



REVIEW OF SOLID WASTE DISPOSAL CHARGES

Final Report
April 2010

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April 5, 2010

Metro
600 NE Grand Avenue
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Subject: Review of Solid Waste Disposal Charges

Dear Council President David Bragdon, Members of the Metro Council, and Chief Operating Officer Michael Jordan:

FCS GROUP Inc. is pleased to submit the result of our Solid Waste Disposal Charges Review. Our study included an expert, independent, technical review of Metro's rate setting process for sustaining an open, transparent and credible process. The study involved reviewing Metro's current rate-setting methodology for compliance with industry standards and best practices. The review also is to confirm that the provisional FY 2010/2011 were calculated properly.

In general the major findings are as follow:

- ◆ Rate process/methodology utilized is solid. All annual operating and capital financial obligations are being captured.
- ◆ Fund balances are meeting (or exceeding) target balances.
- ◆ Direct and Indirect cost allocations generally follow standard practice, and we have identified a few areas for your consideration to help enhance rate-making transparency and consistency in future rate updates. The process used to calculate solid waste disposal rates and charges is standard and follows solid principles.
- ◆ The provisional 2010/2011 rates developed by Metro under pay-as-you-go are technically sound and supported by the cost information provided to us for our review.

We appreciate the opportunity to work with Metro on this project. Please do not hesitate to contact me if you have any questions regarding this report or if additional information is needed.

Sincerely,
FCS GROUP

A handwritten signature in cursive script that reads "Angie Sanchez".

Angie Sanchez Virnoche
Project Manager/Principal

Enclosure(s)

cc: Scott Robinson, Deputy Chief Operating Officer
Margo Norton, Finance & Regulatory Affairs Director
Douglas Anderson, Policy & Compliance Manager

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A. INTRODUCTION

In 1991 Metro established a Rate Review Committee to advise the Metro Council on rate setting procedures and proposed solid waste disposal rates. In November of 2009, a white paper titled *Setting Metro's Solid Waste Rates: An Assessment of Processes and Practices* was written, which provided recommendations to better meet Metro's needs in relation to the changing regional solid waste system and evolving best practices for setting municipal utility rates. One of the recommendations of the white paper is to have a truly independent review of the proposed rates. This option replaces the Rate Review Committee and instead has Metro retain an independent consultant to review the proposed rates in conjunction with the budget.

Metro engaged FCS GROUP to complete a review of the solid waste disposal rate-setting process. The study was undertaken to provide an expert, independent, technical review of the framework and methodology used for setting solid waste disposal fees and charges. For this study, solid waste fees and charges refer to the transaction fees, tonnage charge and regional system fee.

B. SCOPE OF WORK

The review of solid waste disposal charges is intended to provide an objective review of the rate setting process and offer recommendations to Metro for sustaining an open, transparent and credible rate setting process that meets the financial obligations of the solid waste fund and the fiscal policies of the agency.

The study identified the following key areas for the independent review:

- ◆ Rate Setting Methodology
- ◆ Provisional 2010/2011 Rates

Each of the key review areas identified above was completed as part of the study for Metro. Each key area's findings and recommendations will be addressed in this report.

C. RATE SETTING METHODOLOGY

Industry standard rate setting methodologies for utility services follow a general approach that is tailored to the service being provided. An important starting point to any methodology is understanding the legal, regulatory and debt covenant requirements of the agency since it forms the foundation and parameters for the rate review.

Oregon Revised Statutes Chapter 268 Metropolitan Service Districts, section 268.17 provides solid and liquid waste disposal powers. Oregon Revised Statutes section 459.335 (as revised by House Bill 2671 last year) restricts the use of money collected by a metropolitan service district from service or user fees on solid waste disposal. Under Section 1 of the House Bill money collected shall be used for "...activities of regional concern that are directly related to reducing the environmental impact from the generation, collection, transportation, processing and disposal of solid waste; and planning, administrative and overhead costs for activities of the district related to solid waste." Metro Charter Chapter III Finance further clarifies the limits of user charges. Section 15 of the charter states "...Charges for the provision of goods or services by Metro may not exceed the costs of providing the goods or services. These costs include, but are not limited to, costs of personal services, materials, capital outlays, debt service, operating expenses, overhead expenses and capital and operational

reserves attributable to the good or service.” State law and the Metro charter set the parameters and framework for the rate setting process.

Historically, Metro’s Master Bond Ordinance and the covenants of the solid waste revenue bonds issued pursuant to the ordinance had set the tightest restrictions on Metro’s solid waste rate structure. With retirement of the bonds in December 2008 the legal restrictions have been lifted, although Metro still implements several of the best practices formerly required by the bonds.

The mission, policies and objectives of the solid waste department and the role of the agency as a regional service provider are also important to the rate setting process. These factors will inform the process along the way and highlight the tradeoffs that may be required.

A simplified explanation of the rate setting process generally follows three key analytical steps.

- ◆ Step 1: Identify revenue requirements. This step identifies the total annual financial obligations of the system. This includes operations, debt service, capital improvements and replacements and fiscal policy achievement. Ideally, the ongoing rate revenue of the system should support the annual ongoing expenses of the solid waste system.
- ◆ Step 2: Allocate Costs. This step establishes rate equity through cost causation or the cause and effect relationship between different costs and the activities that cause those costs to be incurred.
- ◆ Step 3: Establish Fees/Charges. This step achieves required revenue levels by establishing rates and charges that accurately reflect the cost to provide a particular service.

C.1 Methodology Findings and Recommendations

FCS GROUP focused its review on Metro’s current procedures and methods for establishing solid waste rates. This review primarily included an analysis of the FY 2010/2011 provisional solid waste fund rates, with specific attention focused on direct and indirect budget assumptions, funding requirements, and cost-of-service allocations. As such, these findings and recommendations do not pertain to: the accuracy of specific amounts from the budget for direct costs, capital requirements, and fund balances; nor review of contracts with transfer station operators, transport and fuel providers, or landfill/disposal operators; nor demand forecasting techniques; or tonnage or transaction assumptions.

FCS GROUP’s findings and recommendations are generally grouped into the following areas:

- ◆ Overall Findings
- ◆ Revenue Requirement Findings
- ◆ Cost Allocation Findings

C.1a Overall Findings:

The methodology review indicated that all financial obligations are being captured including operating costs, which include direct costs, indirect transfers and direct transfers. Capital costs include new capital, renewal and replacements, and landfill closure projects all of which are included in Metro’s five year capital plan. The repair and replacement contribution is established every three years by an independent study. In March of 2009, both the Renewal and Replacement Account and the St. John’s Landfill Closure Account were reviewed. All fund balance targets appear to be met (or exceeded) for capital, renewal & replacement, St John’s Landfill closure, operating, working capital, environmental impairment liability and PERS (Public Employees’ Retirement System) reserve. There are currently no outstanding debt obligations.

The functional cost allocation for the revenue requirements identifies the most appropriate fee category from which to recover the cost. Industry standards and comparison jurisdiction approaches indicate there is no one right answer for cost allocation; rather a “range of reasonableness” is what is practiced and accepted. The cost allocation must balance equity with the agency mission, policies and objectives. When possible, costs should follow a cause and effect link to why the cost was incurred. In general, most cost allocations reviewed for Metro follow standard practice with a few areas for improved transparency and consistency noted.

The setting of disposal rates and charges is the final step in the rate setting process. The process used by Metro to calculate the Metro transfer station proposed solid waste rates and charges is standard and based on solid principles. Total costs by fee category are divided by one of the following unit bases to calculate the fee/charge per unit; Count of Metro staffed transactions, Count of Metro automated transactions, Metro transfer station tonnage or regional tonnage. Rates that apply to waste disposed at Metro solid waste transfer stations include transaction fees (staffed or automated), the Metro transfer station tonnage charge and the regional system fee. The regional system fee is paid by regional ratepayers for all waste disposed of at a regional disposal site.

C.1b Revenue Requirement Findings

Revenue requirement findings focus on the analysis development to establish annual solid waste fund financial obligations. Areas for consideration or further review include:

- ◆ Current practice of Metro is to provide a five year forecast of revenue and expenses in the budget document and only a one year snap-shot in the rate setting model. This current approach may result in inconsistent rate fluctuations from year to year, rather than a “smoother” trend in rates that take into account anticipated revenue requirements based on long-term forecasts of revenue and costs.
Recommendation: Consider including a systematic review of the long-term financial needs of the fund (e.g. a five year projected rate forecast) to evaluate the sufficiency of existing revenue levels in the future and improve the stability and predictability of fee and charge levels.
- ◆ Metro’s current rate model includes an optional “under-spend allowance” adjustment for all cost centers. This adjustment has evolved from a comparison of budget figures to actual expenditures. Not all programs expend 100% of their budget allocation. *Recommendation: Develop a formal policy regarding the basis for calculation of the under-spend allowance for a cost center.*
- ◆ Metro currently generates revenue from stewardship initiatives. *Recommendation: Develop a policy that specifies how this revenue will be used (e.g. offset program costs, reduce specific fee the program costs are allocated to, offset for overall requirements).*
- ◆ Metro currently offers a summary sheet of the Reserve Accounts. The reserve summary sheet includes the reserve purpose, funding level basis, target balance, ending balance and if the account is over/ (under) target. *Recommendation: Consider adding a fund balance sheet to the rate model that tracks the sources and uses of the funds on an annual basis and how the reserve is linked to the draw from reserves in the fund budget summary table. This approach should provide added transparency to help show the impacts on reserves from varying policy actions (i.e. no rate action, reduction of expenses, increase in revenue, etc.).*
- ◆ Metro currently has a capital plan for new capital assets with the capital funding policy based on previous bond restrictions. The policy is to use the surpluses generated by the 110% coverage ratio to fund new capital requirements. Although the coverage requirement is gone, Metro still relies on annual surpluses to fund its plan for new capital. *Recommendation: Consider developing a capital funding policy that addresses*

the funding of new capital assets to prevent “major rate increases” in the future in the event significant new capital assets are needed.

- ◆ Metro currently has three unrestricted reserves; operating, working capital and capital reserve each with their own target ending fund balance. *Recommendation: Additional policies related to reserves could be considered, such as:*
 - *A policy that specifies what is done with operating surplus at year end. The policy would consider prioritizing the use of surplus funds as transfers to end-of-year reserve account balances. For example, policies could prioritize the transfer of surplus funds to meet operating and working capital targets first. After such targets are exceeded by an established amount (i.e. 25% above the targeted amount), the additional funds could be transferred to the capital reserve account (with no policy limitations).*
 - *A policy regarding replenishment of reserves when they are below targets, and a policy that states over what time period replenishment should take place (next year, 2 years, etc.)*

C.1c Cost Allocation Findings:

There are two cost allocation approaches that are reviewed under this study. The first cost allocation relates to the Metro solid waste fund’s rate setting approach that assigns costs to fee categories: transaction fee, tonnage fee or regional system fee. For purposes of this report, this will be termed the Solid Waste Cost Allocation Methodology. The second allocation approach reviewed pertains to Metro’s cost assignment of the internal operating overhead costs to the solid waste fund. This allocation will be termed the Metro Internal Cost Allocation Approach.

Solid Waste Cost Allocation Methodology

The solid waste cost allocation methodology findings focus on the cost causation or the cause and effect relationship between different costs and the activities that cause those costs to be incurred. Areas for consideration or further review include:

- ◆ Metro currently has one combined expense line that captures the cost for all four major contracts; station operation, transport, fuel and disposal. *Recommendation: Separate the four major contracts into individual line items for clarity and transparency of cost allocation. This additional detail will allow for each contract cost to be identified and individually allocated to the appropriate fee categories. For example, the station operation contract may have costs assigned to both the transaction and tonnage fee whereas the disposal contract will assign 100% of the contract costs to the tonnage fee.*
- ◆ Metro currently assigns station management costs between transaction fees and tonnage and all station operation contract fees to tonnage. *Recommendation: Review both of the station management and the station operation contracts (when signed) to capture the fixed costs of the system. Allocating the appropriate fixed costs for station management to the transaction fee will improve equity between the cost being incurred and those benefitting from the service.*
- ◆ Metro currently assigns 50% of each cost center’s allocated G&A load back to the cost center itself; the balance is assigned to the RSF. This is not standard practice in public or municipal utility rate setting, or even in pricing of general public services. Furthermore, the policy basis for the practice is not readily explainable. Metro has arrived at this position by a number of policy choices. General utility industry standard is to allocate 100 percent of the overhead costs back to the direct costs of the system proportionately based on historical account of direct costs. *Recommendation: Review of the 50% allocation of general and administrative overhead to the regional system fee is warranted. Metro should identify all of the objectives it wants to achieve with its rates and choose the allocation approach that best serves these objectives.*

Metro Internal Cost Allocation Approach

The Metro internal cost allocation approach refers to the indirect transfers and direct transfers that are allocated to the solid waste fund. It is common practice to have some level of overhead costs assigned to the solid waste fund. For Metro, indirect transfers are based on Metro's cost allocation plan and include; accounting, auditing, chief operating officer, chief financial officer, financial planning, building & office services, contract services, human resources, information technology, creative services, attorney, risk management & insurance and support services. Direct transfers are currently based on effort and staff time estimates from the employee and/or manager related to the solid waste system. Direct transfers include; parks & environmental services administration, sustainability center administration, finance and budget, information technology renewal and replacement allocation, media relations, safety and planning, GIS & data services. These direct and indirect transfers represent 14.6 percent of the overall annual operating budget of the solid waste fund.

A general review was conducted regarding the basis for the indirect and direct transfers. Recommended areas for consideration or further review include:

- ◆ Additional review of Metro's indirect overhead general and administration (G&A) allocations and transfers to the solid waste fund.
 - Currently the allocation for the Attorney uses prospective time allocation for the budgeted fiscal year. *Recommendation:* – *The standard approach is to base the allocation on actual time spent. This is the approach that is used for other Metro indirect costs. If this department tends to be very inconsistent from year to year for significant one-time or non-recurring events (e.g. contract negotiations or bond issues) a reserve account may be optimal for this department. Annual consistent contributions would be made to the reserve (historical average of actual costs).*
 - The Information technology (IT) cost allocation uses server capacity as the basis. *Recommendation:* *Consider improving transparency and/or clarification of this allocation basis and the link between cost and benefit. Considerations could be workstations or IT time charges.*
 - Payroll cost is currently used by Metro as an allocation for administration, budget and finance departments. *Recommendation:* *Payroll is an acceptable allocation basis for direct costs which will capture salary variances. For indirect costs, an FTE allocation basis would be more appropriate. Level of effort for support services generally will not vary by the amount an FTE is paid.*
- ◆ Additional review of Metro's direct overhead general and administration (G&A) allocations and transfers to the solid waste fund.
 - Metro currently assigns direct transfers to the solid waste department based on time estimates provided by employee and/or manager. *Recommendations:* *Conduct a work survey of actual time spent to refine direct transfer cost allocations. It will be important that the survey be conducted at different times of the year and checked over multiple years to normalize results for one-time and non-recurring events. A method for quality checking the results and gaining support for the allocations is to run the work survey and bring the leads of all departments getting an allocation together for discussion and input on the results.*
 - Metro currently has one Senior Planner whose time is being allocated base on “climate impact” assumptions using a national study by the EPA (specific source unknown). This approach seems to result in a 30 percent cost allocation of this staff's time to the Solid waste Fund. *Recommendation:* *While this approach could be lauded for its creativity. We recommend additional documentation of the basis and applicability to the Metro solid waste program.*

- ◆ Metro currently employs a true-up of general and administrative costs at the end of year.
Recommendation: Continue employing the true up approach as a best practice, and incorporate a weighted average of historical results into the “under-spend allowance” factors as appropriate.

C2. Summary of Recommendations

A summary table of the recommendations resulting from the rate setting methodology review is provided in Table 1.

Table 1 – Summary of Recommendations from Rate Setting Methodology Review

Recommendation	Area of Emphasis			Type of Change			Intent*
	Solid Waste Rate Resource Requirement	Solid Waste Rate Cost Allocation	Metro Internal Cost Allocation	Methodology	Technical	Policy	
1. Incorporate a systematic practice of evaluating the sufficiency of long-term rates .	X			X			Revenue stability, Consistency, transparency
2. Develop policy regarding establishment of under-spend allowance	X					X	Improved accuracy, equity, supportability
3. Develop a policy regarding the revenue generated from special programs.	X					X	Consistency, supportability
4. Develop a capital financing policy for new capital to accompany the capital plan	X					X	Consistency, Rate stability
5. Develop policy regarding prioritizing use of end of year balances	X					X	Consistency
6. Add a reserve fund sheet to rate model	X			X			Consistency, transparency
7. Develop policy regarding replenishment of reserves	X					X	Consistency
8. Separate the four major contract costs into their own cost center line item for clarity and transparency of cost allocation		X			X		Transparency
9. Review the station management and station operation costs to identify fixed costs		X		X	X		Transparency, equity, supportability
10. Review the 50% allocation of overhead costs to the regional fee approach		X		X		X	Improved accuracy, equity, supportability
11. Allocate attorney cost based on actual time spent, not on prospective time			X		X		Consistency, improved accuracy, supportability
12. Consider more appropriate allocation basis for IT cost center (workstations, IT time charges) or clarify existing basis			X		X		Improved accuracy, supportability
13. Consider using FTE rather than payroll for overhead costs (admin/budget/finance)			X		X		Consistency, improved equity, supportability
14. Conduct a time estimate study for direct transfer costs (may require more than one to normalize results)			X		X		Improved accuracy, supportability
15. Stengthen cost allocation documentation or develop alternative basis for direct transfer of Senior Planner costs			X		X		Improved accuracy, supportability
16. Continue true-up of G&A costs at year end	X		X		X		Consistency, equity, supportability

* Consistency helps provide or maintain rate consistency from year to year.
 Transparency enhances the ability to review and evaluate rate-making methods and practices.
 Improved accuracy provides a more direct relationship between the revenue requirements (funding uses) and the rate funding (sources).
 Supportability enhances rate design in a manner consistent with best practices.
 Equity promotes rate equity between revenue requirements (funding uses) and rate funding sources (sources).

D. PROVISIONAL 2010/2011 RATES

The review of provisional 2010/2011 solid waste disposal fees and charges is intended to verify that the proposed rates will meet the solid waste fund's annual revenue requirements. Metro provided the rate model with the solid waste fund budget updated for the 2010/2011 rate setting period. The model included costs for operations, maintenance, general & administrative overhead transfers, new capital and renewal & replacements capital. The review was not intended to verify the budget numbers provided were accurate, rather this review is intended to verify that all annual revenue requirements are captured appropriately. Capital costs are identified from Metro's five year capital plan. Based on our review of the model and the annual obligations that comprise the annual revenue requirement, FCS GROUP believes that Metro has captured the appropriate annual costs for pay-as-you-go in the current rate model.

The reserve fund activity is accounted for separate from the rate model. FCS GROUP requested the target balances and ending balances for each of the reserve funds. Based on the information provided for each of the funds, all funds are meeting or exceeding their target balance.

Annual costs are allocated to fee categories as described in the rate-setting methodology discussion. The current Metro approach to allocating costs is using industry standard approaches along with some cost allocations resulting from historical policy decisions. Ultimately, the approach is within the range of reasonableness when considering cost allocation approaches. There are suggested improvements noted in the rate setting methodology findings and recommendations that may be incorporated at a future date. The technical mechanics of the cost allocation are accurate with all costs allocated to the transaction fees, tonnage charge, regional system fee or a combination. Alternative allocation approaches for cost allocation have been noted in the rate methodology review section.

The final step in the rate model development is calculating the required unit cost for each of the fee categories. Based on the proposed unit cost results for 2010/2011, increased rates and charges appear warranted. Existing solid waste fee and charge levels are not sufficient to meet the 2010/2011 annual revenue requirements under the pay-as-you-go policy. Funding available from uncommitted fund balance is not sufficient to meet the 2010/2011 revenue requirement and would result in depleting the uncommitted fund balance levels below recommended targets.

In 2009/2010 Metro did not increase rates to recover the revenue requirement but instead used uncommitted fund balance to mitigate rate payer impacts. Tonnage continues to be lower than historical levels. Target fund balances are in place in order to help Metro weather these unforeseen events until tonnage returns to more "typical" levels. However, tonnage will likely not return to historical levels any time soon. Therefore, it is important for Metro establish rates under the reduced tonnage that will support the solid waste funds on-going costs.

The development of the provisional 2010/2011 rates by Metro under pay-as-you-go and reviewed by FCS GROUP are technically sound and supported by the cost information provided for review.

E. OTHER AREAS FOR CONSIDERATION

According to the Metro Urban Growth Report, the population of the Portland-Vancouver-Beaverton area is forecasted to increase by as much as 1.2 million people by 2030. As the Metro regional service district increases in population and employment, new innovative methods will be needed to ensure that demand on public infrastructure, roads and waste management facilities will not over burden planned capacity levels.

This section is intended to provide an overview of innovative national and international waste management practices that are now being applied to help create value out of waste streams and limit the amount of waste generated per capita. Metro is already a leader in many areas of regional governance and has established progressive solid waste management goals.

While Metro's solid waste transfer facilities only handle a fraction of the 2.4 million tons of solid waste generated within the tri-county region, Metro's policies and the policies and actions of other municipalities can have a major influence on the amount of solid waste that is collected, recycled, composted or recovered for energy recovery. Selected innovative solid waste management practices are highlighted for potential consideration by Metro policy makers.

E.1 Recycling Incentives

According to Metro, the region recycles, composts or recovers nearly 57 percent of the total waste generated. While this level of overall waste recovery is above many large metropolitan regions in the USA, it is below the 64 percent target established in the Regional Solid Waste Management Plan. Overall the percentage of waste recovery is trending upward and recent Metro policies (including Metro Council's 2008 policy for mandatory requirements on recycling of paper and containers for businesses) should further assist with meeting waste recovery goals.

Metro has targeted three areas where most of the opportunity for increased recycling remains: organics (such as food scraps), paper and containers from businesses, and construction and demolition waste. Metro's solid waste fund benefits from the re-use of waste streams such as latex paint and construction materials, which provide about \$2.4 million in annual revenue.

Note worthy practices being used by other regional waste management entities to complement Metro's recycling initiatives include the following:

- ◆ In King County, Washington several programs are used to address waste reduction and prevention, as well as recycling. Selected programs include:
 - EcoConsumer program offering resources and incentives to help citizens balance consumption and conservation;
 - Grants to cities to support waste prevention;
 - Sustainable building education and promotion supporting green buildings, deconstruction and salvage, and adoption of green building standards;
 - LinkUp program to expand markets for recyclable and reusable materials;
 - Organics management featuring "Northwest Yard Days";
 - School programs such as "Green Schools" and education for K-12 programs;
 - Special recycling collection events such as "spring cleaning" where any and all debris may be put curb side for collection. This program is particularly effective at generating large volumes of items, such as used appliances and furniture, which may be donated to local charities. Since Metro does not directly coordinate curb side collection, Metro could consider providing grants or incentives to cities that employ this technique.

- ◆ In Newfoundland and Labrador, Canada, the Department of Environment and Conservation is working on a proposed new extended producer responsibility program for recycling of waste paint. Under this program, paint producers and manufacturers are required to develop, finance and manage the collection and recycling of paint products. Producers and retailers have the option of participating in public or private paint stewardship program, and must demonstrate that waste paint is being recycled in an acceptable legal manner and that new environmentally sustainable products are being manufactured.
- ◆ In Quebec, Canada a new stewardship program for electronics, batteries, fluorescent lamps, and mercury lamps is underway, along with greater stewardship for organics. Increased regulations on these products and a new five-year stewardship surcharge is intended to bring the cost of disposal in line with the cost of diversion, and to internalize stewardship fees rather than imposing them at the retail level.
- ◆ Quebec and Nova Scotia are also moving towards banning certain landfill wastes, when viable alternatives are in place. The first items to be banned from regional landfills will be paper and cardboard products, then organics, like food and lawn debris.
- ◆ In light of the fact that approximately 830 million pounds of plastic bags and wraps were recycled each year and a much greater number finds its ways to regional landfills, several communities in the U.S. and Canada are adopting new policies aimed at plastic bags, which are attributed to clogging storm water drains and negatively affecting waste management productivity. San Francisco is the first city in the U.S. to ban plastic bags; the Los Angeles City Council followed suit with a 25-cent fee on paper or plastic bags (seven cents will go to stores and 18 cents will fund California's anti-pollution and recycling programs).

E.2 Linking Transportation Impacts with Solid Waste

- ◆ In California, several communities have adopted waste hauler vehicle impact fees that are separate from construction vehicle impact fees, and separate from transportation system development charges. Recent regional waste collection contracts include provisions for the collection of vehicle impact fees (with a local option to participate in the program), and the new fees are passed on to consumers in their bills by the waste haulers. Revenue from the fees is used by local jurisdictions to pay for excessive roadway maintenance, which is attributed to the waste hauler vehicles/trucks.

E.3 Waste to Energy

- ◆ Several recent federal and state initiatives are aimed at increasing the amount of green energy provided by sustainable reusable resources. New energy investments at the Columbia Ridge Landfill by Waste Management Inc. in Arlington turn much of the region's solid waste into clean fuels and reusable energy. A new plasma gasification facility at the Columbia Ridge landfill opened in January 2010 to convert solid waste into ultra clean synthesis gas called "syngas." This gas may be converted into transportation and industrial fuels, such as ethanol, diesel, hydrogen, or methanol, and can be used as a substitute for natural gas to generate electricity to heat homes and buildings. Metro continues to monitor this project through periodic progress reports by Waste Management, Inc.
- ◆ In addition to the syngas, Waste Management, Inc. also provides wind power at the Columbia Ridge landfill with 67 windmills producing more than 100 megawatts of renewable power for PacifiCorp.
- ◆ Seattle City Light, the ninth largest public electric utility in the U.S., in combination with Seattle Public Utilities has contracted with Waste Management to transfer solid waste to the Columbia Ridge landfill and purchase clean energy supplies. Energy from the Columbia Ridge landfill is helping achieve the goals established by Initiative 937, a voter-approved law that requires Washington utilities to have at least 15

percent of their energy supply accounted for by new renewable energy sources and energy conservation by year 2020.

These innovative initiatives are provided as “food for thought” as Metro policy makers attempt to meet the needs of a growing region, while maintaining the agency’s sustainability goals.