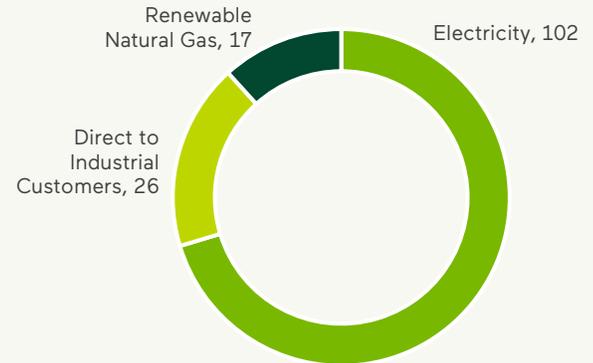


Creating Energy from Waste

Modern landfills are highly engineered facilities, designed to encapsulate all contents for controlled management. When organic material decomposes in an anaerobic environment such as a landfill, it naturally produces gases that include methane. These gases are captured through gas collection and control systems and converted into energy at 145 facilities across WM's landfill network.

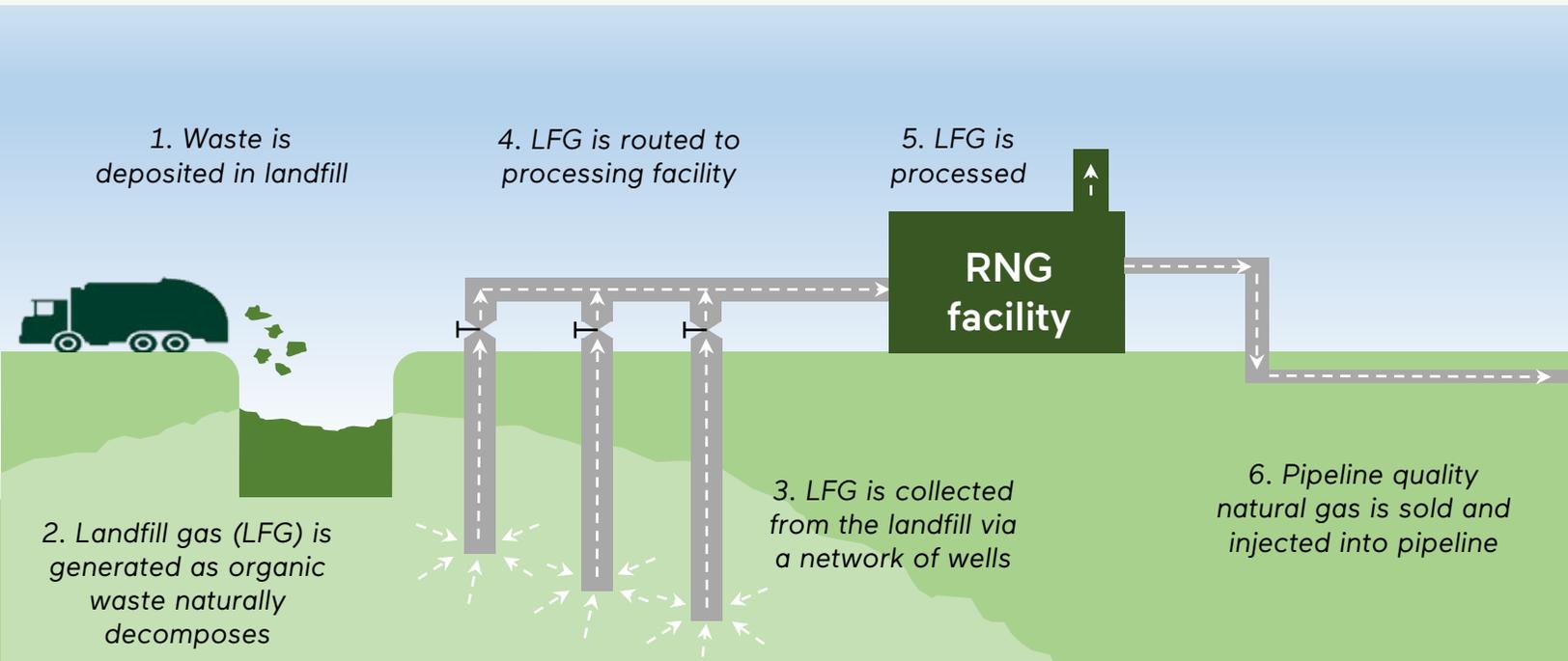
Our renewable energy business generates revenue from the sale of electricity, natural gas, environmental credits as well as from royalties received from third parties who have developed renewable energy facilities at our landfills. Overall, WM's renewable energy businesses contribute 1-2% of WM's total revenues.

145 Landfill Gas-to-Energy Facilities



Harnessing energy from our landfills to generate electricity and RNG

Generating RNG



RNG is pipeline-quality natural gas and offers a cost-effective, drop-in, low-carbon replacement for conventional natural gas derived from fossil resources. Therefore, the addressable market is technically equal to total natural gas demand, and RNG can be transported via existing natural gas infrastructure. The global energy transition and supportive regulatory backdrop make the sector an attractive area for investment.

[Click](#) to watch a video about our newest RNG facility at our Skyline Landfill in Ferris, Texas.

WM's Commitment to Natural Gas Vehicles

- WM operates the largest fleet of Class 8 heavy-duty natural gas vehicles (NGVs) in North America. We operate almost 11,000 NGVs, equal to 57% of our total collection fleet and 71% of our routed fleet.
- WM has invested \$3.0 billion in NGVs, with an additional investment of \$550 million in fueling infrastructure for these trucks. Our goal is to create a near-zero-emissions fleet, fueled almost entirely with RNG.
- For every diesel-powered truck we replace with natural gas, we reduce our annual fuel use by an average of 8,000 gallons, an equivalent of 14 metric tons of greenhouse gas (GHG).
- NGVs reduce nitrogen oxide (NOx) emissions by as much as 97% and diesel particulate matter by 94% compared to the diesel vehicles they replace.
- NGVs are up to ten decibels quieter than diesel trucks, offering significant noise reduction in the communities we serve.



Investing in Growing RNG Generation

WM is uniquely positioned to create environmental value from LFG-to-RNG projects. Our strategic advantage is underpinned by four critical resources:

- North America's largest landfill network
- Largest heavy-duty CNG fleet of its kind in North America providing unparalleled ability to monetize RNG through RINs
- Proven team of project managers, operators and marketers
- Strong balance sheet and cash generation to support investment

WM owns and operates five of the 17 RNG facilities in our network, and we've announced a plan to invest in 17 new RNG projects. These facilities are expected to grow RNG generation at WM operated facilities by 6x by 2026 to 24 million MMBtu per year. We expect capital investment of \$275 million in 2022 and an incremental \$550 million in 2023-2025 to generate estimated annual run-rate operating EBITDA of \$400 million by 2026.

These projects are expected to deliver strong returns and payback periods of about 3 years, assuming an average price of \$26/MMBtu (equivalent of \$2 RINs and \$2.50 natural gas).

The Value of Closing the Loop

Enacted by Congress in 2005 and administered by the EPA, the federal [Renewable Fuel Standard \(RFS\)](#) aims to promote domestic renewable fuel production and consumption. RNG produced from WM’s landfill gas is a qualifying renewable fuel under the RFS, and when matched with transportation demand such as WM’s natural gas collection fleet, creates a credit called a Renewable Identification Number (RIN). WM sells RINs to “obligated parties” under the RFS, such as domestic refiners and fuel importers, through a combination of spot market and contracted volume transactions.

RNG from landfill biogas generates 11.727 D-3 RINs per MMBtu. In the first half of 2022, the value of D-3 RINs averaged ~\$3.35, making the value of RNG used in WM’s fleet to generate a RIN approximately \$40-\$45 per MMBtu ($\$3.35 \text{ per RIN} \times 11.727 + \sim\$4.50 \text{ natural gas value} = \sim\44).

Several factors influence pricing for RINs, including the annual Renewable Volume Obligation (RVO) mandated by the EPA, which sets the compliance requirement for obligated parties, and the number of small refiner exemptions (SREs) granted to exempt small refiners from purchasing RINs. WM joins with industry organizations to advocate for stability, clarity and long-term viability to the RFS.



State Programs Provide Incremental Value

The Low Carbon Fuel Standard (LCFS) is a market-based program that focuses on reducing the average carbon intensity (CI) of transportation fuels within California. CI is the measure of GHG emissions associated with producing, distributing, and consuming fuel. CI is measured in grams of carbon dioxide equivalent per megajoule of energy provided by a fuel type. RNG from different sources has a different carbon intensity, based on complete lifecycle GHG emissions. Low carbon fuels below the benchmark, such as RNG from LFG, generate credits while fuels above the CI benchmark generate deficits.

The LCFS continues to lower its CI targets to meet clean transportation fuel goals, garnering attention from other states. Oregon and Washington have followed with an LCFS-like program, and other states such as Colorado, New Mexico and New York are considering adoption of similar programs.

At WM, about 55% of the fuel that we use in our natural gas fleet is renewable, produced from biogas from both landfills and dairy farms. About 30% of our natural gas fleet demand is matched with RNG from our own landfills. In California, Oregon, and Washington, 100% of our natural gas trucks run on RNG, earning credits under the respective state programs.



A Balanced Approach to Monetizing RNG

RINs

WM can match our RNG generation with natural gas consumption in our fleet to generate RINs. Near-term, this strategy has the potential for the highest value with prices of up to ~\$40 per MMBtu or higher.

Commercial and Industrial Users

WM can sell RNG to utilities or commercial and industrial customers under short, medium or long-term agreements. These agreements provide a guaranteed price in the mid or high teens per MMBtu, or possibly higher, depending on the terms.

Global Market

WM can market our RNG to global commodity logistics providers and end-users for further diversification. Strong demand for renewable attributes exists in mature European markets with early 2022 prices of \$25-\$35 per MMBtu.

Employing a Portfolio Approach to Optimize RNG Value While Managing Volatility

- While WM has historically used RNG in our CNG fleet to generate RINs, we are pursuing additional avenues to monetize RNG as we grow the business.
- We are engaged with a broad range of market participants and are focused on managing near-term volatility through structured contracts with a variety of attributes including fixed prices, floor prices with RIN value sharing mechanisms, collars, etc.
- Currently, we've contracted roughly one-third of expected RNG volumes through such structured arrangements over the next two years, and our expectation is that this portion of the portfolio will grow relative to merchant sales of RNG.
- This approach provides confidence in securing attractive returns on our RNG projects.

Strong and Growing Demand from Multiple Sources

Commercial and industrial end markets continue to develop as decarbonization efforts drive increased demand for secure supplies of renewable fuel. Governments are increasingly requiring utilities to use RNG, and large industrial and commercial end users are purchasing more renewable fuel to meet their sustainability commitments. We expect this will drive higher demand for RNG over time.