

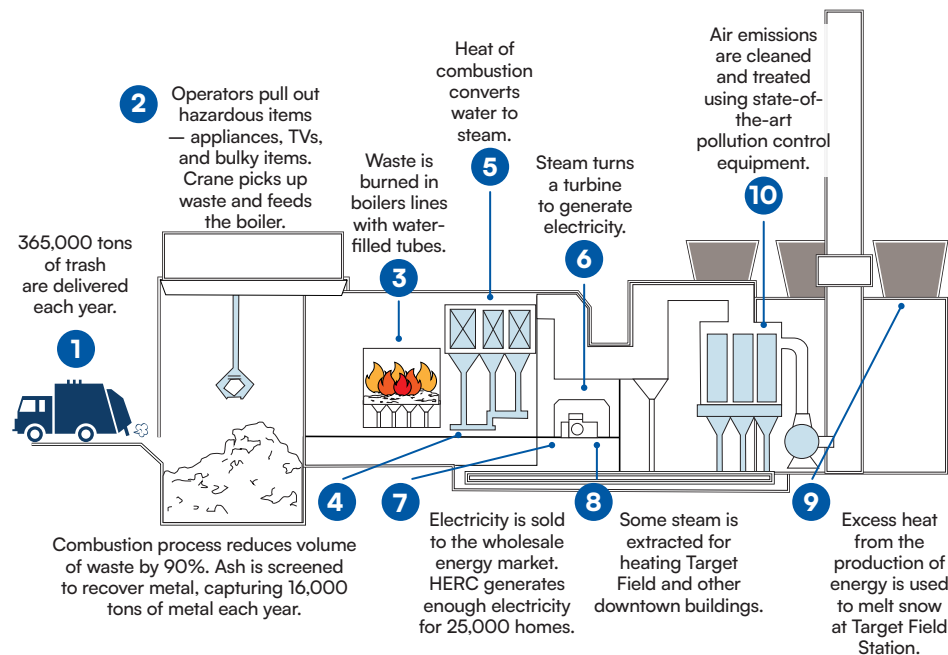
How is waste converted to energy at HERC?

Garbage trucks deliver waste from Minneapolis and surrounding communities to HERC. The waste is pushed into the waste pit with a loader. A crane picks the waste up from the pit and feeds it to the boilers. Operators look for and pull out hazardous and problematic wastes, such as appliances, televisions and bulky items, so they can be disposed of properly.

The waste is burned in boilers lined with water-filled tubes. The heat of combustion converts the water in the tubes to steam that turns a turbine to generate electricity. HERC produces enough electricity to power 25,000 homes. The electricity is sold on the wholesale energy market, also known as Midcontinent Independent System Operator (MISO).

A portion of the steam produced is extracted after going through the second stage of the turbine and sent to the steam line. This steam provides heating and cooling to the downtown Minneapolis district energy system and Target Field. District energy is a network of pipes that aggregates the heating and cooling needs for 100 downtown buildings. District energy systems are more efficient than buildings operating their own boilers and chillers.

The steam is then condensed back to water and circulated back to the boiler, completing a closed-loop.



A portion of the steam provides heating and cooling to the downtown Minneapolis district energy system and Target Field. In fact, heat from HERC works to green up the ballpark turf before the Twins home opener in April and melt the snow at Target Field Station plaza all winter long.



Additional resources



Take a virtual tour of HERC by watching a short video on how HERC generates energy from garbage, available online at [HennepinCounty.gov/HERC](https://www.hennepincounty.gov/HERC)



Learn about resources to reduce waste and improve recycling at [HennepinCounty.gov/recycling](https://www.hennepincounty.gov/recycling)

Hennepin County



Hennepin Energy Recovery Center

Converting waste to energy

Serving our community by providing the most environmentally friendly option for dealing with trash, while we all work toward reducing the waste we create.

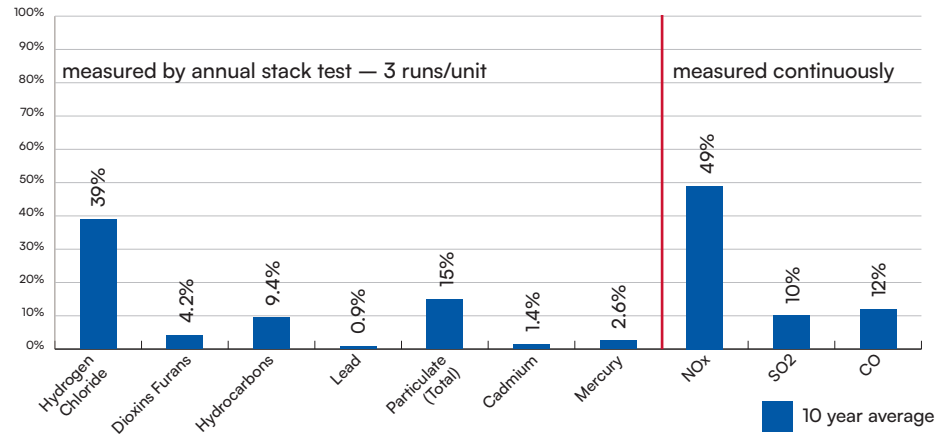
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HERC operates safely and minimizes pollution

The county maintains the highest performance standards at HERC, including its state-of-the-art pollution control system. Controlled high-temperature combustion prevents some air pollutants from forming. The exhaust system neutralizes others, or scrubs and filters them out. The system continually extracts and tests exhaust samples. Plant operators monitor the results around the clock and make adjustments to control air quality and prevent particulate matter from escaping.

HERC air emissions as a percent of MPCA permit levels

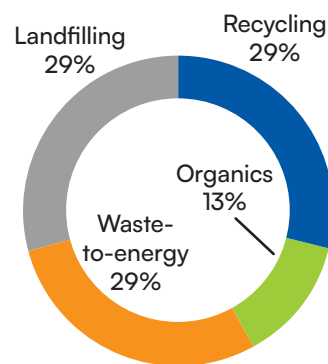


HERC avoids landfilling waste

The combustion process reduces the volume of waste by nearly 90 percent. The material remaining after combustion is non-hazardous ash. The ash is screened to recycle metals and then sent to a landfill. HERC recovers more than 16,000 tons of scrap metal each year, which is nearly triple the amount of metal collected in curbside recycling programs in the county.

How we manage our waste

Hennepin County residents and businesses generate more than one million tons of waste each year. Add up all this waste and it's enough to fill Target Field more than 11 times. Processing waste to recover energy at HERC is just one part of the county's integrated waste management system that emphasizes waste prevention, reuse, recycling and composting.



HERC is environmentally preferable to landfills

About half of the waste generated in the county is recycled or composted. The remaining trash can either be buried in the ground or burned for energy. HERC is better for the environment than landfills.

HERC	Landfills
	
Fewer environmental impacts	Greater environmental impacts
Air pollution control system to capture pollutants. This equipment is monitored 24/7.	The pollution control measures are buried — it could take years to detect and find a leak in a liner.
Waste is processed close to where it is produced, minimizing transportation of waste and associated truck emissions.	Waste continues to decompose, producing methane and organic compounds. This makes landfills an environmental and health risk for decades.
A ton of waste processed at HERC creates electricity to run a house for 21 days, plus steam to heat Target Field and downtown Minneapolis.	Hauling waste to far-away landfills generates more truck emissions. A ton of waste buried in a landfill creates electricity to run a house for 3 days.
Fewer greenhouse gas emissions.	More greenhouse gas emissions from methane.
16,000 tons of scrap metal recycled.	No scrap metal recycled.

Hennepin County is committed to zero waste

The county is accelerating a zero-waste future — defined as preventing 90% or more of all discarded materials from being landfilled or incinerated. Our Zero Waste Plan outlines 58 actions developed with hundreds of residents and industry stakeholders that when fully implemented have the potential to more than double the county's current diversion rate. We all have a responsibility to prevent waste and recycle everything we can. We are asking residents and businesses to take the following actions:

- Recommit to looking at the waste produced in your household and take steps to prevent waste before it's generated in the first place
- Use new or expanding recycling and waste prevention services
- Talk with your friends, family, neighbors and coworkers about reducing waste and recycling more
- Use your power as a consumer to let companies know that reducing waste and reducing climate impacts is important to you
- Explore volunteer opportunities such as Community Recycling Ambassador or Fix-it Clinics
- Advocate for policy changes at the state, county, and city level
- Support the development of zero waste infrastructure (drop-off sites, recycling facilities, etc.) in your community

What is in the trash?

By weight

