



**Integrating Production
and Sustainability:**

How Food & Beverage Companies Can Achieve Net-Zero



BLACK & VEATCH

Clear Seas
RESEARCH

Many food processors perform the basics to save energy, but run out of expertise to realize their larger sustainability goals



Food and beverage companies want to embrace a more altruistic approach to improving their sustainability footprint, but must see accompanying improvements in their operations and bottom line, according to a study conducted by BNP Media's Clear Seas Research for Black & Veatch. That is, they want to become more efficient, use less energy, and create less waste or upcycle the waste that is generated as a part of the production process but, must see bottom-line results to accelerate their programs.

The study also found that while processors are often able to perform the basics—e.g., change out inefficient motors and lighting, add some solar panels on a facility's roof and seal up cracks and replace insulation—taking a next step requires finding trusted partners that can identify and implement the optimal mix of technologies, low carbon fuels and advanced process and recovery streams.

These more holistic sustainability projects include modifying existing infrastructure, changing out inefficient boiler systems, conducting energy and water audits and building water/wastewater treatment systems—systems that go beyond just

processing a wastewater stream and sending it to publicly owned treatment works (POTW).

"Sustainability has matured," said David Ziskind, Black & Veatch director of engineering, NextGen Ag. "It is no longer just about solar panels or LEED certification. Upcycling has become more important, making processors more cognizant of the waste they are producing, and looking for opportunities not only to reduce waste but to monetize that waste stream. One area we have seen this taking root is in digestion, particularly wastewater, as it can be a source of recovered energy that can be used to reduce operating costs. This trend is bringing us closer to a true triple bottom line of people, planet, profits. We're also encouraged to see both large, established manufacturers and emerging companies setting and executing plans for carbon neutrality and energy independence."

Whereas large multinational food and beverage processors have their own sustainability groups who advise and contract out work, many small and medium-sized manufacturers may start seeking out help from existing business relationships.

Food & Beverage Sustainability Vendors

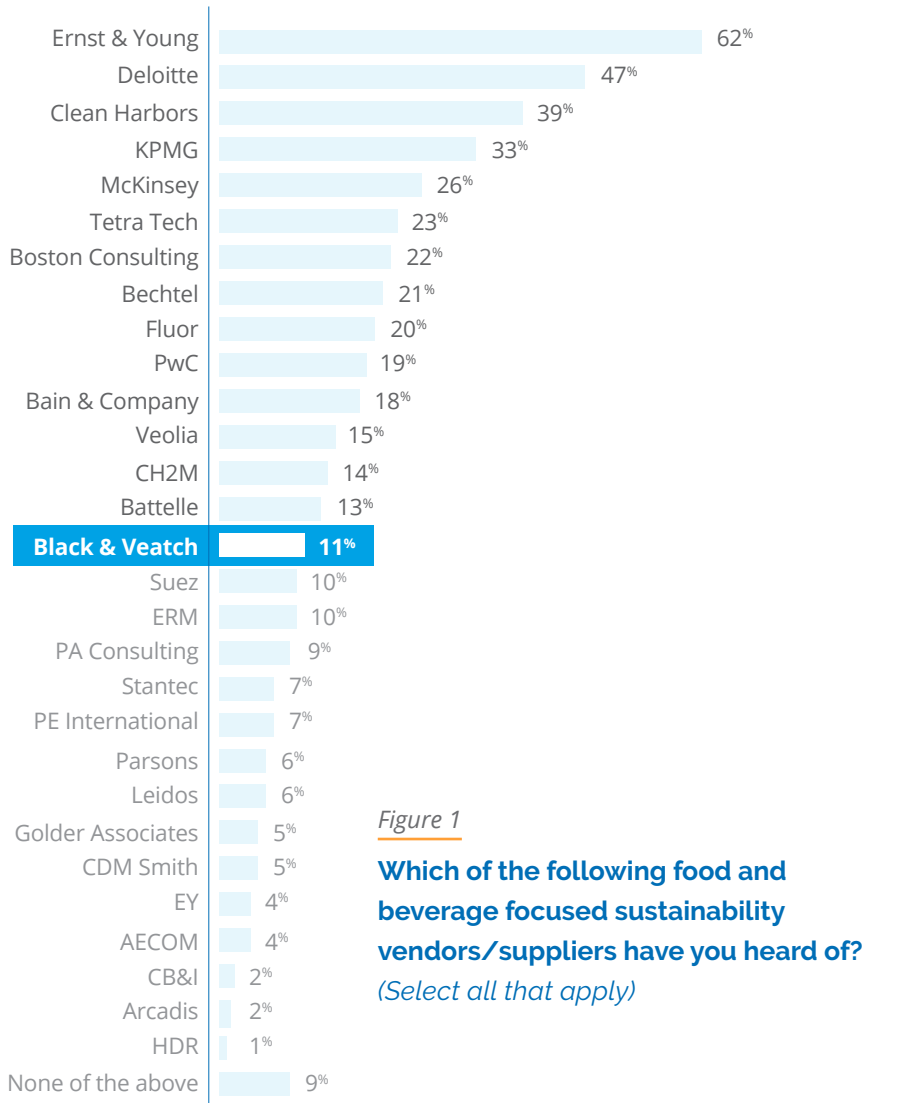


Figure 1

Which of the following food and beverage focused sustainability vendors/suppliers have you heard of?
(Select all that apply)

What does “environmentalism” mean to food processors?

“We believe in the whole circle—our first factory is the earth. We need to support our systems from seed to table.”

“How to use Earth’s resources as efficiently and safely as possible. How to avoid negatively affecting our communities and environment.”

“The process is to evaluate the best attainable product with the least damage to our environmental resources.”

“No impact to the environment; areas being prioritized are animal health, conserving forest and zero water and waste.”

“Avoiding the depletion of natural resources to maintain an ecological balance.”

“Recycling, and lowering trash waste and emissions into the environment.”

“Recyclability, planting trees back to replenish deforestation, fair trade, fair wages; plastic reduction, decrease in single-use plastic.”

“Happy cows produce the best milk, which is why we work with our farmers to promote best practices and support continuous improvements in animal well-being.”

According to the survey data (Figure 1), small to medium-sized food and beverage processors cited business consultants as a source for advice in sustainability projects. While these firms can certainly help direct a manufacturer’s funds to these projects and provide knowledgeable advice based on research they’ve conducted, processors may benefit from looking toward partners that have “hands-on” experience with sustainability projects to take the next steps and execute projects that will achieve a sustainability objective and provide a positive financial return on investment or return on visibility.

A Closer Look at the Research: Defining Sustainability Goals

According to the survey, the food and beverage industry is making progress in achieving corporate sustainability goals. In fact, three in five respondents assigned a high rating to their company’s

What sustainability goals large and very large processors are pursuing

[According to additional research that Black & Veatch conducted](#), there are other key issues regarding corporate sustainability goals and understanding the key strategies to realize these goals. For example, more than 80 percent of companies with revenues greater than \$250 million have set greenhouse gas (GHG) reduction goals, yet 25 percent have set goals at such a level that they are unsure how they'll meet them, representing the need for emerging technologies to close the gap.

In addition, a little more than two-thirds (67 percent) of the largest companies, those with revenue greater than \$10 billion, have set Scope 3 emissions targets reflecting the growing trend to influence emissions of other companies and activities in their value chains. According to the EPA, "Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain ... Scope 3 emissions, also referred to as value chain emissions, often represent the majority of an organization's total GHG emissions."

Other key findings from the [Corporate Sustainability Goal Setting and Measurement](#) report found that:

- Corporate management and investors are the top stakeholders driving sustainability commitments, far outweighing other influencers such as customers or regulators.
- Energy efficiency and renewable energy generation are important in the short term and are seen as a necessity for the largest companies to meet their sustainability goals.
- More than three-quarters of companies with revenues greater than \$10 billion are using analytics to reduce energy and water usage, as are more than half of all other companies.

commitment to corporate sustainability goals, and 21 percent reported that corporate sustainability is a top priority for their company (*Figure 2*).

"Sustainability is no longer just about setting a lofty carbon emissions reduction goal for 2050 as part of a long-term corporate strategic plan. It's about understanding what environmental, social and governance issues are material to you and acting. It's imperative that companies start diving into their long-term goals today," said Lisa Fewins, Associate Vice President and Managing Director of Black & Veatch's Environmental Business and Interim Corporate Sustainability Manager.

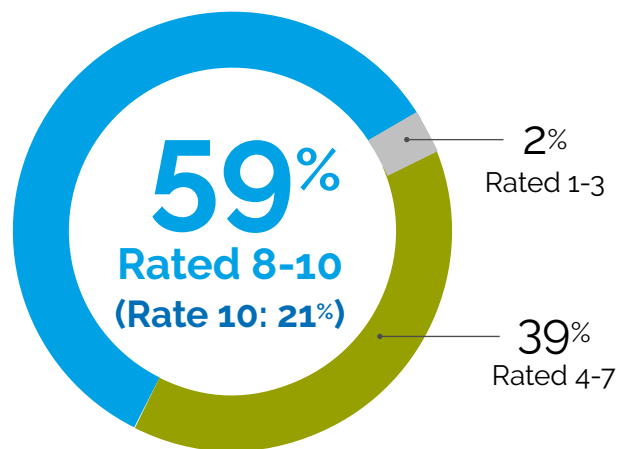
Respondents to the survey indicated that their definition of sustainability goals include corporate waste and recycling; packaging; clean energy; sourcing/supply chain responsibilities including local sourcing; raw materials, renewable resources and regenerative farming; environmentalism/planet issues; carbon reduction; water conservation and human health.

Prioritization of Corporate Sustainability Goals

Figure 2

How are setting and achieving corporate sustainability goals being prioritized by your organization?

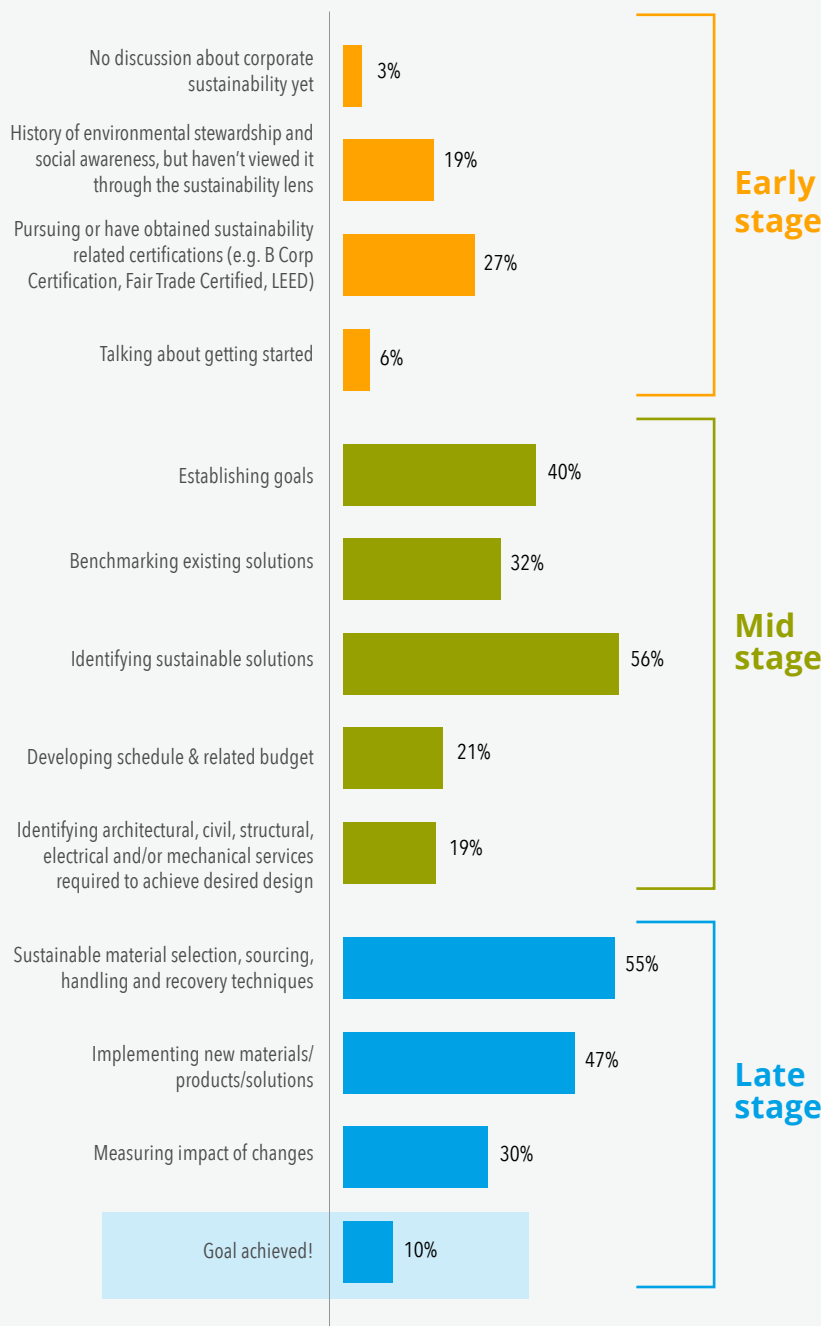
[SCALE: 1=Not a priority to 10=Top priority]



Prioritization of Corporate Sustainability Goals

Figure 3

Where is your company today in the process of establishing, benchmarking, executing and/or achieving your overall corporate sustainability goals? *Select all that apply.*



Most respondents to the poll say they are in mid-to-late-stage planning toward their corporate sustainability goals (Figure 3). The top activities reported were:

- Identifying sustainable solutions (56 percent of respondents)
- Sustainable material selection, sourcing, handling and recovery techniques (55 percent)
- Implementing new materials/products/solutions (47 percent)
- Establishing goals (40 percent)

According to the study, 10 percent of respondents said they have already achieved their corporate sustainability goals. However, considering the ever-changing nature of sustainable market forces, this data suggests that manufacturers who believe they have reached their sustainability goals may not be keeping their pulse on their professionals, investors or consumers—or haven't done enough research to know what other opportunities lay ahead. Many of the largest food and beverage companies have set their sustainability targets out to 2030 and beyond as they discover new opportunities in sustainable practices that save money and better the environment.

When asked to define corporate sustainability goals in their own words, 82 percent of respondents said they were familiar or very familiar with their company's efforts. Nearly half—42 percent—defined corporate waste reduction and recycling efforts among their companies' top sustainability goals. Waste and recycling concerns were not just a concern at the corporate level, but also with the consumer's disposal of the packaging of the company's product packaging.

Finding the right partner to help achieve sustainability goals is a critical move and not one that should be considered lightly.

Making Sustainability Part of Business Practices

“Food and beverage companies are placing an increased focus on sustainability as a tenet of their business practices and facility development,” said Kristie Deiliis, Managing Director of Strategy & Planning, Black & Veatch Management Consulting. “They are holistically integrating sustainability into their corporate strategies considering the entire value chain—from production to the retail buyer—to create long-term value.”

According to the Clear Seas study data, organizational sustainability goals are aligned with how respondents defined sustainability: primarily waste, recycling/circular economy measures and energy efficiency.

While renewable energy is a hot topic in the public sector, the cost seems to hold down interest among food manufacturers, as less than one-third of respondents have adopted it as a sustainability goal. Reducing GHG emissions is also a popular outcry, but only garnered 28 percent interest in those responding to the poll.

Roadblocks to Sustainability

Knowing what the corporate sustainability goals are is one thing, but the steps needed to achieve these goals can be stumbling blocks for some processors, inviting outside help. For example, nearly half of respondents reported that modifying existing infrastructure was the top challenge for processors. Other challenges include quantifying potential return on investment (ROI) and prioritizing sustainability goals. Closely allied to prioritizing goals is developing a roadmap to achieve those sustainability goals.

One-third of those surveyed suggested that determining the life span of capital investments is

a challenge, while others said that there are still additional areas of investment that need to be prioritized. Identifying a vendor/supplier/partner with sustainability experience is a challenge for nearly a third of processors, and for many, regulatory uncertainty only compounds the issues of reaching sustainability goals.

Finding the Right Partner

Finding the right partner to help achieve sustainability goals is a critical move and not one that should be considered lightly. A relationship with an architectural and engineering company that has expertise in the allied areas of sustainability—e.g., has actually deployed sustainable solutions such as renewable energy systems, upcycling systems, and water and wastewater treatment—to produce results that are not only important in terms of what the public views as a food processor’s corporate sustainability image, but will also save energy and utility costs down the road.

When asked what areas of expertise are important in the selection of a sustainability partner, food and beverage processors said that resource optimization was most important, followed by usage optimization, energy and water audits and sustainability reporting. Other areas include energy-efficient buildings, GHG reduction, clean energy projects, climate change resilience, ecological monitoring and electric mobility (the use of electric motor-driven transportation).

The firm a processor selects should be able to help with every stage of the sustainability journey as this will result in actionable solutions that benefit food and beverage companies by improving their sustainability footprint while boosting improvements to their operations and bottom line.