |
| Net income discounted at private discount rate | $(7.0) |
| **Externalities** | |
| Labour: Mill | 32.8 |
| Foreign exchange | 46.8 |
| Corporate taxes | 4.0 |
| Labour: Woods | 6.2 |
| Profits: Other Canadian Mills | (37.8) |
| NET ECONOMIC COST (of closure) | $45.0 |

**NET ECONOMIC COSTS OF FORCED SHUTDOWN ARE SIGNIFICANT WITHOUT INCLUDING:**

**(1) Indirect Effects on Communities (Many Remote)**

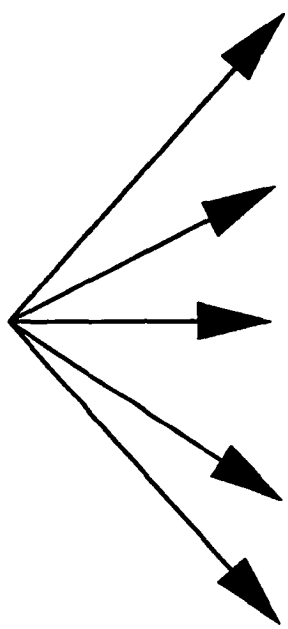
**(2) Benefits From Environmental Installations (Largely Canadian Source Equipment)**

**NET ECONOMIC COST OF CLOSING 15 MILLS: AT LEAST $675 MILLION.**

## 5.0 FIVE ASSISTANCE MECHANISMS WERE CONSIDERED FOR ENVIRONMENT-RELATED CAPITAL EXPENDITURES

¶ **First**, it is necessary to ensure that all enterprises are treated in an equitable manner with respect to the rapid write off for water (Class 24) and air (Class 27) pollution.

¶ **Second**, and in addition, we considered five economic instruments.



Increased CCA Rates:
Effectively Creating New Depreciation Class With Write-Offs Above Class 24

Refundable ITC's:
ITC Provided On The Basis Of Gross Capital Costs.

Green (Tax-Exempt) Bonds:
Valuation of Assistance From Low Interest Financing (30% Below Market Rates)

Flow Through Preferred Shares:

Flow Through Common Shares:
80% Benefit To The Issuer Of The Shares

# CHARACTERISTICS OF AN APPROPRIATE ECONOMIC INSTRUMENT

## The Instrument Should:

¶ Enable firms to increase their access to capital markets.

¶ Not be biased against firms that have already expended significant funds to become compliant; retrospective issues must be included.

¶ Not foster the survival of otherwise uncompetitive firms.

¶ Be equitable across firms, across regions and internationally.

¶ Involve minimal countervail risk.

# INCREASED CCA RATES

## DESCRIPTION

CCA rates could be increased for water-pollution expenditures to provide either a higher and (or) an earlier tax-shielding effect for environmental expenditures. The total level of CCAs could exceed 100 per cent.

## ADVANTAGES

- Could directly target water-pollution environment expenditures (i.e. Class 24)
- Straightforward adaptation of existing tax system

## DISADVANTAGES

- Does not provide funds to the majority of firms that are not tax-paying
- No market discipline to deter use by unprofitable firms
- Retrospective expenditures not easily handled
- Precedent-setting for other industries with the Class 24 category

**Because of the non tax-paying status of much of the industry today, increased CCA rates are not the best mechanism for providing assistance**

# REFUNDABLE INVESTMENT TAX CREDITS

## DESCRIPTION

Refundable investment tax credits would provide cash transfers from governments to companies based on eligible water pollution capital expenditures. These transfers would occur irrespective of whether the firm was in a tax paying position.

## ADVANTAGES

- Could directly target environmental expenditures
- Could benefit taxable and non-taxable companies
- Opportunity for significant benefits to industry
- Historical precedent (regional ITCs range from 15 to 35%)
- Could address retrospective expenditures

## DISADVANTAGES

- Requires direct outlay of funds by government(s)
- Could be used for sub-marginal establishments

**Direct transfers from governments to enterprises would be problematic in today's fiscal climate**

# GREEN (TAX-EXEMPT) BONDS

## DESCRIPTION

"Green Bonds" are essentially a method of reducing the cost of raising debt. Under "green bond" financing, the interest income received by an investor is tax exempt. The result of this preferred tax status is that the investor requires a lower return which translates into a direct savings for the firms issuing this financing.

## ADVANTAGES

- Access to markets
- Involves market discipline
- No direct cash outlay from government
- Extensively utilized in U.S.

## DISADVANTAGES

- Assistance is limited compared to other mechanisms: maximum is about 18 per cent of capital expenditure
- Does not address retrospective issue
- The lender captures a significant percentage of the benefits
- It would be most difficult to contain leakage

**The limited maximum level of assistance and the difficulty in preventing "leakage" are two factors that make "green bonds" relatively unattractive mechanism**

# FLOW THROUGH PREFERRED SHARES

¶ **There are two principal reasons for avoiding the use of flow through preferred shares.**

- First, it would be precedent-setting; it has never been done in Canada.
- Second, it could be easily manipulated to create a zero-risk tax loss transfer mechanism (e.g. a zero dividend separate class of preferred shares)

**Flow through preferred shares will not be well received**

# FLOW THROUGH COMMON SHARES

## DESCRIPTION

Firms can make available tax shields that cannot be utilized to new purchasers of common shares. Firms give up rights to tax shields in exchange for immediate cash flow injection.

## ADVANTAGES

- Immediate cash flow injection to corporations
- Benefits non-taxable firms
- Government only loses the time value of the tax shield
- Capital market test for viability of operations
- Potentially large assistance effect when compared to other mechanisms
- Retrospective and prospective issues are handled

## DISADVANTAGES

- Transaction and sharing costs (inherent in all market mechanisms)
- Sets a precedence for retrospective assistance
- Sets a precedence for other sectors using Class 24
- Only available to publicly-traded companies

**The numerous benefits associated with Flow Through Common Shares makes it the most attractive of the five instruments.**

# 6.0 FLOW THROUGH COMMON SHARES
## Exploring the implications for stakeholders

# FLOW THROUGH SHARES (CONT'D)

## Flow through common shares

¶ Flow through common shares exist today. (e.g. in mining and energy sectors). Investors are very familiar with this instrument.

¶ However, in recent years the attractiveness of these shares has decreased.

- the allowable flow through percentage has decreased.
- capital gains inclusion rate has increased.
- today, most high tax bracket investors have exhausted their capital gains exemptions.

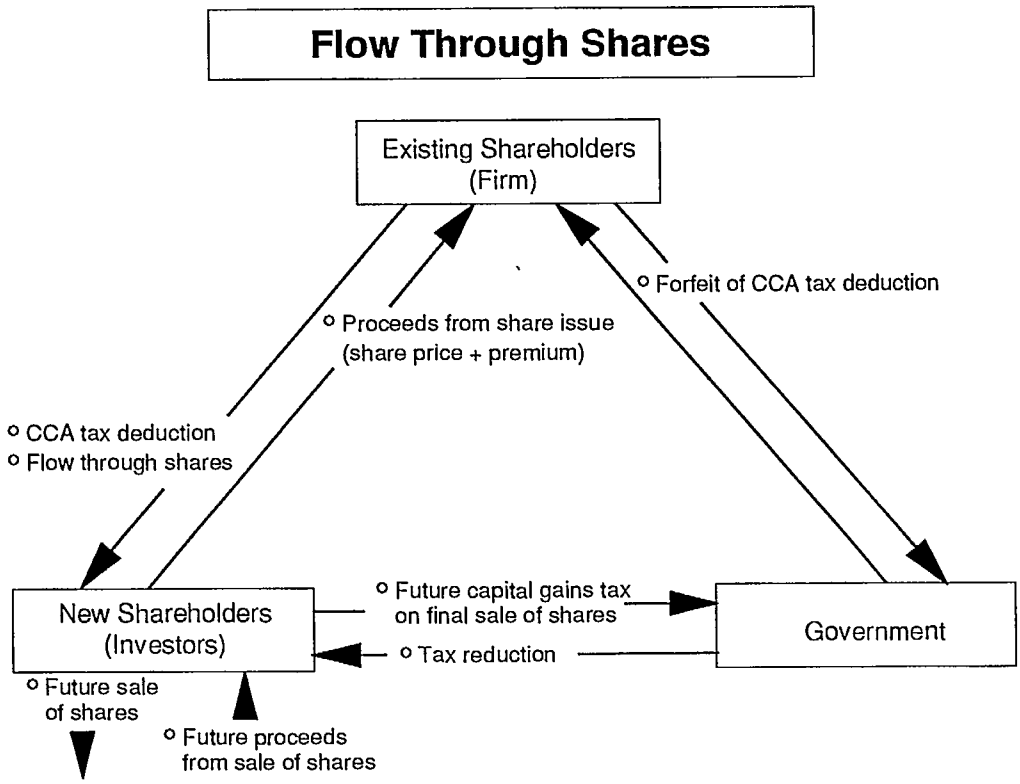
**Nevertheless,**

**Flow through common shares will work for companies having tax losses and good earnings potential.**

# FLOW THROUGH COMMON SHARES HOW WOULD THEY WORK?

## DESCRIPTION

- Allows the firm to "flow through" to the investor CCAs associated with environmental (class 24) expenditures. Firm could immediately issue flow through shares for all the unclaimed class 24 since 1989.
- Non-taxable firms benefit from premiums received for the sale of the tax shield; many Canadian mills are not taxable.
- Value of the immediate use of CCAs would be ***shared*** between the firm and the investor.



# FLOW THROUGH COMMON SHARES HOW WOULD THEY WORK (CONT'D)?

## AN EXAMPLE

Assumptions:

1. Firm issues flow through share for $12.00 ($10 market value of common shares plus $2 premium*).

2. Recipient is in 50% personal tax bracket.

3. Recipient sells share one year hence for $10.00 and pays capital gains tax on the entire $10.00 (assumed cost is zero).

4. Sharing of government assistance is 80% to the firm and 20% to the investor.

| | Year 0 | Year 1 | Gain/Loss |
|---|---|---|---|
| Firm | +12.00 | 0.00 | 12.00 |
| Shareholder | (6.00) | 6.25** | 0.25 |
| Governments | (6.00) | 3.75** | (2.25) |
| New Shareholder | 0.00 | (10.00) | (10.00) |

* Maximum premium is $2.50 (25% of $10) and firm only receives 80% of premium: 0.80 x $2.50 = $2.00

** Shareholder must pay capital gains tax on $10.00; i.e. $10.00 x .75 x .50 = $3.75

# WHAT ARE THE POTENTIAL FISCAL COSTS TO GOVERNMENTS?

## THE GROSS FISCAL COSTS

## ASSUMPTIONS

1. Prospective expenditures (class 24) are eligible.
2. Unclaimed class 24 deductions (1989+) are eligible for immediate flow through shares.
3. Purchasers (marginal tax rate at 50 per cent) will receive immediate tax deduction; shares held one year and capital gains tax paid.
4. Social Discount Rate: 10 per cent.
5. Companies will become tax paying in 5 to 10 years.
6. Approximately 25 to 50 per cent of CCAs in the 1989 to 1992 period are eligible for flow through to investors.
7. Results from 44 mill sample can be extrapolated to 150 mills (Canadian universe)

**Costs: 150 Mills (Canadian Universe)**

| **CCAs (1989 to 1992) Not Utilized** | Real 1992 $ millions (Present Value) | |
|---|---|---|
| | **Timing: Tax-Paying Status of Corporation** | |
| | **Year 5** | **Year 10** |
| 25% | 152 | 376 |
| 50% | 185 | 458 |

**GROSS FISCAL COSTS: $150 TO $460 MILLION**

## WHAT ARE THE POTENTIAL FISCAL COSTS TO GOVERNMENTS? (CONTINUED)

## NET FISCAL COSTS

From the gross fiscal costs must be deducted the fiscal costs associated with the closure of at least 10 per cent of mills (say 15 mills) under command and control.

¶ **Fiscal Benefits: Avoiding Closing 15 Mills**

- Estimated number of mills closed under command and control: 15.
- Benefits per mill from continued operations: personal tax; UIC premiums; and avoided UIC costs.
- Less: reduced corporate income tax (other Canadian mills).
- Equals: net benefit per mill: $15 to $20 million.

**Total benefits (NPV): $225 to $300 million**

¶ **Fiscal Benefits: Increased Construction Activity**

The 15 mills (if they continue) will spend an average $28 million on pollution abatement.

**Fiscal Benefits: Unknown**

**FISCAL COSTS OF FLOW THROUGH SHARES (IF ANY) WILL BE MINIMAL**

# WHAT WOULD BE THE CAPITAL INFLOWS TO CORPORATIONS? (Neglecting the foregone CCA shield)

## ASSUMPTIONS

1. Assume historic, unutilized CCAs can be fully transferred in 1993.
2. Assume two scenarios for historic (1989+) unutilized CCAs: 25% and 50% of the 1989 to 1992 expenditures.
3. Assume 100% of prospective expenditures can flow through to common shareholders as these expenditures occur.

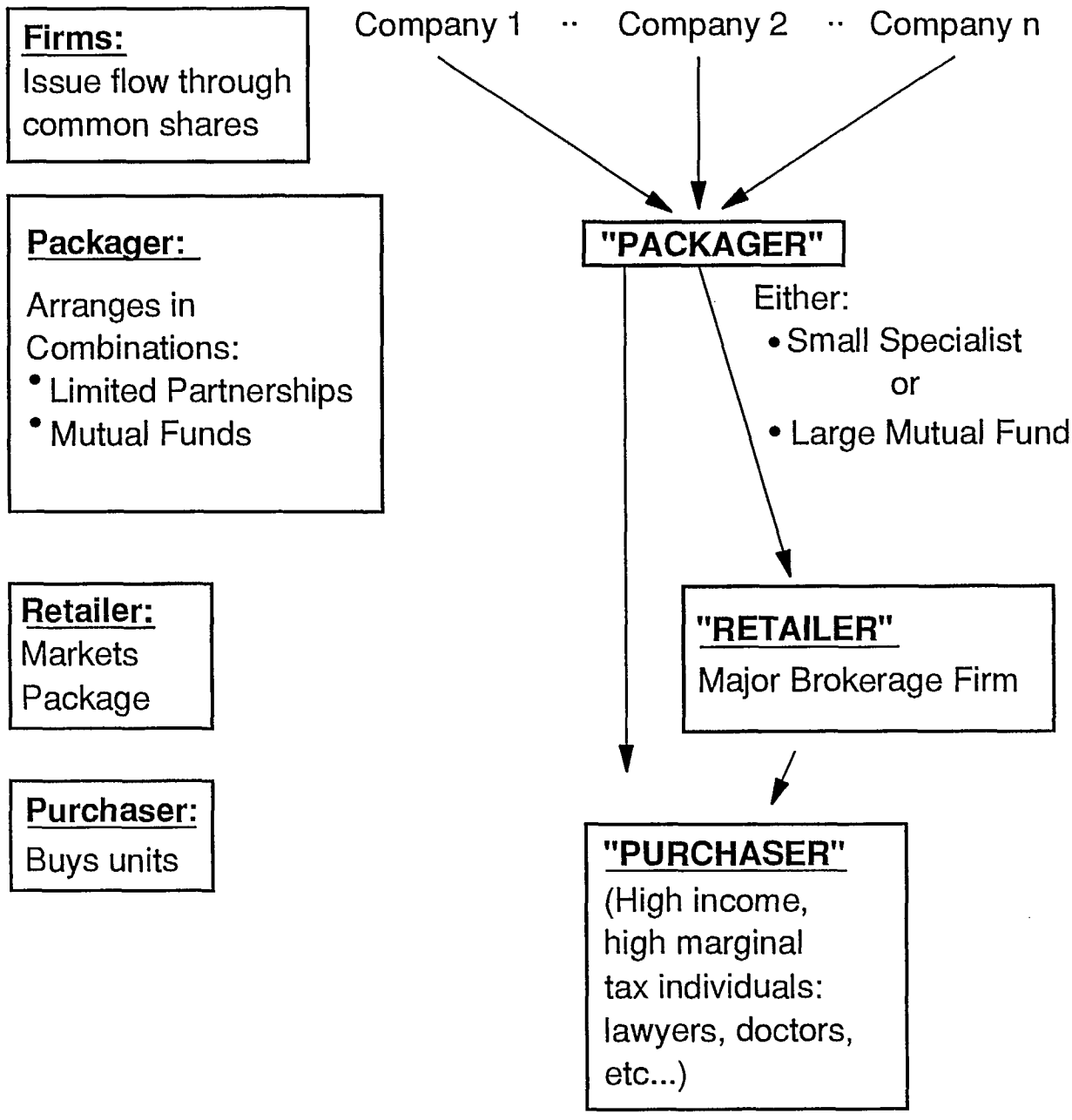
**Inflow To Corporations ($Millions: 1992)**

| Unutilized CCAs (1989+) | 1993 | 1994 | 1995 | 1996 | Total |
|---|---|---|---|---|---|
| **25%** | 1,172 | 1,205 | 1,333 | 123 | 3,823 |
| **50%** | 1,927 | 1,205 | 1,333 | 123 | 4,588 |

# FLOW THROUGH SHARES

## SYNTHESIS OF EARLY FINDINGS: INVESTMENT COMMUNITY

### 1.0 HOW COULD THEY WORK?

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# FLOW THROUGH SHARES

## SYNTHESIS OF EARLY FINDINGS: INVESTMENT COMMUNITY (Continued)

## 2.0 WOULD THEY WORK?

¶ The timing is good; markets are strong; shortage of tax-sheltered instruments today.

¶ It is an instrument very familiar to the investment community.

¶ It may be necessary to increase flow through beyond 100 per cent to facilitate marketing.

¶ The marketability will vary company-by-company depending on the perceived earnings capacity of underlying assets.

¶ "Exit mechanism" is essential:
- Packages of flow through shares converted to mutual fund and listed on TSE.
- Price of mutual fund will be weighted average of the prices of flow through shares in packages.
- No price guarantee.

- **FLOW THROUGH SHARES WILL WORK DETAILS REQUIRE MUCH TECHNICAL ANALYSIS**

# FLOW THROUGH SHARES (CONT'D)

**An appropriate design of a Flow Through Share mechanism would include consideration of the following:**

¶ The instrument must be designed specifically to handle both retrospective and prospective investment;

- Unutilized CCAs (or net cash costs of past investments) of Class 24 are very important.

¶ Recapture of the CCA base upon sale of assets.

- Proceeds on the sale of "sequestered" assets to be fully taxable, even if firm is non-taxable.

- Proceeds should be greater of actual proceeds received or remaining economic value of asset.

¶ Foreign-owned (100 per cent) subsidiaries:

- The companies not having Canadian shares trading may not be able to use the flow through mechanism.

¶ The level and timing of flow through:

- The examples have assumed 100 per cent immediate flow through.

# 7.0 WHERE TO FROM HERE?

¶ Provided there is support for this economic instrument initiative, it may be suitable for inclusion in the next budget.

¶ In the near term, it is necessary to:

- Obtain the inputs from Department of Environment and Fisheries and Oceans.
- Begin working with the Department of Finance.
- Continue to work on technical details with investment community.

# PRINCIPAL POLICY ALTERNATIVES

| | ***RESULTS*** | ***CONSIDERATIONS*** |
|---|---|---|
| **ALTERNATIVE No 1** | | |
| **MARKET SOLUTION**<br>• Competitiveness Challenge in Absence of Environmental Compliance | 10% of Mills in Financial Distress (approx. 15 Mills)<br>• Closures<br>or<br>• 2/3 yrs of Negotiations<br>  • ESOPs<br>  • CCAAs | • 50 per cent of mills not environmentally compliant<br>• Inter mill inequities<br>• International problems |
| **ALTERNATIVE No 2** | | |
| **MARKET SOLUTION**<br>• Competitiveness Challenges; Meeting Environmental Targets | 20% of Mills in Financial Distress (approx. 30 Mills)<br>• Closures<br>or<br>• 2/3 yrs of Negotiations<br>  • ESOPs<br>  • CCAAs | • Mills environmentally compliant |
| **ALTERNATIVE No 3** | | |
| **ECONOMIC INSTRUMENTS**<br>• Mills Can Access Capital Markets to Address Incremental Environmental Costs | 10% of Mills in Financial Distress (approx. 15 Mills)<br>• Closures<br>or<br>• 2/3 yrs of Negotiations<br>  • ESOPs<br>  • CCAAs | • Mills environmentally compliant<br>• Closure or restructuring of non-competitive mills |