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MEMORANDUM

February 24, 1994

TO: Chairman Nelson
Commissioner Hemstad
Commissioner Casad

FROM: Teresa Osinski, Policy Specialist 

CC: Steve McLellan
Dixie Linnenbrink
Gene Eckhardt
Tim Sweeney

SUBJECT: Incentive to Recycling: ESHB 1671 (Chapter 431, Laws of 1989) and King County's Concern about the Eastside Disposal Filing

The Eastside Disposal filing discussed at the February 9 open meeting raised some issues which haven't been directly addressed recently, and which may be valuable to consider when reviewing King County's Petition for Reconsideration. In this memo, I will briefly recap the Eastside Disposal rate filing, look at the major drivers behind the Waste Not Washington Act (chapter 431, Laws of 1989), and make a quick comparison to where we are today. I will also highlight some of King County's most significant criticisms of the Commission's process by outlining the policies you have adopted to ensure compliance with the legislative policy regarding solid waste regulation.

I. The Eastside Disposal Filing

Eastside Disposal has been evolving toward full cost of service based rates for the last few years. When the Commission implemented the cost of service model, Eastside Disposal's rates were heavy on the commercial side, which were subsidizing residential generators. The company has worked slowly toward having residential customers pay their fair share of the costs. The Commission's move toward cost of service ratemaking happened at the same time that curbside recycling programs began to be developed. In order to give all customers a reason to use recycling bins, the minican was created as a lower level of service, giving current one-can customers motivation to reduce disposal.

The recent Eastside filing targeted two major rate areas: minicans and recycling. The minican price had historically been held below cost as an incentive. Even with the subsidy the minican subscription level has been low (less than 5%). Curbside recycling service required a rate increase due to increases in costs, with little or no stable increase in revenues from reprocessing. The rates you approved brought both rates closer to the actual cost of service. The county had tried to convince the hauler to hold off on the rate changes until December 1994, at which time county tip fees would be going up. The company declined, believing it needed immediate rate relief.

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II. King County's Petition for Reconsideration

The county contends that the Commission is violating the Waste Not Washington Act by not setting rates which provide enough incentive for recycling. Though I have not yet read the entire packet the county has submitted, given conversations I've had with the county staff I have a strong understanding of the issues they raise. Before looking at this issue from a policy slant, it is important to consider a number of facts about how waste reduction and recycling incentives have evolved since 1989. I have outlined the most significant points below.

A. The Major Drivers Behind The Waste Not Washington Act:

The Final Bill Report for the Waste Not Washington Act states:

During the past few years several states across the nation have begun to experience a "solid waste crisis." The crisis is characterized by a shortage of landfill space combined with overwhelming public reaction against proposed solutions such as building new landfills or mass burn incinerators.

This statement captures the flavor of the legislative record, which predicted significantly less landfill space at significantly higher costs. Though compelling at the time, the predictions made in 1989 have simply not materialized as anticipated.

1. DISPOSAL (landfills and waste-to-energy)

Since 1989, two mega-landfills have been built within rail distance of the major urban centers in the state (Klickitat County, Washington and Arlington, Oregon), with an additional one planned for Adams County. Though a large number of landfills have closed, they have been readily replaced by other new or existing facilities. Since 1989, state-of-the-art scrubbers have been installed in an existing waste-to-energy facility (Whatcom County), and just two years ago the city of Spokane, in conjunction with Spokane County, opened a waste-to-energy facility. Facilities which closed due to superfund liability have also been replaced by other landfills.

As the Legislature anticipated, landfill closure is terribly expensive¹. However this has not led to prohibitive disposal fees. Tipping fees vary throughout the state; so far the highest rate is in Ferry County at \$110.00 per ton. The average fee is closer to \$80.00 per ton. In the late 1980's the rates were closer to \$40.00 per ton. So,

¹ Ferry County is a perfect example of the crippling effect the EPA Subtitle D requirements can have on rural areas. But even Ferry County has at least two viable alternatives for the disposal of its waste: Klickitat County and Stevens County.

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although we have found that landfill costs have increased, they have not become uniformly excessive. More important, new landfills have been sited and opened. The tipping fee charged at these facilities varies by contract, but we understand that it is commonly within the \$20.00 per ton range (excluding transportation costs). A recent study conducted by the Department of Ecology² concludes we have, at current disposal rates, 48 years worth of landfill capacity remaining in this state. This does not include the effect of the Adams County landfill, if sited, nor does it include the capacity of the Oregon or Idaho facilities being used by Washington State companies and residents. According to the Ecology study, Washington State had net exports of 602,000 tons (primarily from the city of Seattle) to the Arlington, Oregon facility³.

2. RECYCLING MARKETS

The Legislature surmised that the high cost of disposal would help to make curbside recycling more financially attractive. It further assumed that, with expanded recycling programs and procurement requirements, better market values for recyclables would be realized, thus bringing the total expenses for these programs below the cost for disposal. As a result, the Legislature encouraged the Commission to set recycling rates which were no more expensive than a similar component of solid waste. We find that the healthier recycling markets have not materialized as anticipated, especially when compared to the high cost of offering the curbside recycling option. Commodity values vary widely throughout the state and between companies. In the Fall of 1990, Commissioner Casad requested some general information about recyclables' market value. Looking at a range of commodities, I found that the value varied depending on a number of factors: volume, quality, and negotiations between buyer and seller. What was especially interesting was the impact these value factors had on the products brought to market from the curbside programs. When I looked at the commodity values in 1990, the difference between what a large industrial generator might get for a commodity was very different than what the curbside collection companies were getting. Newspaper had a value of \$40.00 per ton, for a large producer, but for the curbside collection companies it was more like \$23.00 per ton.⁴ I have called the Clean Washington Center for current market values. When I receive the values, I will supplement this memo with them.

² Solid Waste in Washington State, Second Annual Report, Washington State Department of Ecology, Solid Waste Services Program, January 1994.

³ The report actually states that exportation was 703,000 tons and importation was 101,000 tons. This equates to a net exportation of 603,000 tons.

⁴ This is taken from a staff memorandum, October 3, 1990, which included market values for a number of commodities. As a comparative, the value was consistently lower for the curbside programs than for the high volume (industry) generators.

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What happened? To work the way the legislature hoped, both of the major economic factors -- prohibitive landfill costs and stronger recycling markets needed to occur, but neither did. In fact, the two systems are becoming similar; a truck full of recyclables pays an aggregate processing fee at the reprocessing facility⁵, while a truck full of garbage is charged a tipping fee at the disposal facility. There may be environmental benefits from avoided landfilling but they have not been reflected in tip fees. It also has been argued that the new state of the art landfills are a viable environmentally- correct option for solid waste management, especially to dispose of those potentially recyclable commodities for which the markets have failed to mature.

B. The Commission's Notice of Inquiry (NOI) on Rate Design (TG-901250)

The NOI process was conducted in direct response to RCW 81.77.030, which mandates that the Commission use billing systems and rate structures consistent with the state's solid waste management priorities. It is this statute, and specifically the rate structure issue, which King County is currently raising. The NOI began in November 1990 and was concluded in July 1992. Ultimately, the staff recommended the Commission maintain the current cost of service methodology, at least for now, but implement waste reduction and recycling incentives in the form of additional service options (i.e. minican, every-other-week service, recycle only service, etc.).

Overall, the NOI found that the majority of respondents supported incentive rate design, with the preferred method avoided cost pricing. The largest cost factor in the solid waste system is disposal (landfill development, maintenance, closure, post closure and siting). The Commission (excluding affiliated interest review) does not regulate the landfill operations in the state. As a result, unlike other utilities we regulate, such as energy, we do not have a clear mechanism to factor in the avoided costs of landfills which are private or public projects outside the Commission's regulatory jurisdiction. Also, avoided cost presumes that we can defer building a less desirable alternative (i.e. a landfill) by raising prices to discourage disposal and extend the life of existing facilities. We have now built those landfills, and as a result the avoided cost could be dropping.

Staff concluded that the Commission should investigate a number of incentive options, but that, at least for the short term, it should implement additional levels of service (minican, and every-other-week). Another option the staff recommended the Commission consider was to require that bills

⁵ The rates just approved for Eastside Disposal allow for a \$66.00 per ton reprocessing expense.

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better assist customers in identifying costs and services clearly and accurately. The staff also recommended that the Commission study technology options, system costs, and incentives to encourage regulated firms to use garbage-by-the-pound billing systems. The service levels have been implemented, the billing issue has been partially addressed⁶, but the other recommendations have not.

C. Eastside's Rates: Incentives or not? Is the Commission meeting its obligations?

King County contends that the Eastside rates do not provide recycling incentives. A review of the record indicates that the Eastside rates provide recycling incentives, though not as high as the county would like. It is King County's objective to set the minimum as the standard level of service. Staff believes the minimum is too low a service level to use as a comparison to curbside recycling. This is because curbside recycling is an unlimited service. In other words, a consumer may place all the recyclables they generate on the curb every collection day for one flat monthly fee.⁷ In contrast, solid waste is not an unlimited service. You may put out only the volume you've paid for, or be charged extra or over-weight fees⁸. Looking at the range of rates charged throughout Snohomish, King and Pierce counties, curbside recycling varies between \$2.00 to \$5.00 (rounded to the nearest dollar) per month. If the average 110 pounds of recyclables were converted to garbage service, it would require three additional cans of service per month (which using current tariff structure would require the one-can-per-week customer to become a two-can-per-week customer). As a result, staff believes it is more reasonable to consider the two can per week rate as a comparable unit of service in lieu of curbside recycling.

Under the staff approach, seen in proper comparison, cost of service based rates provide an incentive to recycle. The Commission has used many factors to build an incentive, and not simply relied on the rate itself⁹. However, looking at only the rates, it is clear that there is a financial incentive to use the curbside recycling program.

⁶ Docket TG-921221, a rulemaking regarding solid waste companies, required all taxes and fees be separately stated on customer bills. However, this rule does not obligate companies to break out the recycling fee from the garbage rate.

⁷ Data in our files indicate that a consumer who participates in recycling at the curb, places, on average, about 110 pounds out each month.

⁸ Using the Meeks' Model, a one can per week customer puts about 34 pounds in a can of garbage. A two can per week customer puts out 51 pounds per pick-up.

⁹ The NOI recommended additional service levels as an important tool to creating incentives. The Commission has also allowed curbside recycling programs to be a mandatory fee for all users of residential solid waste collection services, provided the local government required it by ordinance. This is a powerful incentive because it spreads the cost of recycling to all customers whether they use it or not.

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Consider the specific example of Eastside's current rates:

Assume a one-can-per-week customer using curbside recycling is paying \$10.90 per month. That customer is paying \$4.40 of that \$10.90 for unlimited recycling usage. Along with the unlimited amount of recyclables they may place on the curb, they may only put 34 pounds of garbage out for the remaining \$6.50.

Now, assume this customer decides recycling is not worth it (time, money, bother). It discontinues putting out recyclables and throws it all in the garbage. If that customer were average, and not illegally handling the waste, they would now be putting out two cans per week instead of the one can previously used. The rate charged to use this level of service would still include \$4.40 per month for recycling. Now this customer will also pay the higher cost of the second can of solid waste and their bill will be \$12.75 per month.

This customer has every reason to continue recycling. By discontinuing recycling, the consumer will see a 17 percent increase in cost. More so, if this consumer could decrease its purchases of nonrecyclables, or increase its recycling efforts enough to use a minican service level, that same customer could see a 12 percent rate reduction and only pay \$9.65 per month.

III. Where Do We Go From Here?

The issues raised by King County are not going to disappear, but a broad review of the County's concerns suggests the Commission's rate structures do provide incentives. Whether those remain adequate could be reviewed, either in the context of the King County petition, or in another process. Whatever forum is chosen to review the Commission's policy on solid waste and recycling rate design, we need to consider at least three main issues:

- A) What are the long-term economics of curbside recycling? Much evidence suggests that curbside is an extremely expensive way to recycle.
- B) Is there any evidence that a more inverted rate structure would improve the economic health of recycling¹⁰ or reduce generation of waste? What effects would such a rate structure have on families, low income populations and illicit dumping?

¹⁰ The City of Seattle conducted a study in (The City of Seattle 1988 Recycling Potential Assessment, City of Seattle Solid Waste Utility, 1988) which they determined that the elasticity of residential waste generation with respect to residential disposal prices was about -0.7. Since then they reevaluated their data (letter to the Commission dated December 3, 1991) and found that it may even be lower at -0.1 elasticity. In sum, for every 1 percent increase in price, garbage generation would only decrease by 0.1 percent.

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C) Should the Commission move forward with consumer education by breaking the recycling component out by itself? While some such as King County have opposed this, it could provide an incentive to control recycling costs. Another benefit would be that consumers would realize that the recycling rate is much more stable and not affected by the frequent tipping fee increases. Finally, a line item for the recycling rate would send a signal that all waste management, whether by recycling or disposal has a cost.

Please let me know if I may provide you additional information.

Attachment to: Osinski memorandum of 2/24/94

Greater Seattle-Area Recycling Markets -- 1993

<u>Commodity¹</u>	<u>1993 High-end</u>	<u>1993 Low-end</u>
Baled Aluminum	\$760.00/Ton	\$670.00/Ton
Loose Aluminum	\$413.00/Ton	\$340.00/Ton
Mixed Paper	\$ -5.00/Ton	\$-20.00/Ton ²
Baled Newsprint	\$ 25.00/Ton	\$ 12.50/Ton
Loose Newsprint	\$ 13.33/Ton	\$ 8.33/Ton
Cardboard	No Data Reported	
Plastic	\$ 40.00/Ton	\$ 20.00/Ton
Tin	\$ 29.00/Ton	\$ 22.00/Ton
Clear Glass ³	\$ 33.00/Ton	\$ 33.00/Ton
Brown Glass	\$ 35.00/Ton	\$ 25.00/Ton

¹ The data provided was gathered by the City of Seattle Solid Waste Utility and represents local (Seattle area) markets. This data would not necessarily reflect markets outside of the greater Seattle area.

² According to the data for 1992 mixed waste paper was at its best value at a negative \$2.50 and its worst was a negative \$5.00. The trend continued to get worse in 1993 as we see from the negative values represented above.

³ Clear glass and brown glass generally have strong values. Green glass and mixed cullet (broken glass of mixed colors) does not have a market.