

ENVIRONMENTAL PROTECTION COMMITTEE MEETING
Wednesday, February 27, 1985
1:00 p.m.
Council Chambers


AGENDA

Personnel Present:

ITEM 1: Presentation by Mr. Darrell Burnham of SHARE Society
Re: Curbside Recycling Program

Item 2: Summary Report by Ms. Yvonne Kerr Re: Energy Information/
Action Center

Item 3: Other Business

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MINUTES OF AN ENVIRONMENTAL PROTECTION COMMITTEE MEETING
HELD AT 4:30 p.m., FEBRUARY 27, 1985

PERSONNEL IN ATTENDANCE:

Alderman W.W. Stewart
Assistant City Engineer, T.M. Chong, P. Eng.
Darrell Burnham, S.H.A.R.E.
Yvonne Kerr, S.H.A.R.E. and Energy Info/Action Center
Bruce Joiner, Energy Info/Action Center
Emmie Wong-Leung, International Paper Industries
Margo Dempster, International Paper Industries

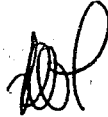
ITEM 1 - PRESENTATION BY MR. D. BURNHAM OF S.H.A.R.E. SOCIETY
Re: Curbside Recycling Program

International Paper Industries was invited by Mr. Burnham to describe current Curbside Recycling Program on North Shore. They did most of the talking in favour of Curbside Recycling Program. Topics discussed cover:

- a. How system evolved in North Shore communities
- b. Problems North Shore communities had prior to current system.
- c. Present status of curbside pickup in North Shore communities.
- d. How recycling will benefit City of Port Coquitlam in financial terms.
- e. What S.H.A.R.E. and International Paper Industries are prepared to do.

Decisions made:

1. T. Chong check with GVRD Recycling contact person, Mr. Bill Smith, and find out whether or not start-up grants possible.
2. T. Chong check with other municipalities in North Shore and Burnaby to obtain their versions of Curbside Newspaper Pickup Program.
3. Draft report to Council prepared for next meeting during week of March 4, 1985 for Committee discussion.
4. S.H.A.R.E. and International Paper Industries meet and come up with terms of reference in approaching City re: Agreement for Newspaper Recycling through curb pickup and give same to T. Chong as soon as possible.

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ITEM 2 - SUMMARY REPORT BY MS. YVONNE KERR
Re: ENERGY INFORMATION/ACTION CENTER

See attached reports submitted by Ms. Kerr.

Bruce Joiner stated that he would be meeting with the Parks Supt. in the near future and analyse the savings during the first quarter after the installation of computer aided components for the operation of the electro-mechanical devices at Hyde Creek Center. Findings will be submitted to Committee.

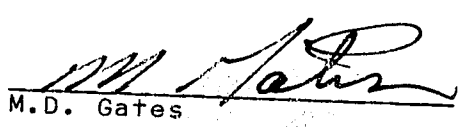
Ms. Kerr advised that the Info Center will be hosting a closing-down party on the 18th of March, 1985.

Hand-out information attached.


Minutes taken by:

Committee Chairman

T.M. Chong, P. Eng.,
Assistant City Engineer


M.D. Gates

TMC/sgg
Attachment

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ENVIRONMENTAL PROTECTION COMMITTEE MEETING
FEB 27/85 NOTES

ITEM 1.

Presentation by International Paper Industries Ltd - Ms Emma Wong - Leung
Re: Recycling of Newspaper via Curbside Pick-up.

a. How system evolved in North Shore Communities? Problems they have had regarding implementation of recycling program.

- Communities involved include Dist of W. Vancouver, Dist of N. Vancouver and City of N. Vancouver.

- Prior to implementation of curbside P/U of newspaper, all of these municipalities had tried some form of recycling including metals + glass. Main reasons that these programs did not work despite subsidy by Municipality were:

a. Contractors submitting proposals/tenders were underestimating overhead for provision of proper service and overestimating long term market demand of the recyclable goods.

b. Inadequate advertising + involvement community wide.

c. Did not make it easy for people to recycle goods. (Most of them were drop-off centres).

d. Public complaints arising from poor pick up service or nuisance of improperly operated transfer/sorting stations.

- After such poor history, the 3 North Shore Communities decided to give it one last attempt taking advantage of volume of these municipalities wastes and called for proposal to pick-up ~~some~~ recyclable goods.

International Paper Industries submitted a proposal to offer curbside pick-up of old newspapers for subsequent re-cycling without any subsidy from government except the initial purchase of Plastic Bags to place newspapers in. Three North Shore Communities accepted proposal and program launched in Nov 83.

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b. Present status of curb-side Pick up of Newspaper in North Shore Communities.

- On each regular garbage collection day, residents are instructed to place their newspapers in the blue plastic bags (issued to each household) beside their garbage.
- International Recycle Trucks usually follow ^(sometimes before) garbage trucks and pick up blue-bag with newspaper and leave ~~the~~ empty blue bag in secure position as to not be blown away.
- Complaints re: service ~~provided~~ provided by International are channelled to International ~~customer~~ customer service person. It is very rare that municipality will have to be involved in solving these problems.
- Present Agreement is for 5 years started in November 83.
- Participation to date has been excellent by residents. Estimated recovery rate for newspaper/newspaper print injected into the community is $\pm 40-50\%$.
- GVRD had given 50% grant for defraying cost of purchasing initial number of ^{plastic} bags to these 3 municipalities with 50% being absorbed by the municipalities. (contact person Mr. Bill Smith).
- Estimated costs for plastic bags (5 mil) = $\frac{25¢}{\text{bag}}$ and will last ± 1 year.
 Cost for 40,000 bags.
- International Paper Industries also operates a sorting/Drop off station in North Vancouver for non-newspaper recyclable goods. Also one in Surrey.
- North Shore Communities currently have By-law enacted to protect International as the designated curb-side newspaper pick-up agent (i.e. illegal for others to do so). However, enforcement has not been necessary.

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C. How Recycling will benefit POCO in financial terms.

- S.H.A.R.G. estimate that in POCO approx 1366 tonnes of newspaper is delivered to residents. Say 45% is recycled. Savings for reduced weight @ 1.2 tons alone is:

$$45\% \times 1366 \text{ tonnes} \times 1.2 \text{ tons/tonnes} \times \$22.50/\text{ton}$$

$$= \$16,597/\text{yr.}$$

- Prior to Program becoming reality in full, initially savings are expected to be \$10,000 - \$15,000 annually.
- There may be some indirect savings for collection as well although the reduction in manpower is not expected.
- In fact, International is implementing program in Burlington June 3/85.

d. What S.H.A.R.G. and International Paper Industries are offering?

- Upon receipt of approval from Council:

- (1) need minimum 3 months lead time to start up (eqpt purchase, manpower acquisition and training, publicity, etc -)
- (2) International will not require a pilot project to determine feasibility but will implement program City wide.

- (3) Will enter into 5 year agreement with city to provide ^{for residents and businesses only.} p/u service. Will agree to an "opt-out" clause for City without condition if City not satisfied with service.

- (4) Will deliver plastic bags to residential homes. (POCO will pay for bags)
- (5) Will establish contact person to handle local complaints
- (6) Will establish drop-off centre ^{for other recyclable goods.} FEB 27 1985
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d (cont'd)

- (7) Will not interfere or forbid paper drives organized by non-profit organizations. Have in fact found them to encourage recycling.
- (8) Curb side p/c can expand to include other ~~paper~~ products provided no glue-bound or vinyl and other contaminants.
- (9) Will advertise by distributing flyers, however would like Council endorsement

e. Commitment req'd by S.H.A.R.E + International Paper Industries

- Full Council support
- News release and endorsement of advertising campaign - (Mayor + Alderman)
- Funds for initial purchase of ^{plastic} ~~plastic~~ bags
- Possible amendment of By-law to protect Contractor from other pilfering agents.
- Enter into agreement with them.

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THE CORPORATION OF THE CITY OF PORT COQUITLAM

MEMORANDUM

TO: B. Kirk,
City Administrator

March 5, 1985

FROM: T.M. Chong, P. Eng.,
Assistant City Engineer

SUBJECT: Curbside Recycling of Newspaper

RECOMMENDATIONS:

1. That Council give approval in principle to the implementation of a Curbside Pickup Recycling Program for newspaper.
2. That subject to the execution of a satisfactory agreement, Council authorize the payment of \$2,000 to International Paper Industries to assist in the purchase of plastic bags needed for the Curbside Pickup Recycling Program and that such funds be taken out of the Environmental Protection Budget.
3. That Staff proceed with drafting an agreement with International Paper Industries for the provision of a Curbside Pickup Recycling Program for newspaper in Port Coquitlam.

BACKGROUND:

Recently, at the request of the Environmental Protection Committee, the Coquitlam SHARE Society in conjunction with International Paper Industries (a private Recycling Company) hereafter referred to as SHARE/IPI, have made a presentation offering the residents of Port Coquitlam a Curbside Recycling Service. The recycled material is limited to newspaper material only. In this context, newspaper means all newsprint, all bond paper, flyers printed on glossy paper and magazines not glue bound.

The service offered basically involves the regular collection of old newspaper on the same day that household garbage is picked up by City crews but on a bi-weekly basis. At the start of this recycling program, a large plastic bag is delivered by SHARE/IPI to each single family residence for the purpose of placing into it newspaper intended to be recycled. On every second regular garbage collection day, residents will be requested to deposit the plastic bag filled with old newspaper beside their garbage containers at the curbside. The recycling truck supplied and manned by SHARE/IPI will then pick up the plastic bag, empty it and leave a replacement for the following pickup. Aside from a nominal start-up fee, which will be discussed later, to offset the cost of purchasing the plastic bags initially, this proposed service is free to the residents and to the City. SHARE/IPI are confident that based on their experience with other municipalities located in the lower mainland, the recycling program proposed for Port Coquitlam is economically feasible.

SHARE/IPI have further agreed that they will not interfere with any paper drives sponsored by non-profit organizations in Port Coquitlam provided they do not pick up bags left at curbside by the residents. In fact, they welcome such door-to-door or drop-off bin recycling programs since it makes residents more aware of the value of recycling.

[Signature]
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Discussions:

1. How will this proposed Recycling Program benefit the City?

The apparent benefits associated with this Recycling Program are not limited to those of conservation and environmental protection. There appears to be a potential for significant savings in terms of reducing the City's Garbage Disposal Costs. In this respect, SHARE/IPI are forecasting that the City will save at least \$15,000 per year in refuse disposal costs alone. Their forecast is based on the assumption that of the total weight (1500 tons) of newspaper injected into the community annually, 40-50% can be recovered under this program. The City's own estimate of the potential savings in disposal costs ranges from a conservative low of \$3,800 per year to a high of \$14,000 per year. Our estimates are based on the information assembled by the Technical Committee of the Lower Mainland Refuse Project Resource Recovery and Recycling. On the basis of our estimates compared to SHARE/IPI, one might conclude that they are overly optimistic. However, it is interesting to note that since the implementation of a similar program by International Paper Industries in West Vancouver, the savings in disposal fees for this municipality of 37,000 population is \$12,600 during the first year of operation. By adjusting for the differences in population and tipping fees (\$13.44/ton for West Vancouver and \$22.50/ton for Port Coquitlam), and assuming that all other relevant characteristics of West Vancouver are similar to those of Port Coquitlam, their forecast of \$15,000 savings in disposal fees per year for Port Coquitlam appears to be achievable.

2. Are there other municipalities involved in this type of curbside recycling program?

In 1983, International Paper Industries entered into agreements with the Municipality of West Vancouver, and the District and the City of North Vancouver for curbside recycling of newspaper. These recycling programs commenced in November of 1983. With the exception of West Vancouver, the exact savings for these municipalities in terms of disposal fees are not available at the time of writing of this report. However, discussions with staff members for the District and City of North Vancouver indicated that there were obvious environmental and financial benefits associated with their curbside recycling program and that their program has been well received and well participated by the residents (approximately 40%). Burnaby will be implementing a curbside recycling program for newspaper commencing June 3rd this year. Again, the company which will be providing this non-subsidized service will be International Paper Industries. Richmond will be implementing a similar program for recycling newspaper in May or June this year. Belkin Paper Board Ltd. (formerly Community Paper Recycling) will be providing curbside pickup service for this municipality. There does not appear to be any curbside recycling program implemented for other recyclable goods such as metal or glass. The apparent reason is that such programs are not economically viable.

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3. Is there anything that SHARE/IPI expect from the City?

Until such time that staff commences serious negotiations with SHARE/IPI, it is difficult to state exactly what they expect from the City. However, in their proposal to the City so far, they have requested the following:

- a. A commitment from Council to fully support this Recycling Program.
- b. The Mayor and Aldermen endorse this Recycling Program by submitting news releases to local papers.
- c. The City pay for the initial cost of purchasing the plastic bags needed by each residence to contain the recycled newspaper.
- d. Council consider amending the Garbage Collection, Removal Regulation Bylaw to protect SHARE/IPI from the pilfering of recycled newspaper at curbside by other parties.
- e. The City enter into a renewable five-year agreement giving them the exclusive right to operate this Curbside Pickup Recycling Program for newspaper.

Regarding items (a) and (b), the Committee feels that these are reasonable requests indeed since the success or failure of this Recycling Program is highly dependent on the full support of Council and also a well-executed public awareness program. Regarding item (c), it was initially thought that a grant may be obtained from GVRD for this program since the North Shore communities obtained a 50% grant for their recycling program. However, according to Burnaby, it appears that GVRD will no longer give out such grants since their application was turned down. Despite this, we will nevertheless pursue this avenue further by applying for a grant through the G.V.R.D. Recycling Committee. This apparent disappointing information has been conveyed to International Paper Industries and they have now agreed to ask the City for \$2,000 only to help offset the cost of purchasing these plastic bags. Since the total cost of purchasing the estimated 9,000 bags needed initially would be in excess of \$2,000 this amended request is an improvement over the original. With respect to amending the Garbage Collection, Removal Regulation Bylaw to protect SHARE/IPI, the Committee recommends that this request be considered at a later date when the need for such Bylaw amendment arises. As International Paper Industries have indicated, the enforcement of such a Bylaw giving them protection from pilfering has not been necessary in other municipalities. The request for the City to enter into a renewable five-year agreement with them is a reasonable one since they want some assurance that they will be permitted to operate the proposed recycling program for a sufficient length of time to enable them to recover the capital costs of implementing such a program. The length of time stipulated in similar agreements which they have entered into with other municipalities is also five years. Incidentally, under the Garbage Collection, Removal Regulation Bylaw, the City may enter into such agreements. Even if SHARE/IPI had not requested.

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such an agreement to be struck, the Committee would have probably recommended it for the simple reason that it would be in the best interest of the City to clearly state and have a written agreement from SHARE/IPI regarding the terms of reference under which their proposed Curbside Pickup Recycling Program for newspaper is permitted to be implemented in the City.

4. How will this recycling program affect the normal garbage collection?

It is not expected at this time that the implementation of this curbside recycling program will have any significant effect on the normal garbage collection. The three North Shore communities did not experience any significant changes in this respect. Unless the proposed curbside recycling program proves to be an overwhelming success with significant reductions in the total weight and volume of domestic wastes generated from local residences, the size of our garbage collection section will not be reduced.

5. Are there other recycling companies offering this service?

There is apparently one other company which offers this curbside pickup of newspaper service. The name of the company is Belkin Paper Board Ltd. formerly known as Community Paper Recycling. They have recently entered into an agreement to provide this service in Richmond commencing in May or June this year. Discussions with the Divisional Manager revealed that this company is primarily into operating a large number of recycling depots for newspaper and have in fact provided financing for a number of non-profit organizations to start up their program to collect old newspaper and sell such products back to the company for their consumption. The company have been forced into providing a curbside pickup of newspaper service by International Paper Industries. Their agreement with Richmond provides for the initial and subsequent supply of plastic bags by the company at no cost to Richmond. In addition, they will pay Richmond \$5.00 per ton for the recycled newspaper collected with the understanding that this money be used for advertising to promote this Recycling Program in the future. The company is not in a particularly good position now to offer a similar service to Port Coquitlam because they are currently in the midst of making preparations to implement this service in Richmond. At this time, the company is not sure whether or not their agreement with Richmond is economically viable. For them, the experiences gained from operating in Richmond will provide them with answers. Belkin Paper Board Ltd. has also submitted proposals for curbside pickup of newspaper in the three North Shore communities and Burnaby, but they were not successful. When asked whether or not they will submit a proposal to provide a similar service to the City of Port Coquitlam, the Divisional Manager said that he will have to take a hard look first.


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There are several attachments to this memo which will provide Council with further information on the following:

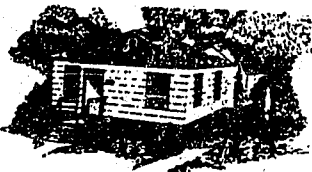
- Attachment 1 - Profile of International Paper Industries
- Attachment 2 - Terms of Reference between SHARE and International Paper Industries
- Attachment 3 - Article in the Sunday News regarding a Survey on Recycling in Port Coquitlam
- Attachment 4 - Letter from Mayor Humphreys to West Vancouver residents on recycling
- Attachment 5 - Performance Evaluation of International Paper Industries by North Vancouver District Engineer

TMC/sgg


T.M. Chong, P. Eng.,
Assistant City Engineer

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Port Coquitlam
Energy Information/Action Centre
1915 Pitt River Road, Port Coquitlam, B.C. V3C 1R2
941-5411

*Handed out at Environmental
Protection Committee Meeting
February 27/85*

The specific objective of the Port Coquitlam Energy Information/Action Centre was two-fold:

- 1) to promote residential energy efficiency
- 2) to promote and assist the energy management program for the City of Port Coquitlam.

To Promote Residential Energy Efficiency

Centre staff have worked hard to establish the Centre as a credible resource in the field of residential energy efficiency. Several agencies and resources have supported the Centre through referrals and providing speakers for seminars (Canadian Home Builders, R2000 Program, B.C. Hydro, C.M.H.C., C.H.I.P.). Centre is known by many in the Lower Mainland, several people throughout B.C. and even a few in other parts of Canada and the U.S. Centre staff have worked with builders, designers, architects, trades, real estate people, students and homeowners through individual consultations (421), speaking engagements 14 (521), workshops 30 (648), visitors (1390), presentations and various committees.

Key Projects to be "Continued"

- Builder training programs in early 1984, were "taken over" by other groups, allowing Centre time to focus on homeowner marketing.
- HOTCAN COMPUTER HEAT LOSS CONSULTATIONS have proved very effective in analyzing various design alternatives. Two companies had been offering this service prior to our Centre's use; six companies will continue on a fee for service basis.
- Low Energy Home Marketing Seminars have demonstrated homeowner's interest in learning more about low energy new homes (140 participants so far). R2000 builder plans to continue holding these seminars in different cities in Lower Mainland.
- Welcome Wagon - Bonnie Wright, the local Welcome Wagon representative, has been distributing energy conservation materials for several months now. It has been arranged that other groups (B.C. Hydro, Ontario Hydro, E.M.R.) will continue to send materials to Bonnie for distribution to the Port Coquitlam area.

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Energy, Mines and Resources Canada
Énergie, Mines et
Ressources Canada



The Corporation of the
City of Port Coquitlam

BUILDER NEWSLETTER ON ENERGY EFFICIENT CONSTRUCTION

A Lower Mainland architect has set up an advisory committee (including Centre staff) to assist in putting together a builder's newsletter with up-to-date information on energy techniques, book reviews, coming events and commentaries. To some extent this newsletter will "take over" the task of disseminating new information to builders and trades.

PRODUCTS MANUAL

*up dated by
Centre by
Federal Government*
There are several hard to find energy conserving products. The Centre is sponsoring the publication of a source list for B.C. which will assist homeowners, builders and building supply dealers in locating the products necessary to complete their energy conservation projects.

DRAFTSTOP II

After a successful Draftstop program for seniors in January through March of 1984, the Centre in 1985 supported a similar proposal by the New Westminster Seniors Bureau. As one of the Centre's final projects, Centre staff will be training the New Westminster staff and donating the materials leftover from the 1984 Draftstop to their project.

SCHOOL PROJECT

Several elementary classes have visited the Centre; others have had in-class presentations. Materials will be dispersed during a March professional day, and school materials remaining will be given to the District Resource Centre.

NEWSPAPER

Consumer Focus has published several articles written by Centre. Small collection of pamphlets and booklets will be given to newspaper as they have interest in continuing to publish energy conservation information.

Consumer Focus is possibly going to explore idea of copying the idea of a Product Showdown for other products after seeing the results of the Ventilation Product Showdown.

In summary, it appears that the private sector will to some extent, carry on some of the project ideas developed and tested by the Centre.

*Personal
gone out.*
next week
March 7-10
Surv.
FVRB.
FEB 27 1985

- 2) To Promote and assist the Energy Management Program for the City of Port Coquitlam

The City has taken several energy measures:

- a) propane conversion
- b) energy saving lights on the arena
- c) Waste Heat Recovery System in the arena
- d) City Hall HVAC Retrofit measures
- e) Computer energy management systems in both the Hyde Creek and Port Coquitlam Recreation Centres.

Centre Staff have put together several reports:


- o Monitoring Energy Consumption
- o Waste Heat Recovery
- o Energy Conservation in New Construction
- o Port Coquitlam Recreation Centre Audit
- o Follow-up Report City Hall HVAC System Modification

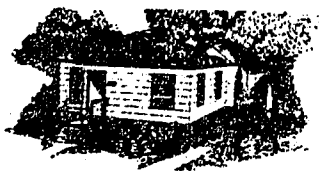
A significant step facilitated by Centre staff will be an energy consumption data base for each of the major city buildings. This will benefit the City's Future Energy Measures by:

- o enabling City Staff to monitor energy consumption annually (or even seasonally or monthly)
- o establishing a base comparison should the City receive proposals from companies for reducing energy consumption (thereby enabling City to request guarantees)
- o making feasible the practice of requiring City Staff to produce payback projections and actual savings after retrofit measures.

Through two municipal seminars, several inter-city contacts have been established that should assist staff in problem-solving individual energy conservation projects.

Perhaps the one piece of information learned during the course of the project: energy conservation in buildings amounts to not much more than quality efficient building operations. With that perspective in mind, it is perhaps not too optimistic to hope that effective energy management will become not merely an isolated theoretical concept, but an every day practical part of building operations.

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Port Coquitlam
Energy Information/Action Centre
1915 Pitt River Road, Port Coquitlam, B.C. V3C 1P2
941-5411

February 18, 1985

MEMORANDUM

TO: Fred Peters

FROM: Bruce Joiner, Port Coquitlam Energy Centre

SUBJECT: City Hall H.V.A.C. Retrofit Follow-up

Attached please find two reports identifying savings that were a result of the 1983 retrofit measures to the City Hall building. One report was produced on a calculator with pencil and paper, the other was produced by a computer.

I will be going over these results as a case study for my talk on monitoring at the Municipal seminar on Wednesday, February 20, 1985 at the Terry Fox Library.

If you have any questions, please contact me.

BJ FEB 27 1985



Energy, Mines and Resources Canada
Énergie, Mines et
Ressources Canada



The Corporation of the
City of Port Coquitlam

FOLLOW-UP REPORT: CITY HALL HVAC SYSTEM MODIFICATIONS

A site visit was conducted on January 14, 1985 to review modifications implemented on City Hall's HVAC system as outlined in D.W. Thomson's Consultant's Report of June 1983.

Seven of the recommended retrofit options have been completed as detailed in the following table. (from D.W. Thomson report)

Table 1. Summary of Retrofit Items Completed.

Item Description	Anticipated Savings
2.3.1. Boiler shutdown at 60°F outside temperature	\$ 815
2.3.4. Reduce supply air system operating hours by adjusting timeclock	\$ 485
2.3.5. Reduce chiller operating hours as above	\$ 616
2.3.7. Fan coil hot water supply scheduled from a space sensor	\$ 400
2.3.10. Insulate attic ramp access (25 sq. ft. area)	\$ 250
2.3.11. Install individual timers for washroom exhaust fans (15 min. max. "on" time)	\$1000
2.3.13. Install reflective solar film on south exposure windows*	\$1600
TOTAL:	\$5166

*Note: savings in Item 2.3.13. will occur only if reflective film installation allows the chiller to be shut off during the winter.

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Table 2 summarizes the electricity and natural gas consumption at City Hall for 1982 and 1984. The modifications were completed in the fall of 1983; the 1984 energy usage should therefore reflect savings achieved as a result of the retrofit measures. Dollar savings were calculated using present B.C. Hydro rates.

Table 2. City Hall Energy Consumption.

	1982	1984	%Reduc.	Savings
Electricity - kw demand	641	614	4.2	\$ 81
- kwh cons.	216,640	171,110	21.0	\$1789
Natural Gas - GJ cons.	1,574	979	37.8	\$2466
TOTAL				<u>\$4336</u>

During 1982, City Hall's total equivalent energy consumption was 62.3 kwh/sq.ft. After retrofit measures, consumption totalled 42.2 kwh/sq.ft. during 1984, reducing the total energy consumption by 32.3% for a total savings of \$4336.

Additional energy savings could be achieved by implementing the following measures:

1. Shut down chiller during winter. Utility bills indicate that chiller was operating in October, November and December 1984.
See report with chiller
Projected Annual Savings: \$135
2. De-lamp and de-ballast light fixtures in overlit areas. By removing 10% of existing fixtures and ballasts, savings would be as follows:
which were done
Projected Annual Savings: \$360
3. Replace existing fluorescent lamps with reduced wattage lamps (35 watt vs. 40 watt).
capital cost to change
Projected Annual Savings: \$300
4. Proper maintenance can avoid costly repairs and poor equipment performance. Check boiler efficiency. Ensure heat exchanger is cleaned and service the boiler annually. This will allow the boiler to operate properly and efficiently.

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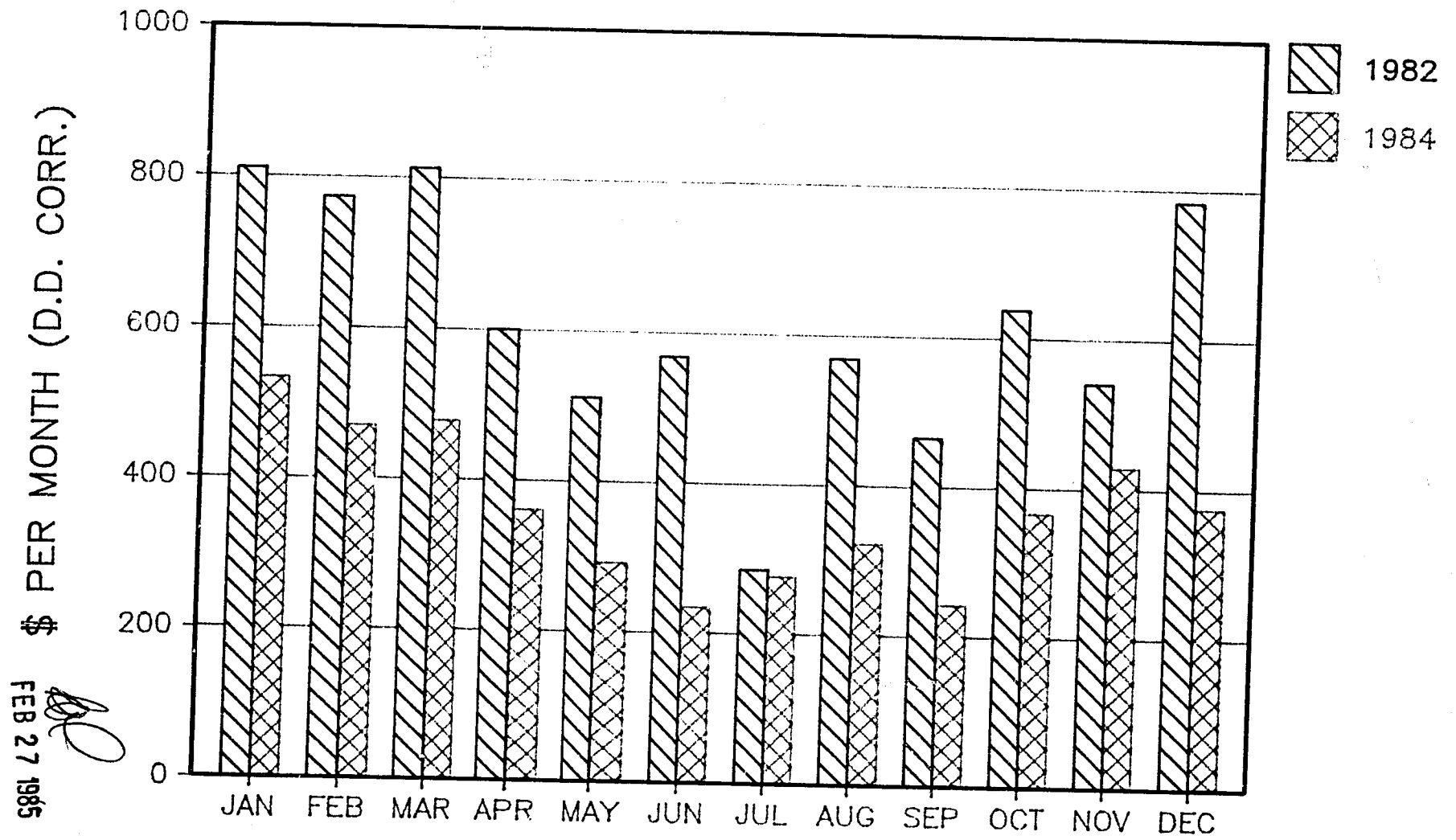
1982		N A T U R A L G A S				
BILLING DAYS		GJ	KWH PER MONTH	TOTAL \$/MONTH	CORRECTED VALUES (KWH) (\$/MONTH)	
32	JAN	217.0	57300	835	55530	809
28	FEB	184.1	55527	809	52980	772
28	MAR	215.0	55051	802	55653	811
35	APR	150.7	42530	620	41097	599
27	MAY	104.8	32860	479	35022	510
35	JUN	72.2	17382	253	38882	567
28	JUL	95.0	28669	418	19547	285
32	AUG	123.3	32479	473	38974	568
30	SEP	94.2	26476	386	31843	464
30	OCT	140.6	39714	579	43605	637
27	NOV	133.6	41936	611	37026	540
35	DEC	221.8	53596	781	53718	783
367		1752.3				

1984		N A T U R A L G A S				
BILLING DAYS		GJ	KWH PER MONTH	TOTAL \$/MONTH	CORRECTED VALUES (KWH) (\$/MONTH)	
30	JAN	110.8	31208	455	36433	531
30	FEB	102.9	28983	422	32155	469
32	MAR	99.0	26141	381	32677	476
28	APR	84.3	25440	371	24675	360
31	MAY	88.6	24150	352	19961	291
33	JUN	67.8	17359	275	15906	232
32	JUL	30.1	7947	122	18796	274
31	AUG	23.2	6323	94	23402	341
31	SEP	67.0	18262	266	16585	242
28	OCT	96.0	28971	422	25064	365
28	NOV	96.4	29091	424	29334	428
31	DEC	115.7	31537	460	25697	375
		921.8				

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NATURAL GAS COSTS

CITY HALL



1982		E L E C T R I C A L						
BILLING DAYS		KWH	MAX KW	KWH PER MONTH	\$ PER MONTH (KWH)	LOAD MONTH (KW)	LOAD FACTOR	TOTAL \$/MONTH
32	JAN	16480	48	15665	717	39	.45	757
28	FEB	15040	49	16338	744	42	.46	786
33	MAR	18640	51	17181	777	48	.46	825
30	APR	15280	51	15492	711	48	.42	759
27	MAY	15680	51	17664	796	48	.47	844
35	JUN	21440	60	18632	834	76	.43	910
28	JUL	19281	57	20945	925	66	.50	991
32	AUG	22960	60	21824	959	76	.50	1035
30	SEP	19200	59	19467	867	72	.45	939
30	OCT	17920	49	18169	816	42	.51	858
27	NOV	13840	52	15591	715	51	.41	766
35	DEC	20880	54	18146	815	57	.46	872

1984		E L E C T R I C A L						
BILLING DAYS		KWH	MAX KW	KWH PER MONTH	\$ PER MONTH (KWH)	LOAD MONTH (KW)	LOAD FACTOR	TOTAL \$/MONTH
30	JAN	13340	38	13525	626	9	.49	635
30	FEB	13340	38	13525	626	9	.49	635
32	MAR	14160	56	13459	658	62	.33	721
28	APR	12640	49	13731	599	42	.38	640
31	MAY	14400	48	14129	668	39	.40	706
33	JUN	14400	48	13273	668	39	.38	706
31	JUL	15040	48	14757	693	39	.42	732
32	AUG	14720	56	13992	680	62	.34	743
31	SEP	16400	62	16091	746	80	.36	827
28	OCT	14720	59	15990	680	71	.37	752
28	NOV	12560	60	13644	595	74	.31	670
31	DEC	14720	52	14443	680	51	.38	731

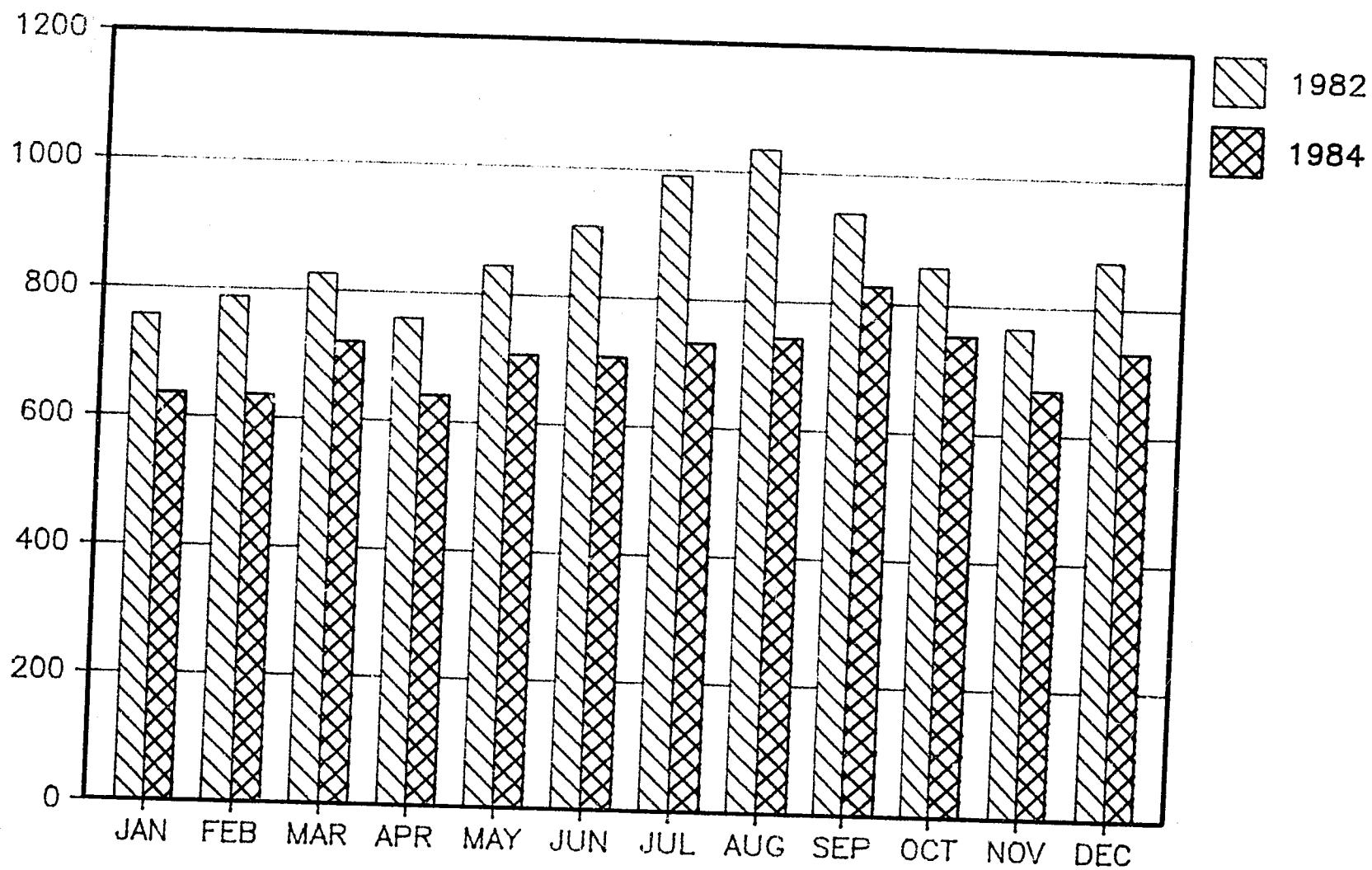
FEB 27 1985

ELECTRICAL COSTS

CITY HALL

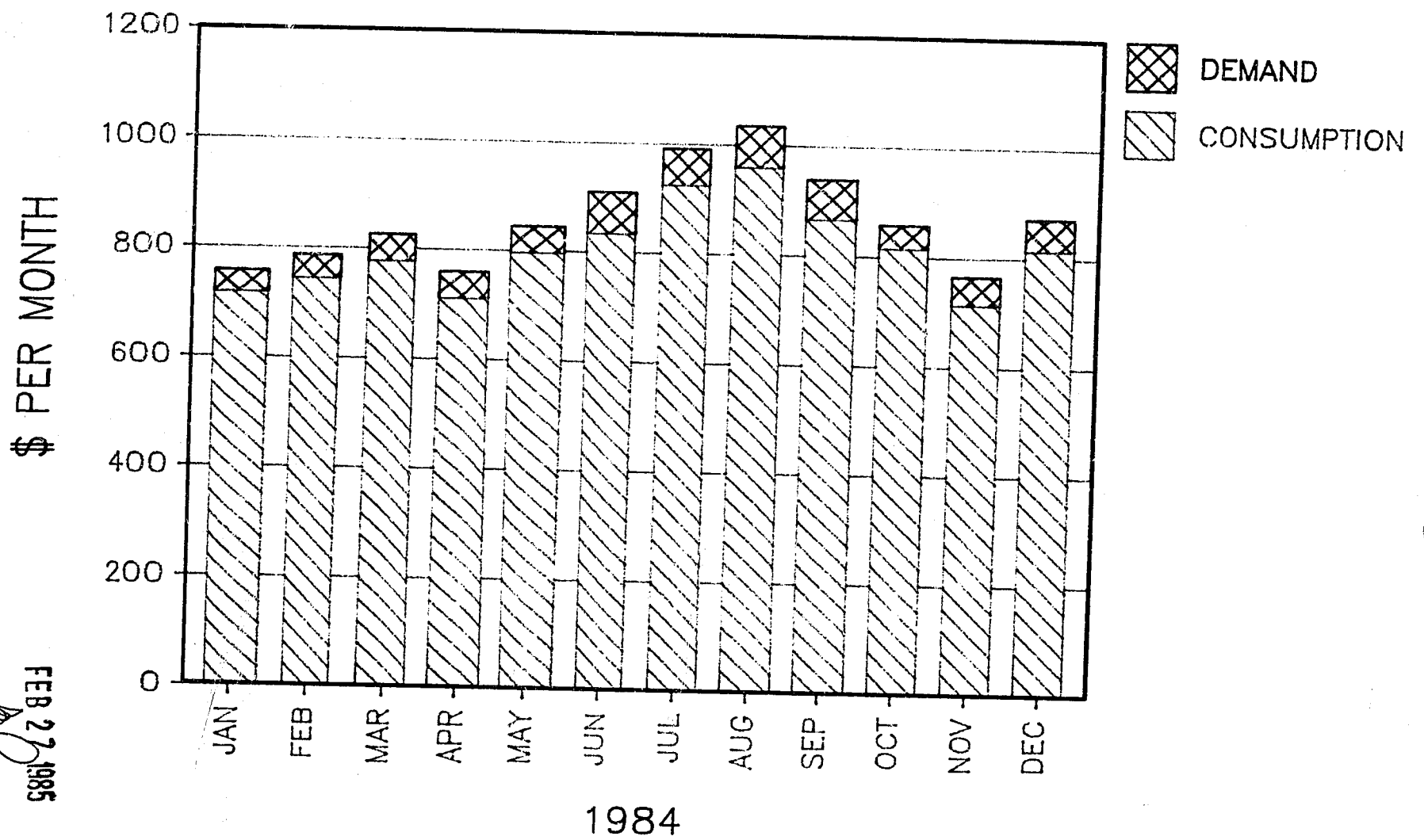
\$ PER MONTH

FEB 27 1985



ELECTRICAL COSTS

CITY HALL



FEB 22 1985

ELECTRICAL STATISTICS

		1982	1984	SAVINGS
MONTHLY CONSUMPTION COSTS	: ANNUAL AVERAGE =	\$806	\$660	\$146
	: SUMMER AVERAGE =	\$876	\$691	\$185
	: WINTER AVERAGE =	\$754	\$637	\$116
MONTHLY DEMAND COSTS	: ANNUAL AVERAGE =	\$56	\$48	\$8
	: SUMMER AVERAGE =	\$68	\$52	\$16
	: WINTER AVERAGE =	\$24	\$41	\$-17
AVERAGE LOAD FACTOR	=	.46	.39	
AVERAGE ELECTRICAL COST (CTS/KWH)	=	4.81	4.98	-.17

NATURAL GAS STATISTICS

		1982	1984	SAVINGS
MONTHLY COSTS	: AVERAGE =	\$612	\$392	\$242
	: SUMMER AVERAGE =	\$479	\$340	\$166
	: WINTER AVERAGE =	\$743	\$456	\$300
AVERAGE N/G COSTS (CTS/KWH)	=	1.46	1.46	.00

FEB 27 1985

West Coast Recycling Company Aims to Recover 30,000 Tons of Waste Paper and Glass Annually in British Columbia

International Paper Industries Ltd., a waste paper brokerage and processing company since 1976, is hoping to recover 30,000 tons of waste paper and glass in the west.

The company, which has established a network of sales offices and agencies in the Orient, currently receives the majority of its paper from the United States, but sees Canada in the future providing much of its paper needs.

Emmie Wong Leung, spokesperson for the company, says her family had been established in the waste paper business for 20 years in Hong Kong prior to coming to North America. She was most surprised to see how undeveloped resource recovery was in Canada. IPI immediately began to start a vertical expansion project at the beginning of 1981 in Vancouver, starting with the building of a recycling plant in Lower Vancouver to collect, to clean, to sort, and to grade recyclables. IPI's Surrey Plant started operation in late 1982.

The company has been very aggressive in resource development from municipal waste, working closely with all levels of government in British Columbia. This approach, although not that common in North America, is quite common in Hong Kong says Leung.

"In Hong Kong, resource recovery is an every day affair. We have very good collection systems with a lot of daily pickers going around sorting out the waste. One of the many reasons for this is the fact that there is not a social welfare system in Hong Kong—the people must work in some way to provide a living," she points out.

As well, waste paper brokers and dealers in the Orient are very cooperative in dealing with each other she says. "If, for instance, one waste paper broker needed some paper, we would supply it to them at no charge and receive it back probably a few days later. They would return this favour when we needed it."

Leung sees social groups and government as playing a very important role in making resource recovery work in the province. As a commercial operation which has offered jobs and revenues to municipalities, IPI has been extremely well received by governments and social groups, such as the Surrey Food Bank program, in which IPI gives

out food hampers to the needy in return for the purchase of waste paper collected at shopping malls and food banks in Vancouver.

In addition to the corporate philosophy of encouraging recycling in Canada on a multi-material basis, IPI also looks hard at any program they become involved in to find the best system to recover the waste and have found low tech approaches which involve the needy and disabled to be very beneficial to both parties.

IPI was the only private firm chosen to sit on the Greater Vancouver Regional District Recycling Committee and has had a significant amount of input into the promotional effort for community recycling projects, including paper drives, recycling depots and bins and curbside recycling programs.

The cooperative effort is needed, Leung feels, to make recycling effective. "Solid recycling programs benefit everyone in the community—public, private and social. For this reason, it is important that all should participate in whatever way they can. The more participation and interest we can get, the more successful the programs can become."

As a commercial operation working with municipal solid waste resource recovery projects, an area often serviced by non-profit recycling groups, IPI feels the company can offer long term stability to numerous municipalities across North America. "We have steady, secure and long term markets for numerous items such as auto batteries even used automobile oil. Our company in Vancouver alone is providing over 20 jobs and millions of dollars of revenues to the city over the next decade. We think we can do the same for other communities across North America," she said.

IPI has also started tapping industrial generators of waste paper in British Columbia including institutional buildings and office buildings.

"We are following a very precise expansion plan for our company in line with our economic position," Leung says, "but it is sometimes very hard to hold back when there is such an incredible amount of valuable material being needlessly sent to landfill sites at great expense to society at large. Coming from the Orient, there is only one word she can use to describe the amount of waste being sent to landfill and that is astonishing."

Perhaps that determination is why she has become vice-chairman of the Recycling Council of British Columbia and has received warm invitations from municipalities across the country to set up recycling programs.

International Paper Industries Undertakes Largest Urban Recycling Program in Canada

International Paper Industries Ltd. (IPI), a Vancouver based recycling company, has initiated a weekly curbside newspaper collection program in North Shore involving 55,000 homes.

The program is starting on November 7, and is billed as the largest recycling program in Canada. It involves IPI, the City and District of North Vancouver, and the Municipality of West Vancouver (they are the contractors of the program).

According to IPI manager, Emmie Leung, approximately 1,000 tons of recyclables a month will be diverted from the landfill on North Shore by the recycling program.

IPI has five new, specially-designed blue trucks on the newspaper pickup routes and is requesting the cooperation of all residents to make the program a success.

Residents are asked to bundle up their newspapers and place them beside the garbage containers on the regular garbage pick-up days. The blue IPI trucks and uniformed employees will pick up the newspapers, while the regular refuse collector will pick up other waste materials.

"This is just the beginning of what we foresee as a multifaceted operation that will allow residents to participate in the recycling of a wide range of wastes, not just paper," says Emmie Leung. IPI operates another recycling centre in Surrey, which accepts all kinds of recyclable materials.

A new plant will be opened in December at the IPI facility now under construction at 132 Riverside Drive, North Vancouver.

According to IPI, newspapers, glass, cans, used automobile oil, auto batteries, cardboard and all grades of office paper (including coloured), can be taken to this site at any time after it opens.

A buy-back centre will also be operated on the Riverside Site each Saturday between 9:00 a.m. and 3:00 p.m. Glass bottles and all aluminum cans will be purchased at one cent per container, and auto batteries will be purchased for \$2.00 each.

"Solid recycling programs benefit everyone in the community... public, private and social."

FEB 27 1985

Alcan Comments on Future Aluminium Can Recycling

When my speech was written and distributed to the council chairman about a month ago, I'd hoped that I would be here celebrating the marriage—the successful marriage—between the government of Quebec on the one side and the private sector, of private companies and community groups on the other side.

I now find myself in the position of the bride standing at the altar and wondering where the groom is, but like that bride, I'm asking myself 'what happened and what's next?'

I would like to say that we will continue to be strongly committed to the multi-product source separation concept and we hope that at least the marriage will soon be successfully consummated in Ontario and that we will undertake it very energetically there.

Even though we recognize that the government of Quebec has a different view from ourselves on the best way for recycling development in the province, nevertheless our views—my views—are permanent and we'd like to share them with you nevertheless.

Packaging in general and beverage cans in particular have been held up as a symbol of everything wasteful in our throwaway society. In actual fact, there never was a very strong substantive logic behind that because beverage cans are less than a half of one per cent of the waste stream and a rather small per cent of litter as well.

Our challenge is to turn that completely around, not just to a neutral position, but to set in place a program that will allow the beverage can to symbolize, in fact, the leading edge of the conserving society through the economic engine that it provides to fuel an economically efficient and self-sufficient recycling program, and this symbol must have substance behind it unlike the previous symbol. We'd like to use wisely on behalf of our industry and on behalf of society as a whole.

Perhaps I should run you through briefly a number of different recovery options. Some of you may be very familiar with them, some of you less so.

transcript of a speech delivered by Alan Wakefield of Alcan Toronto to the Fifth National Conference on Waste Management in Canada, Resource Recovery, Recycling & Reuse session on Friday, October 14, 1983, Quebec City.

A system that is used in Alberta and British Columbia now and has been recently mandated in Quebec is based on mandatory deposit. A consumer pays out a nickel or whatever it is when he or she buys a container and then gets it back when she returns it, either to a store in B.C. or a separate depot in Alberta.

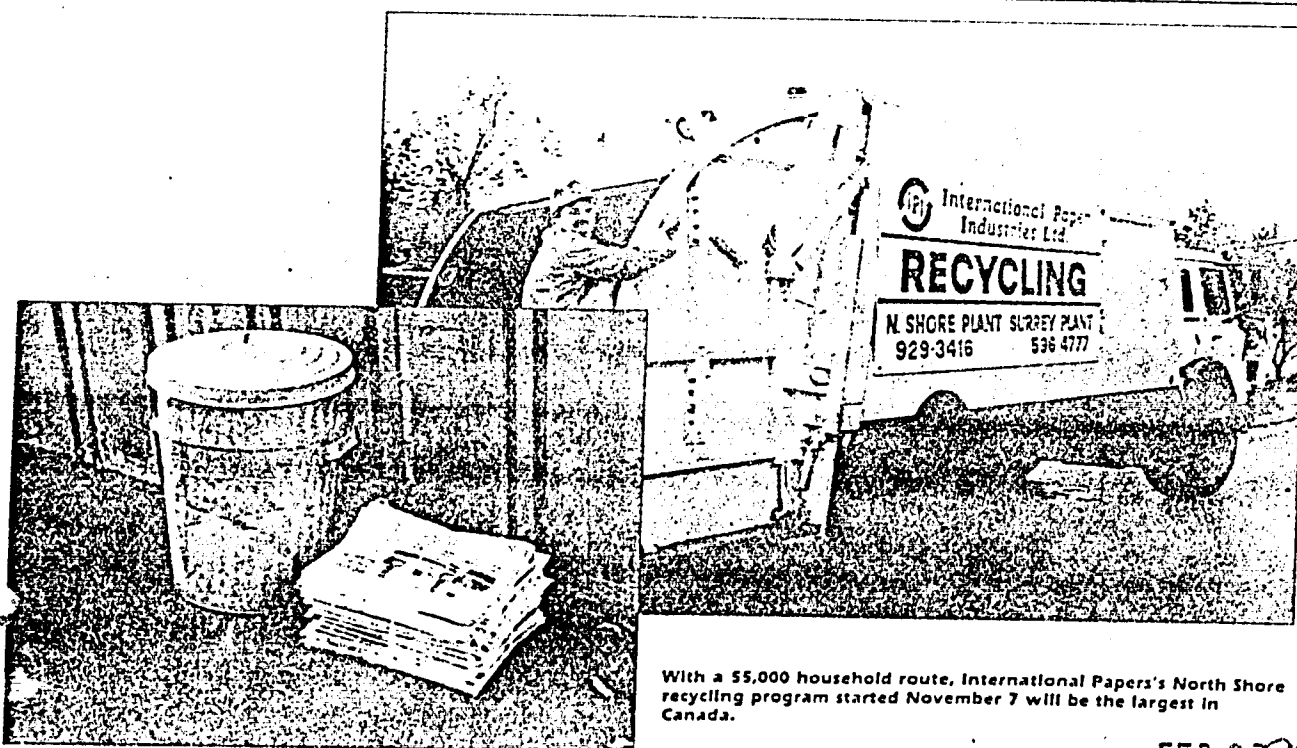
The cans that don't come back would build up a fund of unrefunded deposits—and these monies would be quite substantial—which are used to pay the cost of the program. In both B.C. and Alberta, the recovery rates have been in the range of 40 per cent so there has been success in bringing back the beverage containers and I must say it's been an absolutely tremendous project.

It has been estimated that the waste collection system costs the consumer about \$800 a ton to operate. In fact, most of this has been going straight into the waste dump anyway so they never were recycled.

As well, the deposit teaches consumers that recycling means bringing back your product to get your deposit back—so more recycling means more deposits. I'd like to see the brave soul—the brave soul of a politician—who's prepared to propose a deposit on newspapers. The paradox with deposits is that if they are successful in the environmental sense and they recover the containers, there are very few unreleased deposits and the system fails economically. The consumer ends up picking up the tab. Economic success, on the other hand, means environmental failure. The final point under costs, this is the ultimate of a deposit approach and leaves recycling at a dead end.

The next approach I'd like to talk about is buy-back. Buy-back programs for aluminum cans in the United States have been dramatically successful. They are, in fact, bringing back about 50 per cent of all the cans in United States.

CONTINUED ON P.17



With a \$5,000 household route, International Paper's North Shore recycling program started November 7 will be the largest in Canada.

FEB 27 1984

11

REC'D

SHARE

February 14, 1985

M.D. Gates, Alderman,
Environmental Protection Committee,
City of Port Coquitlam,
2272 McAllister,
Port Coquitlam, B. C.,
V3C 2A8

Dear Alderman Gates:

Re: Curbside Recycling Program

I am writing to inform you about an exciting opportunity in Resource Recovery and Recycling. The program is called Curbside Recycling and basically it entails the regular collection of recycled paper on a day coinciding with normal garbage days from individual homes.

The service would be free to the homeowners, and free to the City. In fact, since the city can expect to reduce its residential garbage weight by 10%, considerable savings on garbage tipping fees can be experienced. In addition, the whole community can benefit from having less waste going into landfills, by actively participating in resource preservation and recovery, and through creating more employment in a growing recycling industry.

SHARE has been recycling newspapers through a bin collection system for 13 years and has used the program to help many people develop employment skills and uses the proceeds in its other community services.


SHARE is proposing to offer the curbside program in tandem with International Paper Industries Ltd., a company which is successfully operating curbside programs throughout the North Shore and will be beginning a program in Burnaby in a few months. International Paper presently has two plants (Surrey and North Vancouver) for processing the recycled paper.


Representatives from SHARE and International would be pleased to meet with you or your representative to further present the opportunities available through this program and how it could be implemented in Port Coquitlam. Further information may be received from Darrell Burnham by phoning him at 525-0188.

Sincerely,



Yvonne Kerr,
Board of Directors,
Coquitlam SHARE Society

 FEB 27 1985


United Way
member agency

Coquitlam SHARE Society, P.O. Box 1037, Coquitlam, B.C., V3J 6Z5, (604) 525-0188



Planning Address: 170 Burr Street, North Vancouver, B.C. V7L 1K1. District Municipal Hall: 105 West Queens Road Tel: 687-7111

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER

OFFICE OF THE MAYOR

CURBSIDE NEWSPAPER RECYCLING

TO ALL DISTRICT RESIDENTS:

The District of North Vancouver, in conjunction with the City of North Vancouver and the District of West Vancouver has contracted for provision of a weekly curbside newspaper collection service which will commence November, 1983. This service will be provided by a private firm on the same schedule as our normal garbage collection service.

Previous experience with a curbside pick-up program indicates that North Shore residents recognize the benefits which accrue to our community through recycling - by the saving of raw materials and protection of our environment. Furthermore, the recycling of newspapers across the North Shore will benefit District of North Vancouver residents specifically through reduction in the volume of garbage which we collect and dispose of at our landfill site.

Community co-operation is the key element for the success of this program. Your participation is simple - bundle your newspapers with sturdy string or twine and place them alongside your garbage can on your regular collection day. If you reside in an apartment or strata title building, please check with your manager or president as to how you should recycle newspaper in your complex.

The new service will begin on MONDAY, NOVEMBER 7, 1983 and we ask you to follow the guidelines listed on the reverse side of this letter. If you have any questions, please call the operator of our new program - International Paper Industries Ltd. (687-4448).

On behalf of your Council, I urge you to participate in this program and give it your active co-operation and support. **TOGETHER WE CAN MAKE RECYCLING WORK!**

Yours very truly,

Marilyn Baker
MAYOR

FEB 27 1985

You'll recycle if it's easy

Many area residents would rather recycle their garbage than see it buried in neighborhood dumps — but don't.

That indication came from a Sunday News survey that showed about 75 per cent of the people who responded would like to start recycling their "unwants" but don't because the city doesn't help out.

"If the city were to make a point of picking up the garbage on a regular weekly basis, I would be happy to once again separate our garbage," said a Port Coquitlam resident in a letter.

"However," she said, "We quit doing it because we needed the room where we used to store it."

About 81 per cent of the responses proved if the city would pick the garbage up and transport it to the specific outlets they would start sorting.

Another Sunday reader said the recycling depots are spaced too far apart and often times they aren't even in the same city.

Some 55 per cent recycle their garbage now, but, almost 38 per cent said they don't.

A Coquitlam woman said she recycles her garbage by keeping all vegetable and fruit peelings and burying them in the back yard. She

explained that after two years the rich soil is placed in the flower beds.

"People are easily led

it shown the way," she said.

So, until the city starts taking, the people will keep chucking.

A SUNDAY READER POLL

I would like to start recycling my trash...

☐ YES ☐ NO

I do recycle my garbage...

☐ YES ☐ NO

I would if it were picked up by the city...

☐ YES ☐ NO

I live in () city...

SEND IN TO SUNDAY NEWS,
#205-1030 WESTWOOD,
Port Coquitlam

FEB 27 1985

Firm exports waste paper to Pacific Rim

By PATRICIA LUSH

A company in North Vancouver is thriving on selling what it calls Canada's "urban forest" to Pacific Rim countries.

The urban forest is waste paper, little appreciated by most North Americans but highly valued in countries where land is too valuable to be planted with trees.

International Paper Industries Ltd. opened a second recycling plant in North Vancouver earlier this year to complement its thriving 18-month-old operation in Surrey, another Vancouver suburb.

The company gathers and processes waste paper and cardboard, glass, tin and aluminum cans, car

batteries and used automotive oil.

But the paper products are the only real money makers — the other wastes are handled as a break-even service to consumers, said IPI partner and administrator Emmie Leung.

The used paper, in the form of old newspapers, waste office paper, cardboard cartons and unmarketable paper from mills, is sorted, graded and sold to manufacturers of pulp and paper-based products.

IPI exports several thousand tonnes of paper a month, about two-thirds of its production, primarily to paper mills in the Orient.

It also sells to domestic manufacturers of insulation and some-

times to domestic paper mills.

For mills in the Orient, buying Canadian waste paper means substantial savings. A tonne of virgin bleached pulp costs \$500 to \$550 (U.S.) a tonne while an equal amount of comparable fibre from used paper sells for \$250.

The savings on groundwood pulp for newsprint are even more dramatic, with the groundwood pulp costing \$250, compared with the \$65 price for a tonne of pulp from old newspaper.

This last price is too low for the cost to recycling companies and is the reason recycling operations often have not worked in the past, Ms Leung said.

To rectify this situation, IPI is searching

for more customers in hopes of increasing demand and thus price.

Meanwhile, the Pacific Rim market for used paper is changing. Developing countries need pulp and paper for packaging the products they are beginning to manufacture, for school books and for increasing amounts of paper needed as they industrialize.

Japan pioneered in importing and using waste paper and used it "in a most efficient manner," Ms Leung said.

But recently Japan has intensified its own resource recovery, has decreased the level of

its waste paper imports and is no longer the number one importer among Pacific Rim countries.

Over the past five years, South Korea and

(primarily France and Spain) is still ahead of Asia in importing waste paper, she added.

The waste paper and cardboard IPI collects

new boxes while and computer paper made into bond tissue paper.

Most of IPI's newspaper comes from its street collection.

In the Orient, virgin bleached pulp costs \$500 to \$550 (U.S.) a tonne, while fibre from used paper sells for \$250.

Taiwan have increased their economic growth and exports, raising their need for packaging, boxes and paper. And India, the Philippines, Indonesia and China are gradually coming into the market, she said.

However, Europe

is generally made into similar products — about 95 per cent of the old newspaper is deinked and made into newsprint once again. The remaining small percentage becomes cellular insulation.

Cardboard cartons become corrugating for

from about 55,000 tonnes in North and Vancouver.

These weekly collections began last September and IPI is one of the non-subsidized recycling programs undertaken in Canada. With about 65 per



FEB 27 1985

Recycling waste paper to Pacific Rim countries

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of North Shore households participating. IPI estimates it saves the two municipalities a total of \$300,000 a year in garbage collection and disposal costs.

The company also buys some of its waste paper from consumers, church groups and Boy Scout troops as well as holding occasional paper drives, offering prizes for the largest amounts of paper turned in.

The amount of money it pays for waste paper depends on how well the paper is graded and sorted. For straight computer paper, IPI pays \$150 a tonne, while mixed

waste paper from offices, containing carbon paper, plastic tabs on file folders or other such contaminants, brings only \$15 a tonne.

To encourage consumers to turn in their waste materials, IPI has built a 112-foot long "Great Wall of Recycling" at its North Vancouver location. The colorful wall, decorated with large cartoon characters, was commissioned by Aluminum Co. of Canada Ltd., Montreal, in consultation with the Recycling Council of Ontario and is available for use by recycling operations across Canada.

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