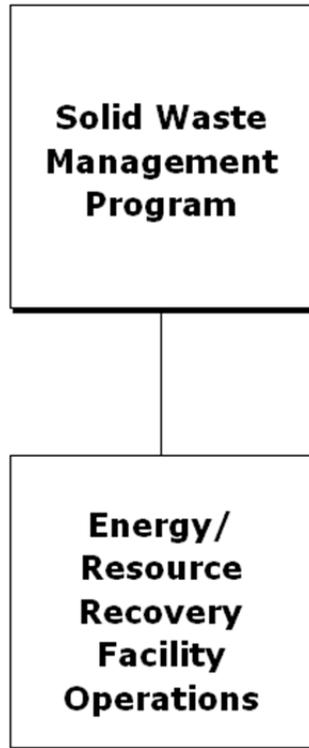


Fund 40160

Energy/Resource Recovery Facility



Mission

To serve Fairfax County residents by providing effective and environmentally-sound solid waste disposal by converting waste-to-energy; by reducing the need for landfill space through volume reduction of solid waste; by reducing the greenhouse gas emissions both by not landfilling waste and by generating renewal energy; by recovering ferrous and non-ferrous metal from the ash and recycling them; and by managing the operational contract in the best interests of the residents.



Aerial view of the I-95 Energy/Resource Recovery Facility

Focus

Fund 40160 supports the management of the contract for the I-95 Energy/Resource Recovery Facility (E/RRF), owned and operated by Covanta Fairfax, Inc. (CFI). Under the terms of the Service Agreement, the County delivers municipal solid waste (MSW) for which it pays a disposal fee to CFI. With the approval of its Title V (Air) Permit in January 2007, the facility has the flexibility to operate at a level above its nameplate rating of 3,000 tons per day. Pursuant to an agreement between Dominion Virginia Power and CFI, signed in 1987 and amended in 1996, Dominion Virginia Power purchases up to

Fund 40160 Energy/Resource Recovery Facility

80 megawatts of electricity, enough to power about 75,000 homes annually. An amendment approved in FY 2008 allows CFI to generate and sell additional electricity over 80 megawatts; this additional electricity revenue further keeps the rate paid to CFI low and benefits County residents.

The County charges a disposal fee to all users of the E/RRF and subsequently pays the contractual disposal fee to CFI. Revenues from the sale of electricity and recycled ferrous metals are used to offset the cost of the disposal fee charged by CFI. In FY 2013, approximately 74 tons of ferrous and nonferrous metals were recovered each day from the processed ash. This additional recycling helps support the County's excellent overall recycling rate of 51 percent. Starting in January 2013, the County also began to receive a 10 percent share of the recovered nonferrous metal revenue. Further, the County receives a fee for certain merchant waste processed by CFI when capacity is available; during FY 2013, over 30,089 tons of merchant waste came into the facility.

When the E/RRF is not able to handle the amount of waste available, some waste is diverted to Virginia landfills. During FY 2013, there were 36,062 tons of diverted waste due to operational outages at the facility, both planned and unplanned. Fairfax County strives to reduce the amount of waste that must be diverted to a landfill for disposal.

County staff must be constantly vigilant in balancing waste as a commodity to ensure that it is disposed of efficiently, cost-effectively and with minimal environmental consequences. Careful management of the Service Agreement with CFI, revenues from electricity sales, increasing metals recycling, and final payment of the construction bonds have allowed the County to hold down disposal fees charged to customers. In FY 2015, the rate will remain at \$29 per ton. Funding from the Rate Stabilization Reserve will be used to buffer against any long term adjustments to the tip fee.

The June 2013 annual stack test indicated that the overall air emissions reductions from the E/RRF, resulting from the Clean Air Act retrofits in 2000, remained well below permit limits with reductions in sulfur dioxide, particulate matter, and lead from FY 2012.

Energy/Resource Recovery Facility Emissions Results¹			
Constituent	Permit Limit	Average E/RRF Result June 2012	Average E/RRF Result June 2013
Sulfur Dioxide (SO ₂)	29 ppm	5.25 ppm	4.75 ppm
Carbon Monoxide (CO)	100 ppm	3.75 ppm	3.75 ppm
Nitrogen Oxides (NO _x)	205 ppm	181.0 ppm	183.0 ppm
Hydrochloric Acid (HCL)	29 ppm	3.97 ppm	4.40 ppm
Particulate Matter (PM)	27 mg/dscm	2.61 mg/dscm	1.42 mg/dscm
Mercury (Hg)	0.080 mg/dscm	0.0013 mg/dscm	0.0018 mg/dscm
Lead (Pb)	0.44 mg/dscm	0.01 mg/dscm	0.0030 mg/dscm

ppm = parts per million

mg = milligram

dscm = dry standard cubic meter

¹ Covanta Fairfax Inc. Annual Determination of Compliance with Permitted Emission Limits and 40 CFR, Subpart Cb Report, (COV Report No. 3640 Volumes 1), pages 12-15 for testing conducted May 28-June 8, 2013.

Fund 40160

Energy/Resource Recovery Facility

A test performed by an independent laboratory during May 28-June 11, 2013, characterized the ash from the E/RRF as non-hazardous waste. This means that the ash can continue to be disposed at the I-95 Ashfill under its permit for non-hazardous materials. The ash conditioning system that was added to the E/RRF in FY 2005 is providing stabilization for the ash that is placed in the I-95 Ashfill.

The E/RRF has helped reduce the overall Fairfax County waste system carbon emissions by about one ton of carbon for every ton of waste processed. This calculation includes the reduction in overall carbon dioxide generated by the waste management system, due to emission reductions that are realized by not transporting waste to a landfill, the actual carbon dioxide that would be generated at the landfill as well as the carbon dioxide that would be emitted to produce electricity using a fossil fuel.

The Energy/Resource Recovery Facility supports the following County Vision Elements:



Maintaining Safe and Caring Communities



Creating a Culture of Engagement



Practicing Environmental Stewardship



Exercising Corporate Stewardship

CFI and the County have negotiated an innovative project that allows the E/RRF to use reclaimed water from the Noman Cole Wastewater Treatment Plant as the cooling water at the E/RRF, saving millions of gallons of potable water each year. The project became operational in FY 2013. The County is always exploring new technology to ensure that the E/RRF continues to provide the required environmental service of waste processing while having the least environmental impact possible.

The County approved CFI's request to conduct a pilot project to process incoming ash from its Alexandria facility to remove additional ferrous metals before the ash is deposited in the County's landfill. This is another mutually beneficial and innovative program that the County and CFI initiated to solve a common problem. Revenue from the increased amount of ferrous metal sold will be used to reduce the cost of CFI operations to the County.

The Fairfax County and CFI agreement extends through February 1, 2016. At that time, it is expected that disposal costs to the County will increase considerably and the County will start to use the Rate Stabilization Reserve to moderate increases in the tipping fee charged to users of the E/RRF. Currently the County is exploring all the options available for waste disposal after the current service agreement ends, including the awarding of a new disposal agreement to CFI.

The Household Hazardous Waste (HHW) program, the three Conditionally Exempt Small Quantity Generator events, rechargeable battery collection, eleven "Electric Sundays," and other programs continue to remove significant amounts of materials with hazardous properties from the waste stream of the E/RRF. These measures contribute to the facility maintaining a low environmental impact for the amount of waste disposed by County residents.

Performance measures for Solid Waste are displayed at a program-wide level. Please refer to the Solid Waste Management Program Overview in Volume 2 of the [FY 2015 Adopted Budget Plan](#) for those items.

Fund 40160

Energy/Resource Recovery Facility

Budget and Staff Resources

Category	FY 2013 Actual	FY 2014 Adopted	FY 2014 Revised	FY 2015 Advertised	FY 2015 Adopted
FUNDING					
Expenditures:					
Personnel Services	\$894,742	\$916,309	\$927,289	\$972,027	\$980,027
Operating Expenses	16,481,705	20,535,512	20,535,512	20,535,512	20,535,512
Capital Equipment	0	0	0	0	0
Total Expenditures	\$17,376,447	\$21,451,821	\$21,462,801	\$21,507,539	\$21,515,539
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	12 / 12	12 / 12	12 / 12	12 / 12	12 / 12
1 Management Analyst III	1	1 Heavy Equipment Operator	1	1 Administrative Assistant II	
1 Management Analyst II	1	1 Administrative Assistant IV	5	5 Weighmasters	
1 Engineering Technician II	1	1 Administrative Assistant III			
TOTAL POSITIONS					
12 Positions / 12.0 FTE					

FY 2015 Funding Adjustments

The following funding adjustments from the FY 2014 Adopted Budget Plan are necessary to support the FY 2015 program. Included are all adjustments recommended by the County Executive that were approved by the Board of Supervisors, as well as any additional Board of Supervisors' actions, as approved in the adoption of the budget on April 29, 2014.

- ◆ **Employee Compensation** **\$71,577**
 An increase of \$71,577 in Personnel Services includes \$53,257 to support increases in Fringe Benefits based on actual experience in previous years. In addition, an increase of \$18,320 in Personnel Services includes \$10,320 for a 1.29 percent market rate adjustment (MRA) for all employees and \$8,000 for a 1.00 percent salary increase for non-uniformed employees, both effective July 2014.
- ◆ **Other Post-Employment Benefits** **(\$7,859)**
 A decrease of \$7,859 in Personnel Services reflects required adjustments associated with providing Other Post-Employment Benefits (OPEBs) to retirees, including the Retiree Health Benefits Subsidy. For more information on Other Post-Employment Benefits, please refer to Fund 73030, OPEB Trust Fund, in Volume 2 of the FY 2015 Adopted Budget Plan.

Changes to FY 2014 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2014 Revised Budget Plan since passage of the FY 2014 Adopted Budget Plan. Included are all adjustments made as part of the FY 2013 Carryover Review, FY 2014 Third Quarter Review, and all other approved changes through April 30, 2014.

- ◆ **Carryover Adjustments** **\$10,980**
 As part of the FY 2013 Carryover Review, the Board of Supervisors approved funding of \$10,980 in Personnel Services for a one-time compensation adjustment of \$850 for merit employees paid in November 2013.

Fund 40160

Energy/Resource Recovery Facility

FUND STATEMENT

Fund 40160, Energy/Resource Recovery Facility (E/RRF)

	FY 2013 Actual	FY 2014 Adopted Budget Plan	FY 2014 Revised Budget Plan	FY 2015 Advertised Budget Plan	FY 2015 Adopted Budget Plan
Beginning Balance	\$36,396,132	\$48,622,139	\$46,300,636	\$52,444,206	\$52,444,206
Revenue:					
Disposal Revenue ¹	\$27,095,091	\$31,193,600	\$27,423,371	\$31,193,600	\$31,193,600
Other Revenue:					
Interest on Investments	119,209	100,000	100,000	150,000	150,000
Miscellaneous ²	66,651	125,000	125,000	125,000	125,000
Subtotal Other Revenue	\$185,860	\$225,000	\$225,000	\$275,000	\$275,000
Total Revenue	\$27,280,951	\$31,418,600	\$27,648,371	\$31,468,600	\$31,468,600
Total Available	\$63,677,083	\$80,040,739	\$73,949,007	\$83,912,806	\$83,912,806
Expenditures:					
Personnel Services	\$894,742	\$916,309	\$927,289	\$972,027	\$980,027
Operating Expenses ³	16,481,705	20,535,512	20,535,512	20,535,512	20,535,512
Capital Equipment	0	0	0	0	0
Total Expenditures	\$17,376,447	\$21,451,821	\$21,462,801	\$21,507,539	\$21,515,539
Transfers Out:					
General Fund (10001) ⁴	\$0	\$42,000	\$42,000	\$42,000	\$42,000
Total Transfers Out:	\$0	\$42,000	\$42,000	\$42,000	\$42,000
Total Disbursements	\$17,376,447	\$21,493,821	\$21,504,801	\$21,549,539	\$21,557,539
Ending Balance⁵	\$46,300,636	\$58,546,918	\$52,444,206	\$62,363,267	\$62,355,267
Tipping Fee Reserve ⁶	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Rate Stabilization Reserve ⁷	34,800,636	47,046,918	40,944,206	50,863,267	50,855,267
Operations and Maintenance Reserve ⁸	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Unreserved Ending Balance	\$0	\$0	\$0	\$0	\$0
Disposal Rate/Ton	\$29	\$29	\$29	\$29	\$29

Fund 40160

Energy/Resource Recovery Facility

¹ The decrease in FY 2014 revenue reflects lower than projected disposal tonnage. The fund is absorbing this reduction through the use of reserves.

² Miscellaneous Revenue is generated by the excess amount that Covanta Fairfax, Inc. (CFI) charges for the disposal of Supplemental Waste.

³ In order to account for revenue and expenditures in the proper fiscal year, an audit adjustment in the amount of \$447,980.34 has been reflected as an increase to FY 2013 Operating Expenses to accrue expenditures associated with the reimbursement of tipping fees due from Covanta. This audit adjustment has been included in the FY 2013 Comprehensive Annual Financial Report (CAFR). Details of the audit adjustment were included in the FY 2014 Third Quarter Package.

⁴ Funding in the amount of \$42,000 is transferred to the General Fund to partially offset central support services supported by the General Fund which benefit Fund 40160. These indirect costs include support services such as Human Resources, Purchasing, Budget and other administrative services.

⁵ Ending balance fluctuations are a result of operating and revenue requirements that change annually. Funding is carried forward each fiscal year to provide flexibility given the uncertainty of market conditions, tipping fee negotiations, and expenditure requirements.

⁶ The Tipping Fee Reserve is used to buffer against sharp annual changes in tipping fees. Potential changes could result from issues such as tax changes regarding energy sales, power deregulation, state or EPA environmental fees, and/or contract changes.

⁷ The Rate Stabilization Reserve (RSR) is maintained in order to buffer against significant increases in tipping fees charged to users of the E/RRF. This reserve is expected to peak in FY 2015 and will begin to be used in FY 2016 when the current Waste Disposal Agreement expires and disposal costs to the County are expected to rise.

⁸ The Operations and Maintenance Reserve is maintained for ongoing improvements and enhancements to the E/RRF including emissions control efforts. Future projects may include additional retrofits to the air pollution control systems for reductions in nitrogen oxides. The reserve will fund the County's share of the initial capital expenditures on the improvements, future uses would include end-of-lease site management.