



Reduce Waste & Create Resources

Objective:

Minimize King County's operational environmental footprint

Strategy:

Create resources from wastewater and solid waste disposal

Why is this strategy important?

King County is a major regional producer of renewable energy through energy-capture programs at its landfill and its wastewater treatment plants. The County's contribution of renewable energy to the region is as environmentally beneficial as buying and using renewable energy--and provides significant revenue for investing in additional energy efficiency and renewable energy generation opportunities.

King County provides essential utility services, including solid waste management and wastewater conveyance and treatment, to residents and businesses in King and parts of Pierce and Snohomish counties. Because of policy drivers including zero waste of resources, climate, energy, green building and 3 percent efficiency, King County seeks to maximize the creation of resources from the wastewater and solid waste management processes.

Treating hundreds of thousands of wastewater daily allows cost-effective opportunities for re-use water, product use of biosolids, and creating energy from biogas. Similarly, as the region's largest landfill operator, King County can provide significant amounts of renewable energy from landfill gas.

How is our performance?

King County has successfully met targets with wastewater recovery efforts for reclaimed water and biosolids reuse.

King County's Wastewater Treatment Division (WTD) converts wastewater into reclaimed water--a resource needed for treatment plant operations and customers. Internal use accounted for more than 99 percent of all reclaimed water used in 2011. King County produced 323 million gallons of reclaimed water in 2011, significantly exceeding the 260 million gallon target.

King County's Wastewater Treatment Division also markets and recycles biosolids, a nutrient-rich organic material produced by treating wastewater solids. 100 percent of the biosolids produced by King County are reused at this time.

King County also converts the natural gas byproducts of the wastewater treatment process into valuable resources. In 2011 King County reclaimed 33 percent of the carbon dioxide and methane gas byproducts of the wastewater treatment process into heat and energy use for inside the treatment

plants. The target was 75 percent.

Moving forward

King County is currently rebuilding its cogeneration power plant at West Point, with a new 2.5 average megawatt plant that is scheduled to come on-line late in 2012, and will sell the renewable electric power to Seattle City Light. This will help increase our biogas production to target levels. King County Water Treatment Division Renton treatment facility is currently reassessing its application of biogas to ensure that the gas is being applied for best utility and value. Sale of landfill gas and environmental credits from the County's Cedar Hills landfill will greatly expand the County's contribution to the region's renewable energy supply while providing revenue. Together, these gas-energy plants maximize the productive use of available waste methane gas to generate plant heat and produce natural gas and valuable renewable electric power for sale.

King County is committed to recovering and reusing the products of the wastewater treatment process at its regional clean-water facilities. The capability to beneficially reuse products increases the efficiency of the wastewater treatment plants, offers environmental sustainability and saves the ratepayers money.

Related Links

[King County Landfill Gas to Energy Project](#)

[King County Wastewater Resources Recovery](#)

[Wastewater Recovery Performance Measures](#)

Technical Notes

Data provided by King County Department of Natural Resources and Parks

Charts and Maps

