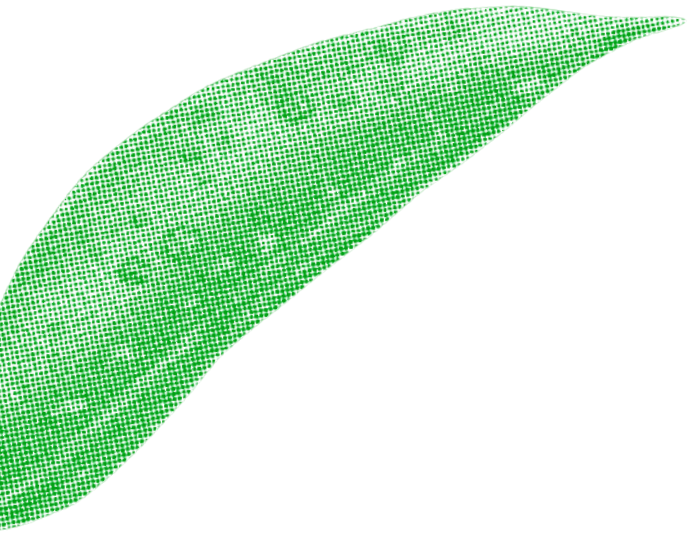
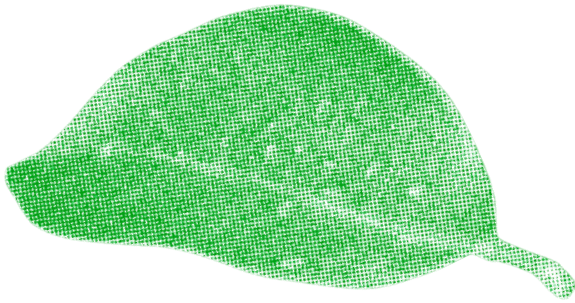
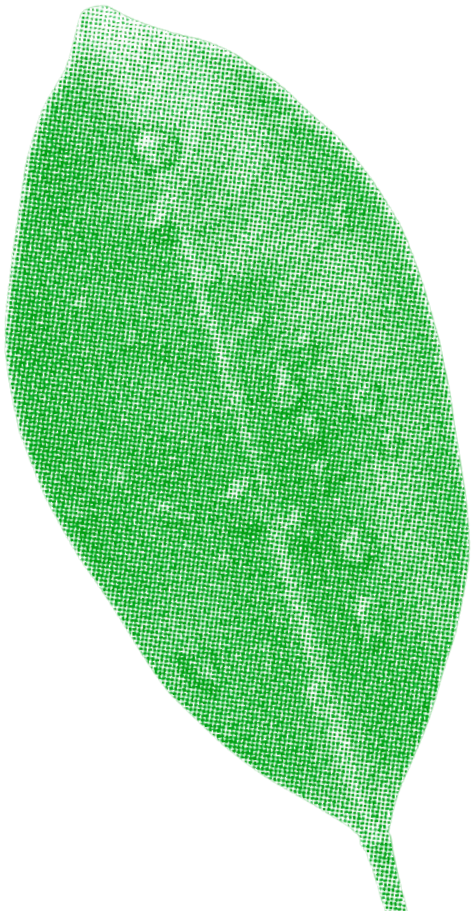
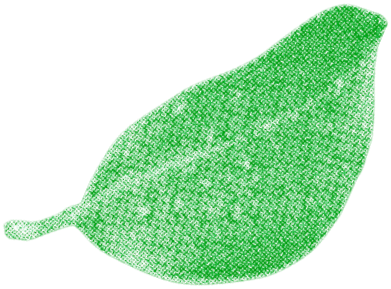




How corporations are managing risk, resiliency and sustainability





GreenBiz group

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Introduction

Even through a pandemic, the world must continue efforts to combat the climate crisis. The United Nations COP26 climate change conference may have been cancelled, but it's still critical to establish ways to achieve the 2015 Paris Agreement goals. Those goals include keeping the increase in global average temperature to well below 2° Celsius above pre-industrial levels,and, in fact, pursuing efforts to limit the increase to 1.5°C. Doing so will substantially reduce the impact of the climate crisis, according to the International Panel on Climate Change (IPCC).

We face the risk of costly delays as governments try to reach consensus on reporting requirements and market mechanisms for implementing the Paris Agreement. However, businesses are stepping up to demonstrate climate leadership by influencing local and regional climate-related policies. They are elevating reporting standards, investing in renewable energy and energy efficiency projects, increasing operational transparency, and putting into place plans to mitigate the worst effects of climate change.

GreenBiz Group, in collaboration with NRG Energy, conducted research to gain a greater understanding of key plans and actions by businesses to address climate change. Among them:

- How organizations increasingly focus on the risks associated with climate change, both in terms of resiliency and sustainability
- The intensity of key carbon drivers, such as energy consumption and greenhouse gas (GHG) emissions reduction

The study included interviews with sustainability executives and energy managers at Fortune 500 companies, as well as a web-based survey of 240 respondents.

Key insights emerging from the research include:

- Corporate risk management and sustainability efforts are beginning to intersect as climate change poses business continuity disruptions and long-term sustainability challenges
- New reporting standards from CDP and the Task Force on Climate-related Financial Disclosure (TCFD) are gaining traction as investors and other stakeholders seek greater corporate transparency
- Scenario analysis is becoming the preferred approach for organizations to set science-based targets in line with the Paris Agreement's 2∞C threshold and to understand the risks and opportunities associated with climate change



The intersection of resiliency and sustainability

One way of gauging corporate response to climate change is to understand how organizations plan for resiliency and sustainability. These two words may share attributes but are viewed differently within many organizations.

As we noted in our 2016 report "Unlock Growth by Integrating Sustainability," developed in partnership with Marsh & McLennan and the Association for Finance Professionals, the terms "sustainability" and "risk" can have a wide range of interpretations within companies.

Sustainability may be understood in terms of limiting environmental impact, or more widely as the impact on "people, profit, and planet." Risk is a similarly ambiguous term. Risk and risk management may be defined narrowly in terms of insurance, compliance, financial, or operational risk management that is focused on downside risk minimization. Or it may be construed as broader Enterprise Risk Management, applied to factor in both risks and opportunities.

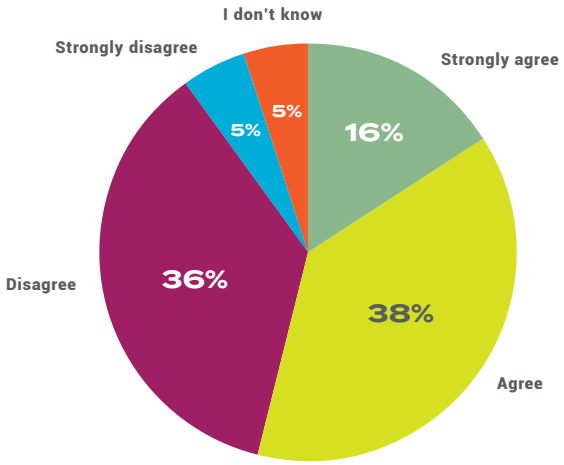
One financial services executive views resiliency as an adaptation or ability to operate in the face of climate-related changes and challenges and large disruptive events. In contrast, he thinks of sustainability as operating within planetary boundaries.

However, a consumer products executive we interviewed observed that, "As an enterprise, risk and sustainability are probably still thought of in two separate buckets. Resiliency is more focused on business continuity, such as a supply chain disruption or some odd anomaly of severe weather, such as a flood or tornado, that affects a company-owned facility. Sustainability is more focused on long-term business success. I think that we're starting to get to a place where they're intersecting."

Organizations can be differentiated based on whether or not they execute well-developed resiliency plans. Among large organizations (those with revenues greater than US$1 billion), 54 percent of survey respondents either agree or strongly agree that they have well-developed resiliency plans and are executing to meet that plan. In contrast, 41 percent either disagree or strongly disagree.

How strongly would you agree with the following statement?

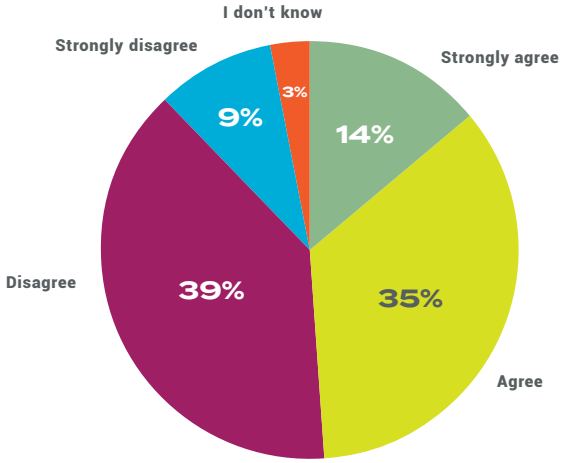
My organization has a well-developed resiliency plan and we are executing strategically to meet that plan



Respondents are equally split about how well their senior leadership incorporates climate-related factors and resilience-related risks into its overall business strategy. Specifically, 49 percent either agree or strongly agree that their senior leadership weighs these factors, whereas 48 percent either disagree or strongly disagree.

How strongly would you agree with the following statement?

My organization's senior leadership sufficiently weighs climate-related factors and resilience related risks into its overall business strategy.



Sustainability and risk management executives should not ignore the need for resiliency plans or climate-related risk management, even if senior leadership lacks enthusiasm for the effort. Customers, investors, NGOs, and supply chain partners are all starting to require more of this data and a number of standards are emerging that will inform future sustainability and risk management plans.

Establishing a climate plan

A number of initiatives are bringing risk management and sustainability into closer alignment; among them are standardized reporting frameworks established by the nonprofit TCFD, CDP, and the Science Based Targets initiative (SBTi). Through collective action, these initiatives look to mitigate risk and minimize the negative impact of corporations, taking into consideration a host of stakeholder issues.

CDP runs the global disclosure system for investors, companies, cities, states, and regions to manage their environmental impact. Over 8,400 companies have reported through CDP on climate change, water security, and forests. With guidance from TCFD, CDP's most recent disclosure requests are aligned global guidelines. They were established in 2015 as a standard for consistent climate-related financial risk disclosures that can be used by companies to provide comparable information to investors, lenders, insurers, and other stakeholders.

Both CDP and TCFD encourage companies to conduct a scenario-planning exercise. Scenario planning is the process of highlighting central elements of a possible future and drawing attention to key factors or critical uncertainties. For both TCFD and CDP, this analysis should be conducted in line with a 2° pathway, which provides a reference point generally aligned with the objectives of the Paris Agreement. Scenario analysis is an important tool for organizations. It helps them understand the strategic implications of climate-related risks and opportunities, and aids them when informing stakeholders about the organization's positioning on the issues.

In a related initiative, CDP also encourages organizations to set a science-based target to reduce GHG emissions in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement.

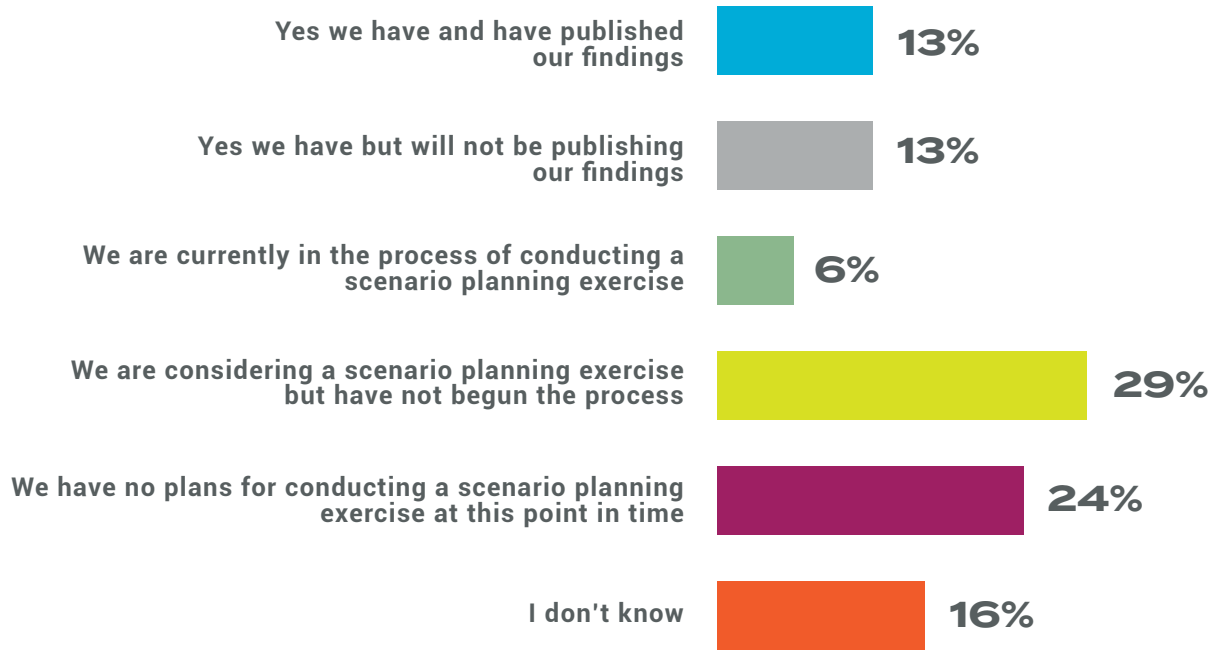
Both scenario planning and science-based targets are important initiatives for organizations to consider, given that stakeholders are requesting greater transparency when it comes to the potential impact of climate change.

Scenario planning

The TCFD's most recent report indicates that while climate-related financial disclosure has increased since 2016, only about 25 percent of companies disclosed information aligned with more than five of the 11 CDP recommended disclosures, and only 4 percent disclosed information aligned with at least 10 of the disclosures.

As discussed above, a key to TCFD disclosure is the use of scenario planning. We asked members of the GreenBiz Intelligence Panel whether they have conducted a scenario-planning exercise. Only about a quarter of the large organizations surveyed report conducting climate-related scenario planning, with 13 percent publishing findings and 13 percent not publishing. The efforts are becoming top of mind for sustainability executives, with a significant number of firms either in the process of conducting this exercise (6 percent) or considering it (29 percent).

Has your organization conducted a climate-related scenario planning exercise?



The 2018 CDP climate survey introduced scenario planning questions based upon the TCFD guidance, and several of the executives we interviewed responded even though they had not conducted a formal scenario planning exercise.

An executive from a consumer products company shared that, "We have an aspiration to more formally implement climate-related scenario planning into our enterprise risk management process. Right now, that process does have climate-related anomalies, like severe weather, baked into the process for business continuity purposes. We're looking to learn more about how other organizations have implemented the climate-scenario analysis process into their formal enterprise risk management process and not just pockets of functions within the company."

Key reasons reported for conducting a climate-related scenario planning exercise include remaining competitive in an industry segment (48 percent), and reporting to CDP (44 percent) and TCFD (38 percent). For self-identified high-emitting companies, 43 percent also noted that their risk management group asked to have the analysis conducted.

The key reasons that large organizations are NOT conducting scenario planning exercises aligned to the TCFD are that no one is asking (39 percent), it is perceived to be too costly (18 percent, and the risk department does not see the value (11 percent).

NRG: An early supporter of TCFD

NRG was one the first companies to publicly support the recommendations of the TCFD in 2017. Now there are almost 1,000 companies committed to aligning their reporting with TCFD guidance. Greg Kandankulam, Senior Manager of Sustainability at NRG, has been following the emergence of the TCFD framework for the past two years and helped lead efforts to conduct the company's scenario planning exercise. According to Kandankulam, "We first learned about TCFD through some of our NGO partnerships, like BSR and Ceres, as well as through some of our customer interactions. We wanted to look at other aspects of sustainability that could inform the way we manage our business, deploy capital, and foresee the future. We were looking for an approach that was a bit more progressive than traditional enterprise risk management practices."

Involving different levels of management helped boost scenario planning success. Kandankulam noted that NRG looked at several different variables along the way. For instance, what happens if a tariff, a storm or a pandemic hits? "We were able to come up with scenarios at the mid-manager, upper-middle-management level, and then had a second scenario-planning session with our C-suite."

Kandankulam pointed out that internal stakeholders — including some who were dubious about the effect of climate change on the organization — were more apt to take ownership of the final results when the process was collaborative and inclusive. Management also recognizes that goal setting and scenario planning must be regularly and formally revisited to ensure that the most direct path to meeting climate action goals can be attained and surpassed.

For organizations new to the climate-based scenario-planning process to achieve success, Kandankulam offers this advice: "It's important to engage a third party to facilitate the process with a fresh perspective. This can lead to a more open and collaborative atmosphere. You should also try to quantify climate-risk exposure in dollars and cents so that you are measuring financial impact on the business."

As to how public companies will report the results of a climate-based scenario planning exercise, Kandankulam raises an important question, "I think there's going to be an interesting evolution of the TCFD in terms of what companies are willing to report versus what they may choose to keep private. The results of these analyses are not just a list of risks but also opportunities for competitive advantage."

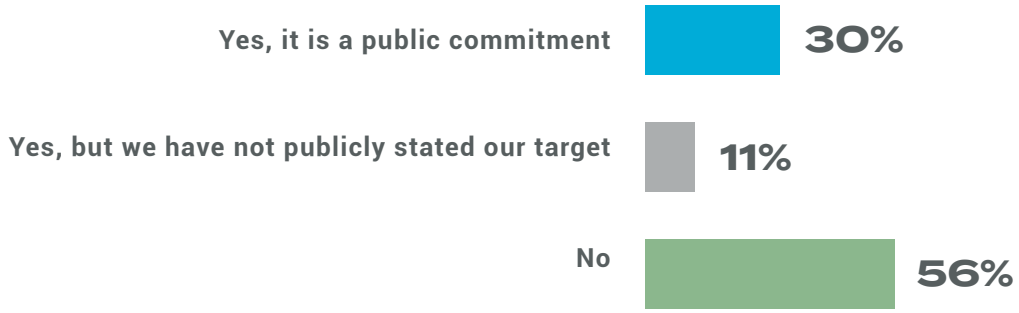
Science-based targets

The Science-Based Targets initiative is a multi-stakeholder initiative established to define and promote best practices in setting targets to reduce GHG emissions. Emissions-reduction targets are considered science-based if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement.

The SBTi has changed the way some companies set goals. As one large agriculture executive shared with us: "We had a renewable energy goal, and we actually removed it. We wanted a certain percentage of our energy portfolio to be made up of renewables. Then we asked ourselves what we really wanted to achieve and the vision of our senior leadership was that we need to be a leader in sustainability. We moved away from having several different types of energy and greenhouse gas targets and adopted a science-based methodology to set an absolute reduction target."

Most large organizations choose to make their commitments public (30 percent) rather than do the work and not make it public (11 percent). One manufacturing executive described the challenge in making public commitments: "I know that whenever you look at the science-based target's website, they say, 'Okay, the first thing you do is you publicly declare and then you figure out what your goal is going to be and how you're going to meet it.' Within our company, I have to flip those. I have to first of all figure out what we think the goal should be and how we would meet it. And if it seems like it's a reasonable risk, then we could publicly declare. But until we get there we're not ready to go public with the science-based target commitment."

Has your organization set a Science-Based Target for greenhouse gas emissions?

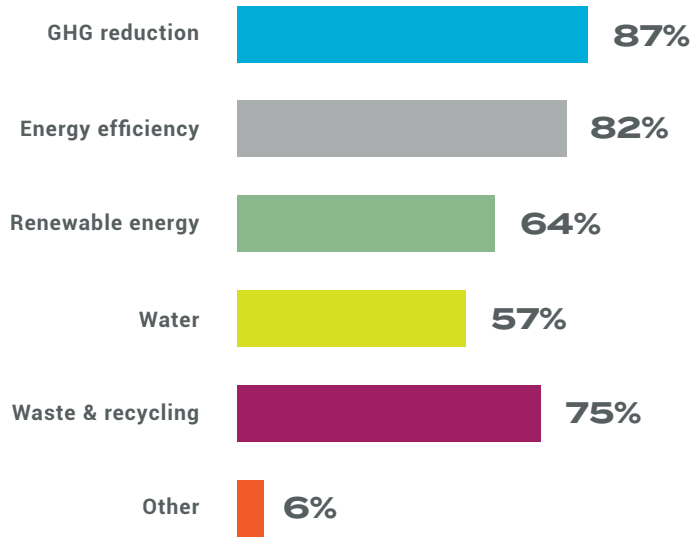


Digging deeper into the survey results uncovered that 75 percent of low-emission-intensity organizations have no science-based target while 46 percent of high-emission-intensity organizations have such a target. For most companies, especially high-emission-intensity ones, meeting these targets requires an aggressive energy and emissions strategy.

Achieving the goal

To achieve established science-based targets, companies are investing in energy efficiency and renewable energy. When asked what sustainability goals are a priority at their company, survey respondents identify GHG reduction (87 percent), energy efficiency (82 percent), and renewable energy (64 percent) as three of their top four goals.

Which of the following public or private sustainability goals does your organization currently have? (select all that apply)



Many of these sustainability goals are established and approved to reduce costs. Other primary drivers for an organization's energy strategy are: addressing GHG emissions reductions (60 percent), mitigating risk (48 percent), and meeting customer and investor expectations (48 and 41 percent respectively). For high-emitting organizations, mitigating risk (65 percent) ranked higher than reducing GHG emissions (61 percent).

Energy efficiency

To supplement our quantitative survey, we talked with executives about their strategies and approaches when it came to energy efficiency and renewable energy. As one software executive lamented, "It seems like nobody wants to talk about energy efficiency."

Several of our conversations revolved around how to put energy efficiency and renewable energy approaches in place.

A measured approach is recommended by one executive, "What gets measured gets done. You can't touch [energy efficiency] until you touch the utility billing. You can't go out and start changing out light bulbs until you understand your utility accounts and the source of your utility supply. That was Year 1 of our program. In Year 2 we wanted to find out where we were getting our electricity from and what we could do to minimize our impact. Only then could we move on to our next phase to reduce consumption through energy efficiency projects."

According to another executive, "Energy efficiency has been the one thing we've really been focused on that's helped with our Scope 2 emissions and our energy reduction goals. But financing has been an issue. A lot of facilities have projects on the radar, but haven't really had the budget. What's been helpful is efficiency technologies have come way down in cost, which makes the business case that much better."



Renewable energy

Renewable energy also is capturing investment dollars, according to the executives we interviewed. The Center for Climate and Energy Solutions says that renewable energy is the fastest-growing energy source in the United States, increasing 100 percent from 2000 to 2018.

One interviewee employed in the food and agriculture sector said energy efficiency is important but can't be relied upon, alone, to achieve climate goals. Renewables became a key aspect of the company's three-part strategy, which was to: 1) Conserve. Do more with less. 2) Use cleaner sources of energy. 3) Engage in off-site energy transactions.

In terms of allocating capital, this firm and many others are considering GHG emissions in their decision-making. A few leadership organizations are implementing an internal price on carbon to amplify the climate dialogue within their operations. This, they believe, will help the rank and file understand the drivers of greenhouse gas emissions and explain why, for example, one piece of equipment is selected over another. Implementing a shadow price on carbon can also help organizations take a closer look at where renewables make sense for their facilities and operations, potentially incorporating that into site-selection criteria.

Setting a science-based target can open the door to investments in renewables, as one executive noted: "Now that we've established the greenhouse gas target, we've identified new approaches to meet our target. We just did our first virtual power purchase agreement and the reality is, that's something that would not have happened without having this target in place."

One technology company wants to help its local communities adopt renewable energy. To that point, they are looking at green tariffs, an emerging green power utility offering in some regulated markets.

Sustainability professionals see senior leadership beginning to embrace renewable energy. A manufacturing executive reported, "We signed a virtual power purchase agreement for a wind project that's big enough that 100 percent of the electricity we use in U.S. and Canada is now renewable. One of the vice presidents heard about the wind project and said, 'Well, this is important. Tell me what else you're doing.' Now, I have to list every facility and what we're doing for renewable energy at each facility. There is now a quarterly update meeting with him to talk about who's got solar and who doesn't."

Resources for moving forward

Setting science-based targets, conducting scenario planning exercises, procuring renewable energy, and determining the appropriate energy efficiency projects all take unique skills and knowledge. Often, companies are faced with either a lack of deep expertise or a lack of internal resources to devote to these efforts. That is when external consultants are typically engaged.

When we asked our survey respondents what types of consultants assist with their sustainability programs, a large majority said they rely upon in-house resources. Boutique consultancies (smaller firms that tend to offer a limited number of services) were often cited by large corporations for work associated with strategic sustainability planning (30 percent), climate-related risk analysis and scenario planning (26 percent), and TCFD-specific scenario planning (29 percent).

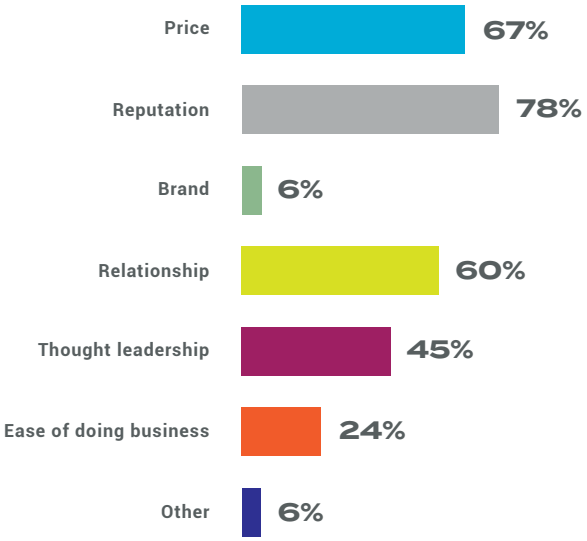
When it comes to energy efficiency projects and energy procurement, the go-to resources are energy services companies, or ESCOs. These are firms that provide a broad range of energy solutions, including design and implementation of energy-savings projects, retrofitting, energy conservation, energy infrastructure outsourcing, power generation and energy supply, and risk management.

In our research, ESCOs with a consulting division were the preferred choice for energy efficiency projects (including measurement and verification) and both off-site and on-site energy procurement (39 and 37 percent, respectively). For high-emitting companies, the use of energy services providers rises to 53 percent who contract with them for energy efficiency projects and 50 percent who turn to them to help with energy procurement. Among companies with a mixed portfolio of facilities, 73 percent use energy service providers to help with energy procurement.

As one manufacturing executive notes, "For energy efficiency programs it's largely working with our vendors, but very little of it is us calling the vendor saying, 'Gee, what do you think we should do next?' It's more in the terms of, 'Okay, I want a lighting survey of this building and tell me what it would cost to re-lamp to LED status and then give me some options of lighting controls. Should I put motion sensors in to turn the lights off at the warehouse when no one's there, and what's the payback, and can I save enough money to pay for the project?'"

When we asked what qualities large organizations seek in ESCOs, consultants, or other service providers, respondents cited reputation (78 percent), price (67 percent) and relationship (60 percent). For high emitters, reputation was 90 percent.

What qualities does your organization look for when working with a service provider? (select top 3)



Summary

Business are playing a major role in meeting the Paris Agreement's goals. To do their part, more companies are assessing the risks and opportunities facing their enterprise by conducting climate-related scenario planning and subsequently setting science-based targets for emissions reductions. Still, their efforts are sometimes hampered by a range of factors, among them a focus on sustainability without consideration of risk and resiliency, a lack of financial disclosure and scenario planning, and a need for greater expertise. Many companies will achieve emissions reductions by investing in energy efficiency and renewable energy projects. The largest organizations will look to collaborate with energy service companies to leverage their expertise and determine the best opportunities available.

About this report

This research included interviews with sustainability executives and energy managers at Fortune 500 companies, as well as a web-based survey of 240 respondents from the GreenBiz Intelligence Panel, consisting of more than 4,000 executives and thought leaders in the area of corporate environmental strategy and performance.

GreenBiz Group is a media and events company that advances the opportunities at the intersection of business, technology and sustainability. Through its websites, events, peer-to-peer network and research, GreenBiz promotes the potential to drive transformation and accelerate progress — within companies, cities, industries and in the very nature of business.

NRG brings the power of energy to people and organizations by putting customers at the center of everything they do. The company generates electricity and provides energy solutions and natural gas to more than 3.7 million residential, small business, and commercial and industrial customers through its diverse portfolio of retail brands. A Fortune 500 company, operating in the United States and Canada, NRG delivers innovative solutions while advocating for competitive energy markets and customer choice, and by working towards a sustainable energy future.

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