

# Solid Waste Management

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LOB #358:

## **ENERGY / RESOURCE RECOVERY FACILITY**

### **Purpose**

- The Energy/Resource Recovery Facility (E/RRF) is a public/private partnership between Fairfax County and Covanta Energy, Inc. to incinerate solid municipal waste for electrical power production in a safe, environmentally responsible manner;
- Reduce the need to dispose of municipal refuse in a landfill and results in significantly less environmental risk; and
- The Covanta facility produces approximately 80 megawatts of electricity.

### **Description**

- The E/RRF annually processes approximately 650,000 tons of waste generated by residents and businesses in Fairfax County and 40,000 tons of waste from Prince William County through an inter-jurisdictional agreement. In addition, the E/RRF facility annually burns approximately 200,000 tons of municipal solid waste from Washington, D.C.;
- The current contract between Fairfax County and Covanta Fairfax, Inc. (CFI) expires in February of 2016. The SWMP has renegotiated a five-year contract with Covanta with two five-year extension options, which will provide disposal capacity until 2031, when the lease for the property upon which CFI is situated will expire. Prices are anticipated to increase based on the terms of the new contract;
- The SWMP charges customers a disposal fee for all tonnages that flow through the CFI facility. These fees and program expenses are accounted for in a special revenue fund that is used solely to finance the operation and maintenance of the E/RRF facility
- CFI owns and operates the E/RRF waste processing facility that is specifically designed for the combustion of waste. This facility incinerates municipal solid waste to produce steam that turns turbines, generating over 80 megawatts of electricity;
- Air emissions from the facility are regulated under the terms of an air permit issued by the VDEQ;
- Ash generated by the combustion of waste is landfilled on site by County employees;
- Fairfax County is obligated to deliver a minimum amount of municipal solid waste to CFI known as Guaranteed Annual Tonnage (GAT). Under the original long-term contract it had to deliver 930,750 tons of waste per year including waste from Washington, D.C. and Prince William County. When the new contract goes into effect in February 2016, GAT will decrease to 650,000 tons per year. The new GAT amount does not include waste generated in Washington, D.C., which is approximately 200,000 tons per year.

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## Benefits

The County has taken responsibility for the management of solid wastes generated within its borders through the operation of the E/RRF. The benefits are as follows:

- Waste volumes are reduced by about 90 percent thereby reducing the amount of landfill space needed to dispose of this amount of waste;
- Power is generated using waste material thus replacing the need to generate power with fossil fuels;
- The facility is operated in compliance with federal and state environmental regulations ensuring that the impacts of waste disposal are minimized;
- Truck traffic in the region is minimized by preventing the long hauling of waste into another jurisdiction;
- Waste-to-Energy is considered an environmentally preferred method of disposing of municipal waste by the EPA;
- The E/RRF provides Fairfax County with greater control over its destiny through an in-county disposal operation that is not dependent upon long haul options or out-of-county disposal sites and reduces the county's exposure to market rate fluctuations; and,
- Equipment and staff used at this location respond to emergencies such as flooding, storm events and other natural or man-made disasters in the County. Staff coordinate with FRD and the FCPD during emergency events to provide assistance such as roadway clearing and winter weather events.

## Mandates

While the use of the waste-to-energy facility is not mandated in the Commonwealth, it provides the County with an environmentally responsible method of disposing of municipal waste that is preferred over landfilling.

## Trends and Challenges

### Trends

- The existing contract between the County and CFI changes in FY 2016. A new WDA has been awarded to CFI which significantly changes the relationship between the two organizations, as well as the price that the County will pay CFI after the new agreement goes into effect.
- The new agreement will have a partial- year affect in FY 2016 and full- year impact on the FY 2017 Advertised Budget Plan under the WDA. Careful staff management of the Service Agreement with CFI and the new WDA will allow the County to hold down disposal fees charged to customers. The WDA guarantees the County capacity to dispose of its waste through January 31, 2021, with two additional five-year terms available. This WDA covers the period of CFI's lease of the property to FY 2031. If the County and CFI agree to two more five-year terms, the county will have identified disposal capacity until 2031.
- If the County and CFI decline to agree on the additional five-year terms, the County would need to find disposal capacity elsewhere for wastes generated in the County.
- A 2012 study of waste disposal prices revealed that Fairfax County will pay CFI 14 percent-24 percent lower than the current market prices (\$40-\$45/ton) based on the new contract.

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## Challenges

- The SWMP is planning for the period starting in 2031 after the lease with the CFI facility ends. At this point, the E/RRF will be over 40 years old and most likely will be in need of significant rehabilitation and perhaps equipment replacement. The County has the opportunity now to develop additional solid waste management and recycling capacity at the I-95 facility to allow for the continued self-funding of the County's solid waste program. Staff is currently developing plans to continue solid waste management activities at the I-95 location beyond 2031. This involves the evaluation of new and emerging technologies for the management of solid waste.

## Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
<b>LOB #358: Energy / Resource Recovery Facility</b>			
<b>FUNDING</b>			
<u>Expenditures:</u>			
Compensation	\$930,747	\$937,746	\$1,009,485
Operating Expenses	16,950,293	16,581,591	24,791,786
<b>Total Expenditures</b>	<b>\$17,881,040</b>	<b>\$17,519,337</b>	<b>\$25,801,271</b>
<u>Transfers Out:</u>			
Transfer Out to General Fund	\$42,000	\$42,000	\$49,000
<b>Total Transfers Out</b>	<b>\$42,000</b>	<b>\$42,000</b>	<b>\$49,000</b>
<b>Total Revenue</b>	<b>\$28,341,049</b>	<b>\$27,268,275</b>	<b>\$25,958,161</b>
<b>POSITIONS</b>			
Authorized Positions/Full-Time Equivalents (FTEs)			
<u>Positions:</u>			
Regular	12 / 12	12 / 12	12 / 12
<b>Total Positions</b>	<b>12 / 12</b>	<b>12 / 12</b>	<b>12 / 12</b>

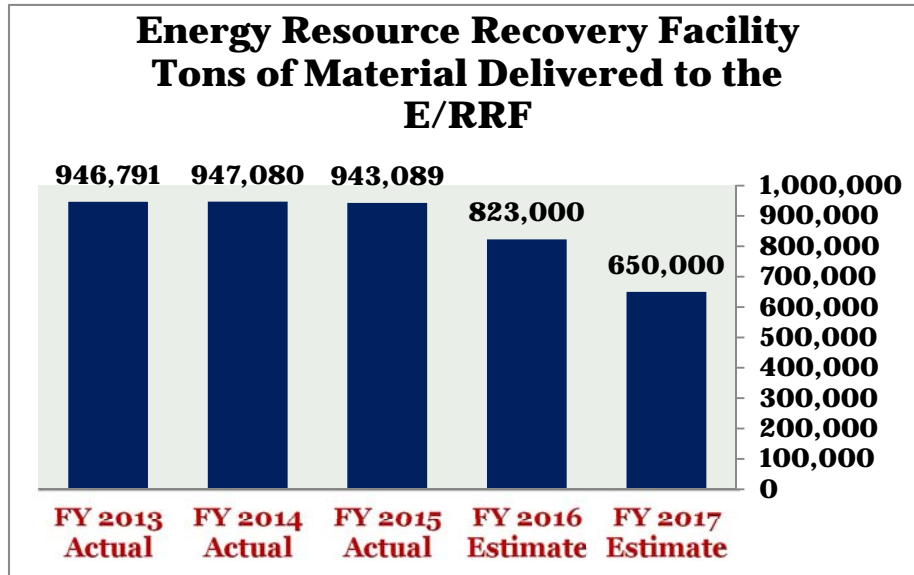
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## Metrics

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Tons of material delivered to the E/RRF	946,791	947,080	943,089	823,000	650,000
Cost per ton of material processed at the E/RRF	\$18.35	\$18.40	\$18.62	\$28.00	\$28.70
Percent of Guaranteed Annual Tons met	101.72%	101.75%	101.33%	101.13%	100.00%

### Tons of Material Delivered to the Energy/Resource Recovery Facility (E/RRF)

Under the new Waste Disposal Agreement between Fairfax County and CFI, effective February 2, 2016, it is anticipated that waste tonnage delivered to E/RRF will decrease. The current contract with Covanta, which expires February 1, 2016, required Fairfax County to deliver 930,750 tons of solid waste annually to the E/RRF. When the new contract goes into effect in February 2016, GAT will decrease to 650,000 tons per year. The new GAT amount does not include waste generated in Washington, D.C., which is approximately 200,000 tons per year.



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## Energy/Resource Recovery Facility (E/RRF) Cost Per Ton of Material Processed

The tipping fee charged to Fairfax County by Covanta will increase as a result of the revised agreement over the next five years. As a result of Board of Supervisor's foresight in 2011, the E/RRF Special Revenue Fund has increased its Rate Stabilization Reserve to \$51.3 million as of June 30, 2015. This reserve will be drawn down to allow for the gradual increase in fees Fairfax charges its customers during the term of the new contract. Note that in FY 2011 and prior years, the rate was at \$31 per ton, and it significantly decreased from 2012 - 2016 as a result of the payoff of the E/RRF revenue bonds. Although the cost per ton will increase in February 2016 due to the new contract, the new rate remains below the market rate in the metropolitan area.

