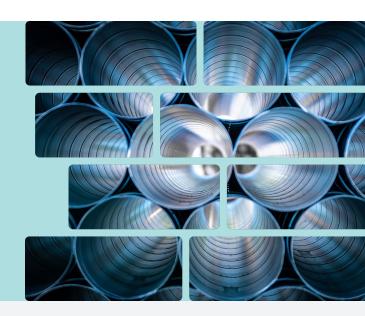


# Risk and Opportunity in a Resource-Constrained World: The Circular Economy Imperative



CALVERT RESEARCH AND MANAGEMENT | October 2025

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Vice President, ESG Quantitative Research In a world shaped by resource scarcity and supply chain challenges, Calvert views the circular economy—a model that minimizes waste and reuses resources—as a strategic investment opportunity. By aiming to break the link between economic growth and natural resource depletion, it offers a resilient model for addressing decarbonization, waste, pollution and biodiversity loss. Companies are adopting circular economy models to address environmental objectives, such as reducing carbon emissions, pollution and waste by improving resource efficiency. Trends like rising energy demand and expanded data processing for artificial intelligence (AI) are increasing the need for raw materials, thereby drawing attention to circularity as a potential solution. Factors such as geopolitical instability and supply chain challenges also contribute to this focus.

Calvert's *Circular Economy Thematic Universe* defines a list of companies that are aligned with our circular economy taxonomy and can be used in portfolio construction processes. With deep research expertise, Calvert is well-positioned to design customized investment strategies tailored to clients' responsible investing needs.

# Circular economy versus other economic models

A circular economy model seeks to limit the use of primary resources and reduce waste by emphasizing product reuse and material recovery. This differs from the linear "take-make-waste" model that relies on continuous resource extraction, consumption, and disposal. A circular approach decouples economic growth from finite resource consumption. Given concerns over supply chain resilience, we believe integrating circularity into investment analysis is increasingly important for responsible investors like Calvert.

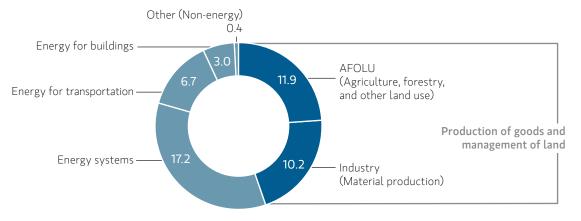
# Circular economy is a key component of climate investing

Circular economy principles can help address the 45% of greenhouse gas (GHG) emissions that can be attributed to the production of materials, products, and food and land management (*Display 1*).<sup>1</sup>

It is widely acknowledged that GHG emissions, environmental pollution and nature degradation are mispriced externalities. Embracing a circular economy has the potential to reduce carbon emissions as well as eliminate waste and pollution, thus promoting biodiversity.<sup>2</sup>

# DISPLAY 1 Circular Economy Can Address 45% of Global GHG Emissions

Global GHG emissions - Billion tonnes of  ${\rm CO_2}{\rm e}$  per year, 2020



Note: 'Industry' and 'AFOLU' include their own energy-related emissions but not indirect emissions from electricity and heat production. Source: IPCC. Fifth Assessment Report (ARS) and Material Economics analysis.

Source: Ellen MacArthur Foundation.

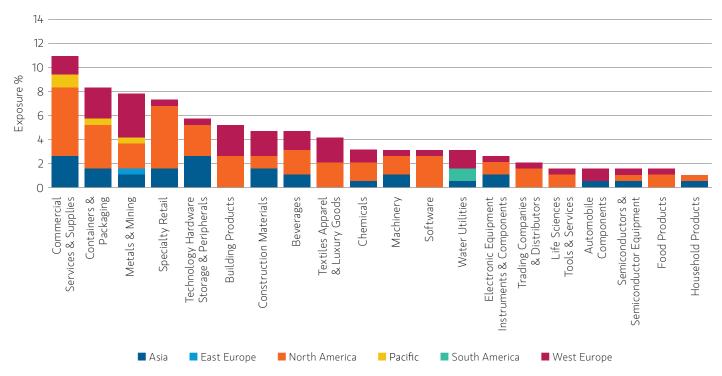
<sup>&</sup>lt;sup>1</sup> Ellen MacArthur Foundation, The Circular Economy: A Missing Piece in City Climate Action Plans?, Pippa Henderson, September 2023.

<sup>&</sup>lt;sup>2</sup> Ellen MacArthur Foundation, Biodiversity Overview. Information as of September 2025.

# **Calvert's Circular Economy Thematic Universe**

Calvert's proprietary Circular Economy Thematic Universe (the "Universe") is a collection of over 150 global issuers across a wide range of GICS (Global Industry Classification Standard) industries (*Display 2*) that we believe are best positioned to benefit from circular economy opportunities.

DISPLAY 2
Broad GICs Industry and Regional Exposure in Calvert's Circular Economy Thematic Universe



Exposures derived from an equal-weighting of issuers in Calvert's Circular Economy Thematic Universe. Source: Calvert Research & Management, September 2025.

# **Calvert's Circular Economy Thematic Universe Taxonomy**

To compile the Universe, we identified issuers with financially material exposures (revenue, expense and risk, *Display 4*) across four circular economy themes:

- 1. Sustainable Materials,
- 2. Circular Economy Leadership,

- 3. Asset Lifecycle Management, and
- 4. Waste Collection, Transformation & Reduction.

# **DISPLAY 3**

# **Calvert's Circular Economy Themes**

# **WASTE COLLECTION, MANAGEMENT & TRANSFORMATION**

Gathering, recycling, and transforming used materials for reuse waste and resource consumption

# **SUSTAINABLE MATERIALS**

Product/Business model is materially utilizing or producing recycled/recyclable materials

# **ASSET LIFECYCLE MANAGEMENT**

Business models or practices that extend the useful life of assets or increase asset utilization rates thereby reducing waste and resource consumption

# **CIRCULAR ECONOMY LEADERSHIP**

Product design or use incorporates circular principles for material selection and waste minimization

# **DISPLAY 4**

**REVENUE** 

# Calvert's Financial Materiality Assessment



# 5

# EXPENSES

- Embracing circularity can lead to new product lines, increased client retention, customer satisfaction and product premium as consumer preferences shift
- Circular business practices can help manage GHG emissions, water use, hazardous materials, and waste thus lowering expenditures
- Implementing Circular product design principles can reduce unit cost of production via material selection and production waste



# RISK

- Sourcing more circular materials, such as recycled materials, can keep materials in-house and reduce geographic risk, thus improving supply chain security
- Navigating a fast-changing regulatory landscape as laws are enacted at local, state and national levels

This represents how the Calvert research team assesses financially material exposures to the circular economy under normal market conditions.

# Calvert's Circular Economy Heatmap

Our Circular Economy Heatmap (*Display 5*) builds upon the four circular economy themes identified in the Circular Economy Thematic Universe Taxonomy. For example, themes are associated with sub-themes to clarify focus. Sub-themes are then linked with representative GICS industries based on financial materiality along revenue, expenses, and risks.<sup>3</sup> We view this heatmap as a useful discussion tool because it quickly identifies where respective issuers may have meaningful circular economy exposures. We will refer to this heatmap in the theme-specific sections that follow.

DISPLAY 5

Overview of Circular Economy Taxonomy: Aligned Sectors and Financially Material Exposures

# FINANCIAL MATERIALITY EXPOSURES

THEME	SUB-THEME	EXAMPLES OF RELEVANT GICS SECTORS	REVENUE	EXPENSE	RISK
Sustainable Materials	Metals	Metals & Mining			
	Building Materials	Building Products Construction Materials			
	Packaging	Containers & Packaging			
Circular Economy Leadership	Product Design	Software			
		Textiles, Apparel & Luxury Goods			
	Packaging	Beverage, Household Products etc.			
	Recycled Content	Automobile Components, Building Products, Semiconductors			
	Optimization/Efficiency	Software, Electronic Equipment			
	Food	Food Retail, Agricultural Products & Services, Restaurants			
Asset Lifecycle Management	Resale	Transportation/Industrials			
		Retail			
	Product Lifecycle	IΤ			
	Rent/Lease	Transportation			
		Diversified Support Services			
	Repair/Refurbishment	Machinery, Transport			
Waste Collection, Management & Transformation	Solids	Waste Management			
	Water	Machinery, Chemicals, Environmental Services, Electronic Equipment, Water Utilities			

LEGEND						
COLOR CODING	OPPORTUNITY	MIXED	RISK			

Source: Calvert Research & Management

<sup>&</sup>lt;sup>3</sup> Calvert's research analyst frameworks for circular economy are unique to each sector analyst and peer group and do not perfectly align to GICS sectors. Frameworks underpin issuer selection for a sub-theme and there may be multiple frameworks applied to a sub-theme.

# **Introducing Calvert's Circular Economy Themes**

For each of Calvert's four themes, we discuss unique financial materiality considerations that are used to identify issuers that are aligned with circular economy universe. Each of the following sections discusses the theme, provides a description of aligned issuers, describes financial materiality from revenue, expense and risk perspective and provides a case study.

# 1. Sustainable Materials

Sustainable materials are the foundation of a circular economy and are fundamental to the basic goods that influence consumers day-to-day lives. We define issuers aligned to this sub-theme as those with a product or business model that primarily utilizes or produces recycled/recyclable materials.

# **FINANCIAL MATERIALITY**

In this section, we outline the financial materiality of the packaging sub-theme, which addresses key externalities such as pollution and single-use plastics:



# **REVENUE**

Packaging companies are typically intermediaries, where sales are often business-to-business models. Demand is influenced by end-customer preferences, which can be a positive or negative driver depending on a firm's product alignment. For instance, growing concerns over single-use plastics, plastic waste and ocean pollution has increased pressure on consumer brands to commit to recycled materials and recyclable packaging. This in turn

shifts packaging substrate demand, which can contribute to growth for aligned packaging companies but act as headwinds for others.



# EXPENSE

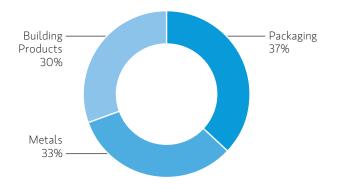
By implementing circular business practices, packaging companies can better manage greenhouse gas (GHG) emissions, water use, hazardous materials and waste, thereby reducing costs. For example, manufacturing primary aluminum is 20 times more energy intensive than recycling the material<sup>4</sup>—aluminum producers and downstream users can benefit from using recycled aluminum cutting costs and emissions.



### RISK

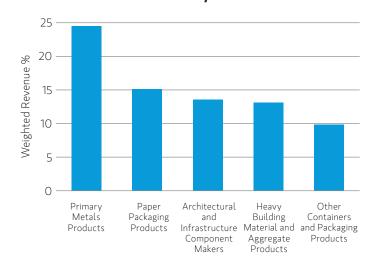
Packaging companies are facing growing regulatory pressures, particularly companies serving the European and California markets, from Extended Producer Responsibility (EPR) legislation. EPR mandates price the externality of waste, such as plastics, by charging producers fees for using these materials, while also incentivizing lower fees through favorable actions like increased recycled content.

# DISPLAY 6 Sustainable Materials Issuers in Calvert Circular Economy Universe by Sub-Theme



Source: Calvert Research & Management, July 2025 Note: Percentage is based on number of issuers within Calvert's Circular Economy Universe

DISPLAY 7
Revenue Activities (Top 5) within Sustainable Materials
Sub-Theme of Circular Economy Universe



Source: Calvert Research & Management, July 2025 Note: Percentage is based on an equal-weighting of issuers within the Circular Economy Universe

<sup>&</sup>lt;sup>4</sup> Ball Corp, 2023 Combined Annual & Sustainability Report, April 2024

Roll-out of these laws has been largely state by state, or country by country; however, there has been momentum in the European Union (EU). For example, in 2025, the EU's Packaging and Packaging Waste Regulation (PPWR) went into force, covering the entire packaging lifecycle—from design to waste handling. It restricts certain single-use plastics by setting minimum recycled content levels, requiring all packaging to be recyclable by 2030, and establishing payment structures tied to recyclability performance.

# **PAPER & PACKAGING CASE STUDY**

Calvert applied a customized framework to evaluate packaging issuers for circular economy alignment through a substrate-driven approach to mirror EPR regulations.

We evaluated substrates based on current recycling rates, lifecycle analysis, transport-related emissions, cost, and recycled content. Issuer material sourcing and recyclability ambitions furthered the analysis.

We found that issuers with greater exposure to plastic are disproportionately affected by EPR laws. For instance, packaging producers tied to soft drink companies are generally more exposed to plastic than alcoholic beverage companies that rely more on aluminum and glass. Polyethylene terephthalate (PET), a type of plastic, is 47% of Coca-Cola's packaging mix compared to Diageo's 1%. Similarly, we are already seeing plastic-based packaging producers lose share to fiber-based alternatives in areas like protective shipping.

<sup>&</sup>lt;sup>5</sup> Bloomberg Intelligence, Global Beverages: ESG Poses Broad Hurdles, Gail Glazerman, October 2023

# 2. Circular Economy Leadership

We view Circular Economy Leadership as the demand driver and counterpart to the Sustainable Materials theme. Leadership is demonstrated through five sub-themes: packaging (mostly beverage and consumer companies where packaging is an input); product design (IT hardware and software issuers, as well as apparel), recycled content (industrial and original equipment manufacturers (OEMs); food; and optimization/efficiency (software and electronic issuers). (See *Displays 8* and 9).

# **FINANCIAL MATERIALITY**

In this section, we outline the financial materiality of both revenue and risk for the packaging sub-theme, focusing on consumer-packaged goods companies. For the expense driver, we examine product design for textiles, apparel and luxury goods as these reflect the supply (Sustainable Materials)/ demand (Circular Economy Leadership) relationship central to the business models discussed in Sustainable Materials:



# REVENUE

Understanding and improving packaging systems is essential for a circular economy. Packaging plays a crucial role in

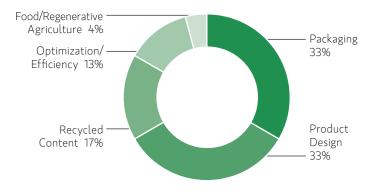
keeping goods safe, preserving quality and shelf-life, and serving as a marketing tool. According to Nielsen, "64% of customers are open to new products based on the packaging of a product." As consumer preferences and EPR push for sustainable packaging, substrate choice becomes a key part of product design. To address this, consumer-oriented companies increasingly work with packaging producers to evaluate packaging portfolios on recyclability and use of recycled materials.



# EXPENSE

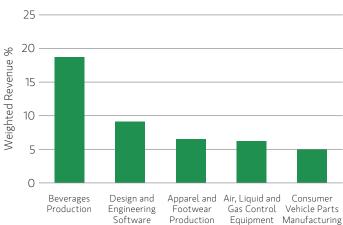
Businesses such as apparel, textile and discretionary retail are challenged by overproduction and overconsumption, i.e., the mismatch between supply and demand. Fast fashion has exacerbated the problem by stepping up the pace of design and production without embedding the social and environmental costs in consumer price tags. Yet, there are best practices that issuers can take in product design—such as utilizing organic, natural, biodegradable and plant-based fibers or materials, designing pieces to be worn for longer, offering repair services, creating recyclable pieces, and offering take-back schemes.

# DISPLAY 8 Circular Economy Leadership Issuers in Calvert Circular Economy Universe by Sub-Theme



Source: Calvert Research & Management, July 2025. Note: Percentage is based on number of issuers within Calvert's Circular Economy Universe.

# DISPLAY 9 Revenue Activities (Top 5) within Circular Economy Leadership Sub-Theme of Calvert Circular Economy Universe



Source: Calvert Research & Management, July 2025.

Note: Percentage is based on an equal-weighting of issuers within the Circular Economy Universe.

<sup>&</sup>lt;sup>6</sup> As reported in Specright, "Effective Packaging Management for Consumer Packaged Goods," Matthew Wright, July 2024

# **Example: Expense Drivers in Textile Emissions**

The textile sector (including its supply chains) **EMISSIONS** emits 2-8% of the world's GHGs annually; uses the equivalent of 86 million Olympic-sized swimming pools of natural water resources; and is responsible for 9% of microplastic pollution in our oceans.7

> Most GHG emitted by fashion brands are produced in their supply chains, concentrated at the material production and processing stages. For example, the carbon emissions from producing a virgin polyester t-shirt are ~200-300% more than a cotton version. To mitigate emissions, fashion brands can prioritize natural fibers, while keeping in mind that cost and suitability concerns may affect the desirability of these choices as well.

### WASTE

Unpriced externalities—indirect costs or benefits to a third party that are not included in the price of a product or service can be blamed for the excessive waste in the sector. These include cheap raw materials, cheap labor and no recourse for environmental degradation. The garment industry's waste can be broadly categorized into two types:

**Pre-Consumer**—Waste consists of manufacturing offcuts, leftovers and unsold inventory. Estimates suggest around one-quarter of the industry's resources are wasted every year.8

**Post-Consumer**— Of the total fiber input used for clothing, 87% is incinerated or sent to landfills.9 Less than 1% of used clothing is recycled into new garments<sup>10</sup> and global clothing consumption has more than doubled from 74.3 billion items of clothing and footwear in 2005 to 130.6 billion items in 2019.



Companies are facing accelerating regulatory pressures from EPR mandates, including the EU's PPWR. In January 2025, this regulation required separate collection of textile waste at end of life as well as EPR fees based on the sustainability of garments. These fees reflect a garment's eco-modulation, meaning use of recycled content, end of life recyclability and durability, and provide an incentive for producers to adopt

these design aspects. Based on Calvert's conversations with industry experts, the expected cost to producers is about €120 euro/tonne, or roughly €0.03/item, assuming 250 grams per item. Compliance with the EU's PPWR will be a form of risk mitigation as producers strive to reduce expected fees by evaluating their production practices, material selection and garment designs.

# CONSUMER DISCRETIONARY CASE STUDY

To identify companies with financially material circular leadership, we have designed a framework that assesses inventory management and profitability with considerations for material choice and durability. Inventory management centers on efficiency and measures how many days on average a company keeps inventory before selling it. All else equal, a longer days' worth of inventory may indicate a slower sales cycle or higher inventory costs, while a shorter days' worth of inventory could indicate fast fashion business practices. Profitability measures look at a firm's ability to turn inventory into cash above the cost of the inventory. Healthy readings along both metrics may suggest a company is forecasting market demand appropriately and can thus avoid unsold inventory becoming waste. Companies are further assessed for their focus on creating garments that can be reused, remade, recycled or safely composted.

For example, 88% of products produced for Levi's were made of 99% sustainably sourced cotton, a framework best practice. Further, they have designed their first-ever circular jean, defined by both material selection and recyclability design. They use organic cotton, wood pulp from sustainably managed forests, and Circulose—a pulp derived from industrial textile waste or denim waste. 12 Lastly, the company encourages consumers to wear their garments longer by focusing on product durability and offering repair services to tailor or customize products.

<sup>&</sup>lt;sup>7</sup> UNEP – United Nations Environment Programme, Sustainability and Circularity in the Textile Value Chain: A Global Roadmap 2023,

<sup>8</sup> Reverse Resources, Digitally Enhanced Circular Economy Within Global Fashion Supply Chains, 2017

<sup>&</sup>lt;sup>9</sup> UN Environmental Program, Cleaning up couture: what's in your jeans, December 2018

<sup>&</sup>lt;sup>10</sup> World Economic Forum, 5 Ways the Circular Economy Will Transform Your Fashion Habits, Mo Chatterji, January 21, 2022

<sup>&</sup>lt;sup>11</sup> Fashion Revolution, Why We still need a Fashion Revolution, Sarah Ditty et al., April 2020.

<sup>&</sup>lt;sup>12</sup> Levi's, Levi's First-Ever Circular 501 Jeans, January 2022

# 3. Asset Lifecycle Management

Once a product is in the marketplace, a key circular principle is maximizing its useful life and utilization to reduce waste and resource consumption. We see multiple ways that issuers align with the Asset Lifecycle Management theme. First, product design can improve a product's lifecycle characteristics through modularity for easy repairs. Second, business models such as renting, leasing, and resale naturally increase utilization. Relevant issuers in this theme are typically in the area of physical goods.

# **FINANCIAL MATERIALITY**

In this section, we outline the financial materiality of revenues and expenses within Asset Lifecycle Management's Rent/Lease sub-theme which commonly includes transportation-related issuers. Risks are best captured via right to repair efforts within the Repair sub-theme.



### REVENUE

In a linear economy, a product is typically sold once through a single transaction to use or consume and discard. However, in a circular economy, "product-as-a-service" models can result in steady income streams, higher recurring revenue and strengthened customer relationships. A classic example is an automobile or aircraft leasing model, which can give

used vehicles a second life. Leasing companies can also benefit by charging for maintenance and repair services that extend the asset's useful life.



# EXPENSE

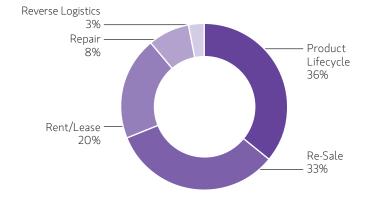
In a circular economy, the repair vs. replace decision would favor repair, factoring in the cost of repair versus new equipment. Proper maintenance can extend an asset's useful life, reducing ownership costs while delivering peak performance. Rent/lease models often increase incentives to extend useful life and pursue repairs.



### DISK

The Right to Repair (R2R), is a movement that advocates for the consumer's ability to repair and maintain their own products without facing unnecessary barriers from manufacturers. In recent years, R2R has gained traction in U.S. legislation efforts across party lines and in all 50 states. Meanwhile, in the late aughts, the EU enacted its version of R2R, called the European Repair and Maintenance Information (RMI) regulation. RMI established consumer protections from predatory repair prices and makes spare parts more easily accessible. In 2024, the EU Parliament extended RMI policies by adopting the "Right to Repair"

# DISPLAY 10 Asset Lifecycle Management Issuers in Calvert Circular Economy Universe by Sub-Theme

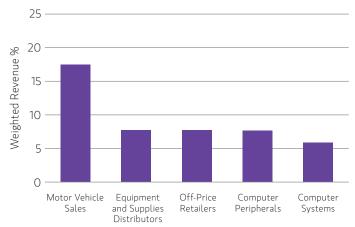


Source: Calvert Research & Management, July 2025.

Note: Percentage is based on number of issuers within Calvert's Circular Economy Universe.

# DISPLAY 11

# Revenue Activities (Top 5) within Asset Lifecycle Management Sub-Theme of Calvert Circular Economy Universe



Source: Calvert Research & Management, July 2025.

Note: Percentage is based on an equal-weighting of issuers within the Calvert Circular Economy Universe.

directive that obligates manufacturers to repair goods and encourage consumers to use goods to end-of-life.

R2R legislation has implications for equipment owners, repair technicians and producers. As legislation passes, it may be easier for equipment owners to seek third-party or DIY repairs, potentially taking business away from the OEM or primary manufacturer. However, other aspects of legislation, such as the EU's Right to Repair Directive,<sup>13</sup> can promote manufacturers to offer cost-effective repairs as well, which we see as an opportunity to promote brand loyalty. Other aspects of this law encourage eco-design, which promotes product repair by setting product design requirements and availability of spare parts.

# **LEASING CASE STUDY**

Calvert's circular economy framework for the transportation industry aims to identify issuers with material exposure to the Asset Lifecycle Management theme. We focused

on manufacturing, servicing, rental, leasing & distribution and logistics as areas with material alignment. For each business model, analysts looked at relevant practices, such as remanufacturing initiatives (a process that involves rebuilding a product back to its original manufactured form with parts that are new, repaired or reused), service and replacement policies, disposal and end-of-life handling/logistics, among others.

Rental and leasing companies play a central role in incentivizing circularity through increased asset utilization and promoting sharing, reuse, remaking and recycling. Rental and leasing companies are typically involved in the whole life of assets, taking delivery from OEMs and remaining involved until the assets are retired, providing the opportunity for parts to be reused in the supply chain. Leading equipment leasing companies are increasingly involved in the logistics and disposal of end-of-life assets, exposing them to additional opportunities to extract value through recycling and remanufacturing parts.

<sup>&</sup>lt;sup>13</sup> European Commission, Directive on common rules promoting the repair of goods, European Commission, June 2024

# 4. Waste Collection, Management & Transformation

Waste Collection, Management and Transformation may be the last of our circular economy themes, but, in some ways, we believe it is the most important. The process of gathering, recycling and transforming used materials into products for reuse and resource consumption is what distinguishes a circular economy from a take-make-waste system. This component can be the most challenging since it partially relies on human behavior to properly dispose of the waste to proper streams. For example, only 15% of plastic waste is collected for recycling globally and only 9% of all plastic waste is actually recycled.<sup>14</sup> Even if the consumer does recycle, there must be sufficient demand and viable economics at the other end of the recycling stream to make the process worthwhile for processers. The advancement of EPR laws can support recycling by targeting minimum recycled content, which would support demand for greater supply and processing capacity, thus benefitting waste management companies.

# FINANCIAL MATERIALITY

The Solids sub-theme ranks highest in financial materiality on our heatmap (*Display 5*), making it a key focus for circular economy considerations within our taxonomy.

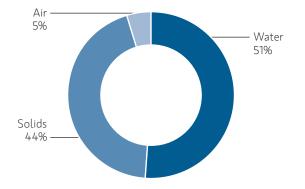


# REVENUE

Renewable Natural Gas (RNG) production is a circular practice undertaken by the waste management industry and a financially material revenue opportunity. RNG is produced from organic waste sources like landfills, livestock manure, food scraps and wastewater sludge, which is then processed into a substitute for conventional natural gas. RNG captures methane that would otherwise be released into the atmosphere and is considered "renewable" because the organic materials used to produce it are constantly replenished.

RNG production has been supported in the U.S. by an investment tax credit for projects started by December 31, 2024, 15 production tax credits through 2029, 16 and

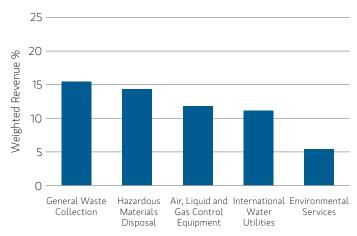
DISPLAY 12
Waste Collection, Management & Transformation Issuers in Calvert's Circular Economy Universe by Sub-Theme



Source: Calvert Research & Management, July 2025. Note: Percentage is based on number of issuers within Calvert's Circular Economy Universe.

**DISPLAY 13** 

# Revenue Activities (Top 5) within Waste, Collection, Management & Transformation Sub-Theme of Calvert Circular Economy Universe



Source: Calvert Research & Management, July 2025.

Note: Percentage is based on an equal-weighting of issuers within the Circular Economy Universe.

<sup>&</sup>lt;sup>14</sup> Organisation for Economic Co-operation and Development (OECD), Plastic pollution is growing relentlessly as waste management and recycling fall short, February 2022,

<sup>&</sup>lt;sup>15</sup> Holland & Knight, Key Highlights of the Section 48 ITC Final Regulations, Amish Shah et al., January, 2025.

<sup>&</sup>lt;sup>16</sup> RSM US, Clean Fuels and the One Big Beautiful Bill Act, July 2025

generation of Renewable Identification Number (RIN) credits when sold into the transportation fuel market. TEurope has also encouraged production of RNG (also referred to as bio-methane) through target setting for 35 billion cubic meres (bcm) by 2030 as part of its REPowerEU Plan.<sup>18</sup> This was further supported from a binding target in the EU Renewable Energy Directive (RED III) in 2023.<sup>19</sup>

EPR legislation is also catalyzing demand for waste management services by inducing demand floors on recycled content and increasing requirements for hazardous substance handling.



Within the waste management issuer group, production of RNG captures and reduces landfill operators' methane emissions. Waste management operators can also utilize RNG internally to power their fleet of vehicles or trucks, reducing fuel costs



# RISK

Global municipal solid waste generation is predicted to grow from 2.1 billion tonnes in 2023 to 3.8 billion tonnes by 2050.20 The growth in waste generation highlights the ongoing risk of landfill capacity for waste-management operators. Higher throughput volume on the recycling side can reduce the amount of waste sent to landfills, extending the useful life of landfill assets and shifting revenue streams. Further, depending on where recycling is processed and where demand is located, this could improve supply chain security for certain downstream materials.

# **WASTE COLLECTION. MANAGEMENT & TRANSFORMATION CASE STUDY**

Solid waste processing for second-life applications is a key part of a circular economy. Our framework evaluates issuers for exposure to RNG and landfill gas investments, recycling services and hazardous waste cleanup to determine alignment to this theme. We considered both current revenue and planned capital expenditure in our evaluation.

A prominent environmental solutions provider in North America, and a leader in utilizing landfill gas for its energy production, is investing \$1.6 billion in RNG over 3 to 5 years, which is expected to have a 3-year payback period. The RNG investment, combined with \$1.4 billion in recycling projects over 3 to 5 years, the company expects this to contribute an additional 7% of earnings before interest, taxes, depreciation and amortization (EBITDA). This company currently captures landfill gas for RNG use at 145 out of 250 landfills sites. In part, the company uses RNG internally to fuel its own fleet of 12,000 garbage trucks, which allows it to have lower scope 2 emissions compared to peers using traditional fossil fuels.

<sup>&</sup>lt;sup>17</sup> EPA, Renewable Identification Numbers (RINs) Under the Renewable Fuel Standard Program, January 2025

<sup>&</sup>lt;sup>18</sup> European Commission, Biomethane

<sup>&</sup>lt;sup>19</sup> McKinsey, The Iberian Green Industrial Opportunity: Biomethane, André Anacleto et al. August 2024

<sup>&</sup>lt;sup>20</sup> United Nations Environment Programme (UNEP), Global Waste Management Outlook 2024, UNEP, February 2024

# Conclusion

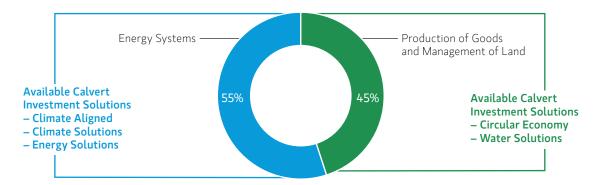
As global resources face increasing constraints and environmental regulations become more stringent, Calvert believes the circular economy is a compelling opportunity for responsible investors. Calvert's Circular Economy Thematic Universe can help investors address climate change through energy systems and the production of goods and management of land. By identifying key sub-themes and carefully evaluating companies for their alignment, Calvert's Circular Economy Universe offers investors access to the circular economy investment theme.

Incorporating this thematic universe aims to enhance our ability to help clients address the risks and harness the opportunities within the broader climate investing space. Through our specialized research and tailored investment strategies, Calvert enables investors to participate in the circular economy—whether as a stand-alone thematic portfolio or as tilt integrated into another climate investing solution. This positions clients to benefit from emerging trends, manage risk and make a lasting positive impact on the path to a more sustainable global economy.

# **DISPLAY 16**

# Calvert's Climate-Related Investment Solutions Address Energy Systems and Production of Goods and Management of Land

Global GHG Emissions by Source



Provided for informational purposes only, based on the research, analysis, and opinions of the presenter; not a recommendation to purchase or sell specific securities, or to adopt any particular investment strategy.

# **About Calvert**

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# **Risk Considerations**

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